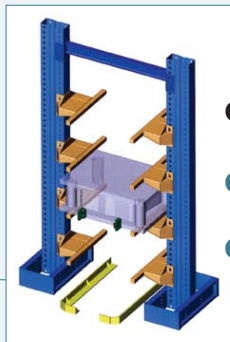
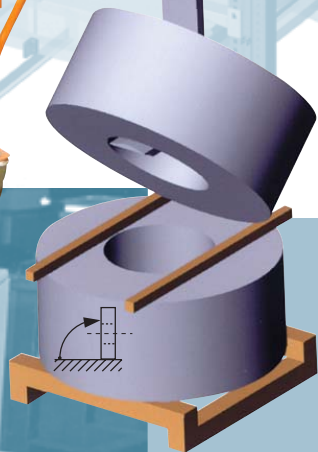
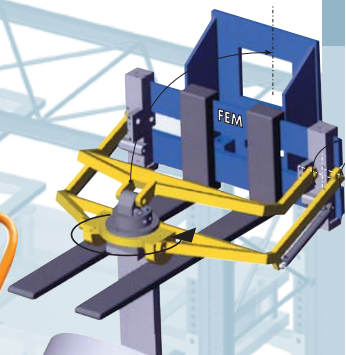
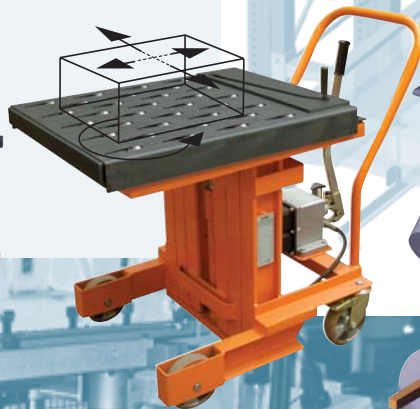


# ROTOBLOC-PSP

GROUPE  
**DIMECO**



- Quick die change system
- Die handling and storage
- Quick coil change



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# OUR PROGRAMME : 3 departments

## Quick tool change

p.3

### TOOL CHANGE RAILS

- Handling equipments
- Detachable counterbalanced tool change rails
- Rotating tool change rails
- Articulated tool change rails
- Detachable with supporting legs tool change rails
- "Heavy series" rotating tool change rails
- "Heavy series" articulated tool change rails
- Motorised tool change rails

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### TOOL MOVEMENT SEGMENTS

- Translation equipment
- Rotobilles, transrollers and hydraulic cartridges
- HPF and HPM hydraulic pressure generators
- Distribution valves and piping kits
- Rotobilles, transrollers and mechanical cartridges

p.40

### TOOL CLAMPING

- Clamping equipment
- Lever DYNABLOC
- Pressure generators for hydraulic release
- Distribution valves and piping kits
- Lever BRIDABLOCS and hydraulic NUTS
- Pressure generators for hydraulic tightening
- Distribution valves and piping kits
- Lever CAMBLOC

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### BLOCMATIC SYSTEM

- Rapid cassette change block

p.69

### Handling and storage of tools

p.75

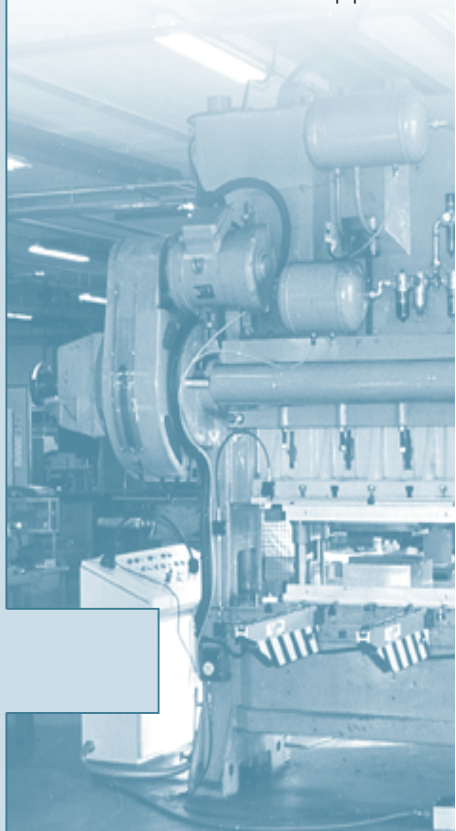
### Quick coil change

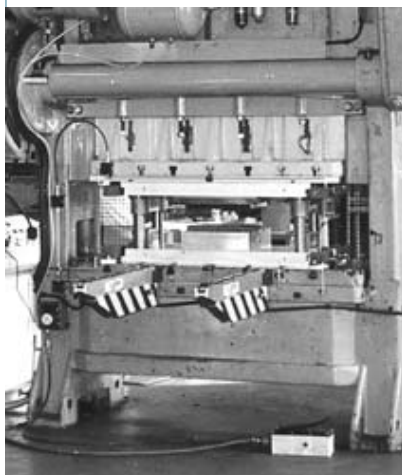
**ROTOBLOC-PSP**  
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## APPLICATION

TCF detachable tool change rails are used to change tools on press tables safely and quickly. Light and easy to handle, they are quick to install or to remove from different sites thanks to their quick-fastening system.

## DESCRIPTION

Built from a strong treated alloy section and of high mechanical quality, their movement plane is constituted by compact bearing modules (A). These modules are of the combined needle roller type for heavy loads and the standard roller type for normal loads.

Gripping openings (C) allow a quick and easy handling. The frontal support zone has an adjustable thrust (B) to allow an accurate adjustment of the levelling of the movement plane upon initial installation.

The ends of the arms are equipped with an additional bearing module (E), and this unique design allows tools to be moved smoothly from the handling equipment.

A retractable stop (F) automatically adopts a safety position when a tool is passing through. For high-mass (or Heavy) tools, a progressive ramp stop (D) replaces the retractable stop; this allows the tool to stop without impact.

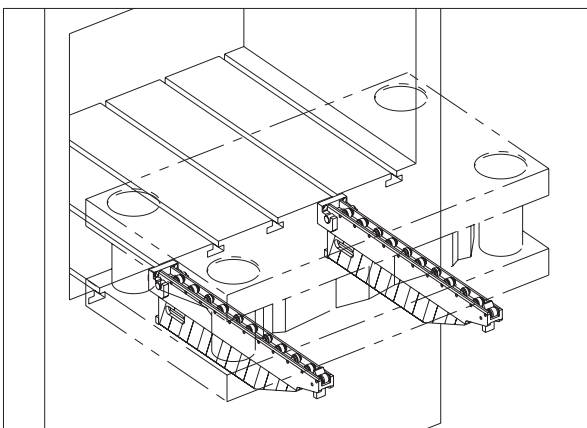
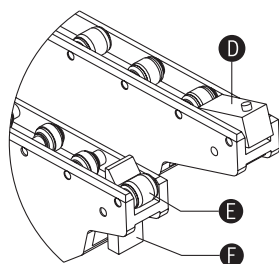
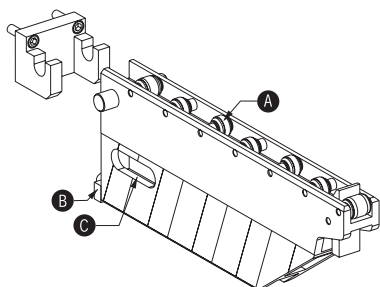
The choice of these stops may be optional.

## ASSEMBLY & USE

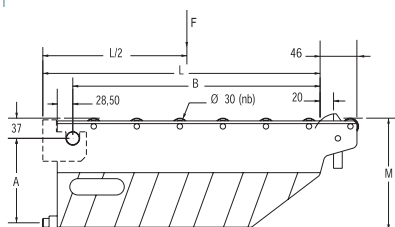
The tool change rails are used exclusively in pairs and are positioned and held in place at the front of the press table with the assistance of a set of threaded brackets. Different sets of brackets are available, depending upon the tool change rails and upon requirements. Please see tool change rails page for definition and options.

Tools are moved manually or with the assistance of a motorised unit. The force required for movement depends upon the mass of the tool, its material and the quality of the surface finish. An average rolling friction coefficient is quoted in the specifications for the purpose of evaluating that force.

All the load values are given for static working conditions and are uniformly distributed per pair of tool change rails. Please abide by and reduce laying down speeds as much as possible in order to avoid impact that may engender dynamic overloads. Please see specifications.



Dimensions and data subject to amendment



### GENERAL TCF USER SPECIFICATIONS

Rolling friction coefficient: 0.03 for steel tools with a surface finish of  $R_a = 3.2$

Admissible tool laying down speed  $< 20$  mm/sec.

Loads F Static uniformly distributed between 2 tool change rails

Admissible temperature  $< 60^{\circ}\text{C}$

*Example of travel force calculation:*

Tool mass = 1000 kg, steel material,  $R_a = 3.2$

Rolling friction coefficient = 0.03

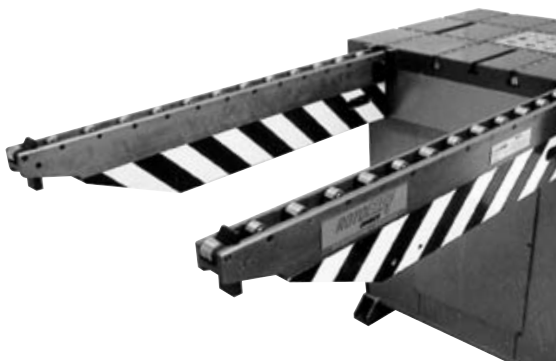
Approximate travel force :  $1000 \times 0.03 = 30$  kg (30 daN)

**To order** : Quote the full reference details of the pair of tool change rails  
e.g.: TCF 1/800

(Pair of tool change rails capacity 1000 kg & working length of 800 mm.).



| Models      | A<br>mm | B<br>mm | F/Pair<br>kg | M<br>mm | L<br>mm | Nb | Weight<br>kg/pair |
|-------------|---------|---------|--------------|---------|---------|----|-------------------|
| TCF 05/300  | 155     | 254     | 500          | 205     | 309     | 5  | 12                |
| TCF 05/500  | 155     | 455     | 500          | 205     | 509     | 7  | 18                |
| TCF 05/800  | 155     | 755     | 500          | 205     | 809     | 11 | 28                |
| TCF 05/1000 | 155     | 955     | 500          | 205     | 1009    | 13 | 36                |
| TCF 1/500   | 155     | 455     | 1000         | 205     | 509     | 7  | 18                |
| TCF 1/800   | 155     | 755     | 1000         | 205     | 809     | 11 | 29                |
| TCF 1/1000  | 155     | 955     | 1000         | 205     | 1009    | 13 | 37                |
| TCF 2/500   | 155     | 455     | 2000         | 205     | 509     | 7  | 18                |
| TCF 2/800   | 155     | 755     | 2000         | 205     | 809     | 11 | 29                |
| TCF 2/1000  | 155     | 955     | 2000         | 205     | 1009    | 13 | 37                |
| TCF 2/1250  | 155     | 1205    | 2000         | 205     | 1259    | 16 | 47                |
| TCF 3/800   | 155     | 750     | 3000         | 205     | 805     | 10 | 29                |
| TCF 3/1000  | 355     | 950     | 3000         | 405     | 1005    | 12 | 54                |
| TCF 3/1250  | 355     | 1200    | 3000         | 405     | 1254    | 15 | 71                |





## APPLICATION

TCRF tool change rails are used to load tools onto press tables safely and quickly. They are permanently fixed to the front of press tables with the assistance of rotating brackets. They can adopt two set positions, the working position and the sliding position that allows complete access to the front of the press.

## DESCRIPTION

Made from a strong treated alloy section and of high quality mechanically, their movement plane is constituted by compact bearing modules (A). These units are of the combined needle roller type for heavy loads and the standard roller type for normal loads. An indexing lever (C) allows for effective locking and rapid unlocking of the arm so that you can obtain the positions desired. The frontal support zone of the bracket has an adjustment thrust (B) and this allows for accurate adjustment when levelling the plane of movement upon initial installation. The ends of the tool change rails are equipped with an additional bearing module (E) and this unique characteristic allows tools to be moved smoothly from the handling equipment.

A retractable stop (F) takes up an automatic safety position when a tool is being moved. For high-mass tools, a progressive ramp stop (D) replaces the retractable stop; this allows the tool to stop without impact.

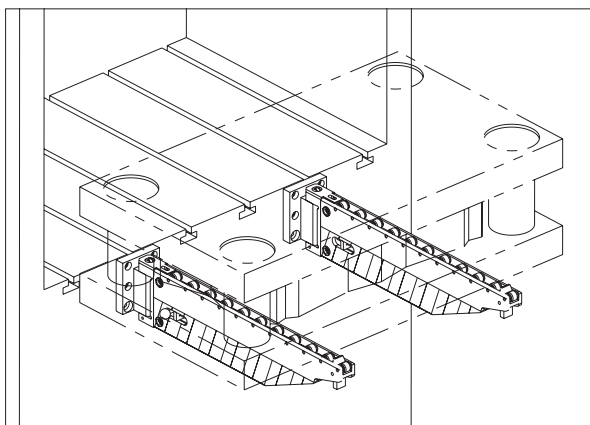
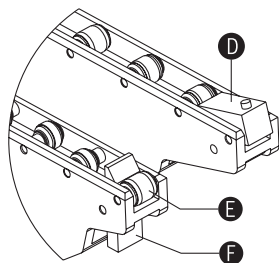
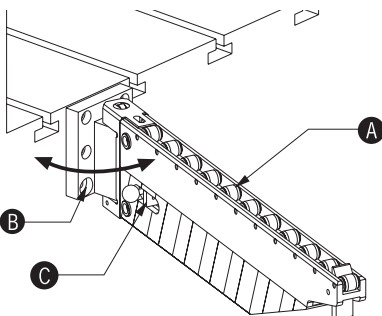
The choice of these stops may be optional.

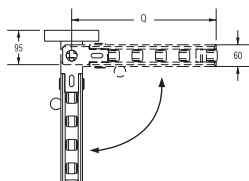
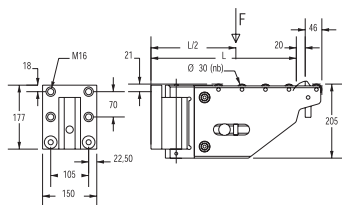
## ASSEMBLY & USE

The tool change rails are used exclusively in pairs and are positioned and held in place (or fixed) at the front of the press tables with the assistance of a set of screwed plates. The arms can be swapped from the right to the left, without distinction.

Tools are moved manually or with the assistance of a motorised unit. The force required for movement depends upon the mass of the tool, its material and the quality of the surface finish. An average rolling friction coefficient is quoted in the specifications for the purpose of evaluating that force.

All the load values are given for static working conditions and are uniformly distributed per pair of tool change rails. Please abide by and reduce laying down speeds as much as possible in order to avoid impacts that may engender dynamic overloads. Please see specifications.





## GENERAL TCRF USER SPECIFICATIONS

Rolling friction coefficient: 0.03 for steel tools with a surface finish of  $R_a = 3.2$

Admissible tool laying down speed  $< 20 \text{ mm/sec}$ .

Loads F Static uniformly distributed between 2 tool change rails

Admissible temperature  $< 60^{\circ}\text{C}$

Example of travel force calculation:

Tool mass = 1000 kg, steel material,  $R_a = 3.2$

Rolling friction coefficient = 0.03

Approximate travel force

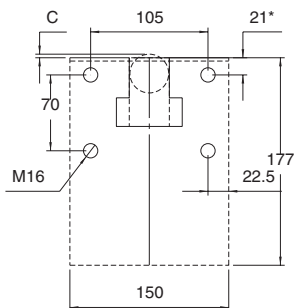
$$1000 \times 0.03 = 30 \text{ kg (30 daN)}$$

**To order :** Quote the complete reference of the pair of tool change rails

e.g.: TCF 1/900

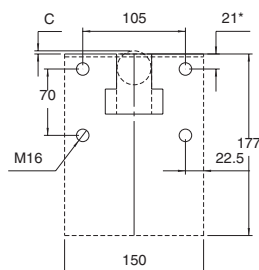
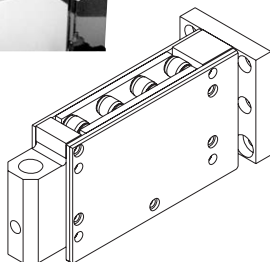
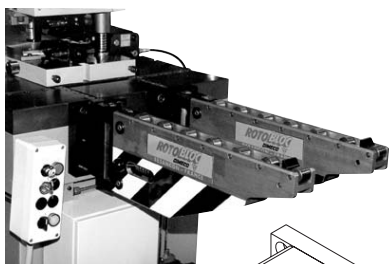
(Pair of tool change rails capacity 1000 kg & working length of 900 mm.).

| Models       | F<br>kg | L<br>mm | Q<br>mm | Nb | Weight<br>kg/pair |
|--------------|---------|---------|---------|----|-------------------|
| TCRF 05/400  | 500     | 400     | 402     | 5  | 56                |
| TCRF 05/600  | 500     | 600     | 602     | 7  | 63                |
| TCRF 05/900  | 500     | 900     | 902     | 11 | 88                |
| TCRF 05/1100 | 500     | 1100    | 1102    | 13 | 104               |
| TCRF 1/600   | 1000    | 600     | 602     | 7  | 65                |
| TCRF 1/900   | 1000    | 900     | 902     | 11 | 88                |
| TCRF 1/1100  | 1000    | 1100    | 1102    | 13 | 104               |
| TCRF 2/900   | 2000    | 900     | 902     | 11 | 88                |
| TCRF 2/1100  | 2000    | 1100    | 1102    | 13 | 104               |
| TCRF 3/900   | 3000    | 900     | 902     | 11 | 88                |

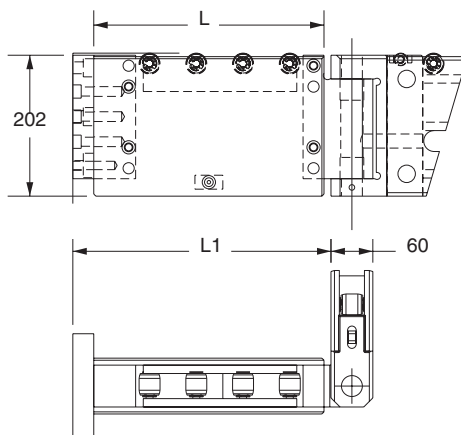
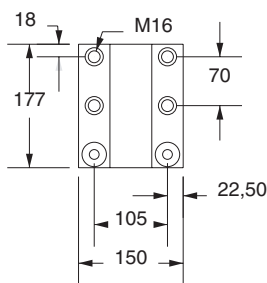


\*: If rotobilles or transrollers, reduce dimension of C.





\*: If rotobilles or transrollers, reduce dimension of C.



## APPLICATION

Articulated BER brackets are designed to keep the coupling point away from the edge of the press table.

## DESCRIPTION

- Made from steel;
- Upper plane equipped with heavy cage bearings and combined needle rollers;
- Front end does not articulate with connecting plate (identical to TCRF tool change rails with which it is assembled);
- Rear end with bored bushing for the shaft of TCRF bracket with which it is assembled;

## ASSEMBLY

Only as option: TCRF-type support tool change rails.

N.B.: BERs are supplied by the unit.

## EXAMPLE

- Assembly with one tool change rails in order to allow two TCRF arms to be positioned one on above the other.
- Assembly with two TCRF tool change rails (a pair) in order to allow you to direct them at a 90° outwards angle, "escaping" the press frame.

## CAPACITIES

The admissible load is the one of the tool change rails with which they are assembled. The admissible length is the one of the tool change rails + the length L.

## N.B.

TCRF tool change rails retain their characteristics when they are assembled with BER articulated brackets.

| Models  | L of BERs |
|---------|-----------|
| BER 130 | 130       |
| BER 230 | 230       |
| BER 330 | 330       |
| BER 430 | 430       |



## APPLICATION

TCAF tool change rails are used to load tools onto press tables safely and quickly. They are permanently attached to the front of a press table with rotating brackets. They can adopt two set positions, the working position and the slide position, which allows complete access to the front of the press.

## DESCRIPTION

Built from a strong treated alloy section and of high quality mechanically, their movement plane is constituted by compact bearing modules (A).

These modules are of the combined needle roller type for heavy loads and the standard roller type for normal loads.

An indexing lever (C) allows for effective locking and rapid unlocking of the tool change rails so that you can obtain the positions desired. The frontal support zone of the bracket has an adjustment thrust (B) and this allows for accurate adjustment when leveling the plane of movement upon initial installation. The ends of the tool change rails are equipped with an additional bearing module (E) and this unique characteristic allows tools to be moved smoothly from the handling equipment.

A retractable stop (F) automatically takes up a safety position when a tool is being moved. For high-mass tools, a progressive ramp stop (D) replaces the retractable stop; this allows the tool to stop without impact.

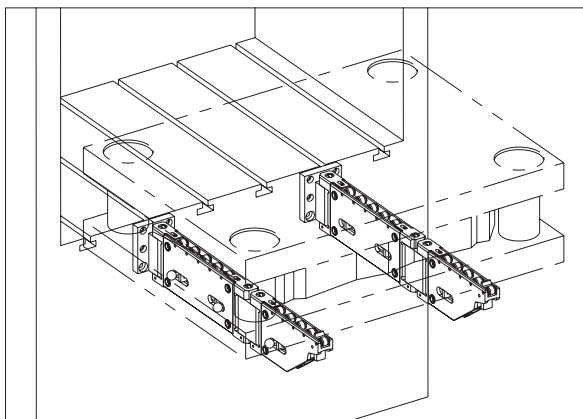
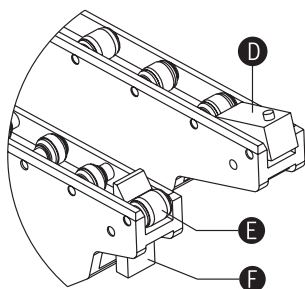
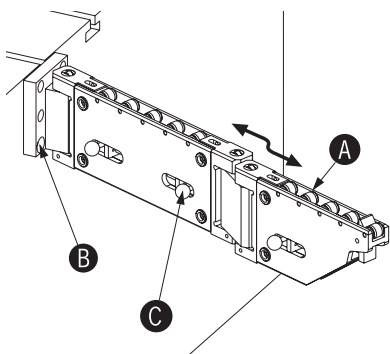
The choice of these stops may be optional.

## ASSEMBLY & USE

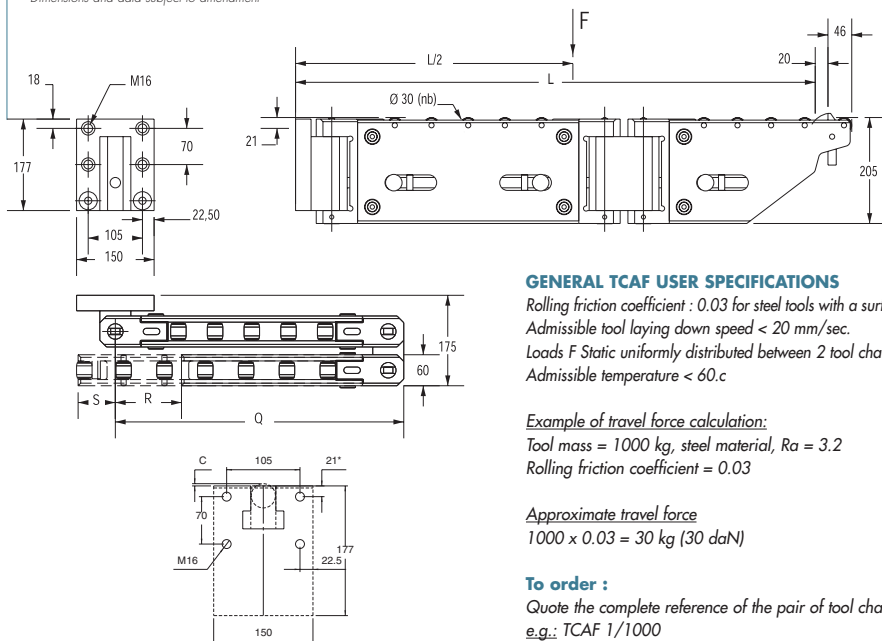
The tool change rails are used exclusively in pairs and are positioned and held in place at the front of the press tables with the assistance of a set of threaded bracket. The tool change rails can be slid to the right or to the left, without distinction.

Tools are moved manually or with the assistance of a motorised unit. The force required for movement depends upon the mass of the tool, its material and the quality of the surface finish. An average rolling friction coefficient is quoted in the specifications for the purpose of evaluating that force.

All the load values are given for static working conditions and are uniformly distributed per pair of tool change rails. Please abide by and reduce laying down speeds as much as possible in order to avoid impact that may engender dynamic overloads. Please see specifications.



Dimensions and data subject to amendment



\*: If rotobilles or transrollers, reduce dimension of C.

### GENERAL TCAF USER SPECIFICATIONS

Rolling friction coefficient : 0.03 for steel tools with a surface finish of  $R_a = 3.2$

Admissible tool laying down speed < 20 mm/sec.

Loads F Static uniformly distributed between 2 tool change rails

Admissible temperature < 60.c

Example of travel force calculation:

Tool mass = 1000 kg, steel material,  $R_a = 3.2$

Rolling friction coefficient = 0.03

Approximate travel force

$1000 \times 0.03 = 30 \text{ kg (30 daN)}$

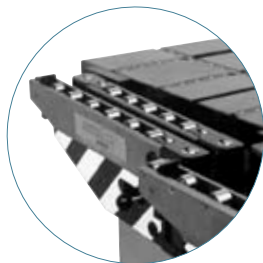
**To order :**

Quote the complete reference of the pair of tool change rails

e.g.: TCAF 1/1000

(Pair of tool change rails capacity 1000 kg & working length of 1000 mm.).

| Models       | F<br>kg | L<br>mm | Q<br>mm | R<br>mm | S<br>mm | Nb | Weight<br>kg/pair |
|--------------|---------|---------|---------|---------|---------|----|-------------------|
| TCAF 05/1000 | 500     | 1005    | 558     | 128     |         | 13 | 100               |
| TCAF 1/1000  | 1000    | 1005    | 558     | 128     |         | 13 | 100               |
| TCAF 2/1000  | 2000    | 1005    | 558     | 128     |         | 13 | 100               |
| TCAF 2/1200A | 2000    | 1205    | 558     |         | 72      | 15 | 104               |
| TCAF 2/1200B | 2000    | 1205    | 758     | 328     |         | 16 | 104               |





## APPLICATION

TCP tool change rails are used to load tools onto press tables safely and quickly. Designed for very long tools, they are equipped with an end leg with sole plate. Optionally, a leg with castor may be used in order to move tool change rails quickly and easily between multiple sites or to place them in storage until needed.

## DESCRIPTION

Built from a strong treated light alloy section and of high quality mechanically, their movement plane is constituted by compact bearing modules (A).

These units are of the combined needle roller type for heavy loads and the standard roller type for normal loads.

Gripping pockets allow for quick and easy handling. At the base of each leg is a fine adjustment mechanism (B) that allows for accurate setting of the level of the movement plane upon initial installation. When ordering, you need to indicate the height, H, of the press bed above the ground. The ends of the tool change rails are equipped with an additional bearing module (E) and this unique characteristic allows tools to be moved smoothly from the handling equipment.

A retractable stop (F) automatically takes up a safety position when a tool is being moved. For high-mass tools, a progressive ramp stop (D) replaces the retractable stop; this allows the tool to stop without impact.

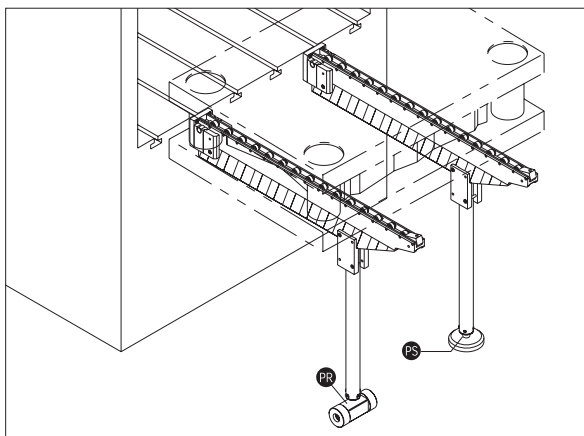
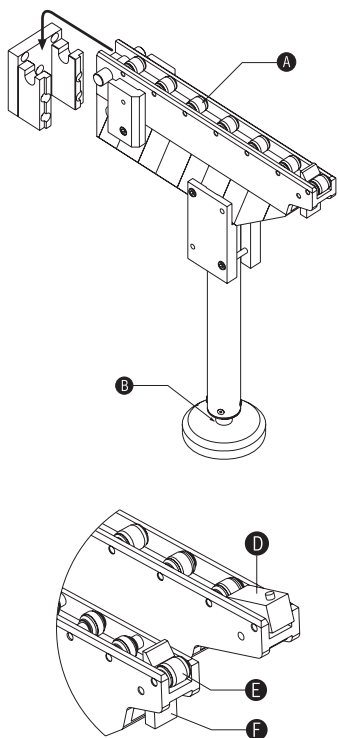
The choice of these stops may be optional.

## ASSEMBLY & USE

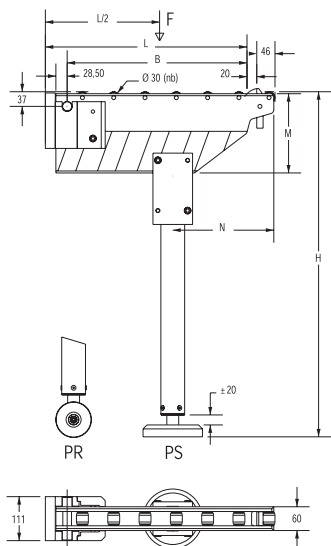
The tool change rails are used exclusively in pairs and are positioned and held in place at the front of the press tables with the assistance of a set of threaded pins. The brackets can be slid to the right or to the left, without distinction.

Tools are moved manually or with the assistance of a motorised unit. The force required for movement depends upon the mass of the tool, its material and the quality of the surface finish. An average rolling friction coefficient is quoted in the specifications for the purpose of evaluating that force.

All the load values are given for static working conditions and are uniformly distributed per pair of tool change rails. Please abide by and reduce laying down speeds as much as possible in order to avoid impact that may engender dynamic overloads. Please see specifications.



Dimensions and data subject to amendment



### GENERAL TCF USER SPECIFICATIONS

Rolling friction coefficient: 0.03 for steel tools with a surface finish of  $Ra = 3.2$

Admissible tool laying down speed  $< 20$  mm/sec.

Loads F Static uniformly distributed between 2 tool change rails

Admissible temperature  $< 60^{\circ}\text{C}$

*Example of travel force calculation:*

Tool mass = 1000 kg, steel material,  $Ra = 3.2$

Rolling friction coefficient = 0.03

Approximate travel force

$2000 \times 0.03 = 60$  kg (60 daN)

### To order:

Quote the complete reference of the pair of tool change rails and the leg type:

PR = leg with castor

PS = leg with soleplate

Specify the height, H, in mm. of table / ground.

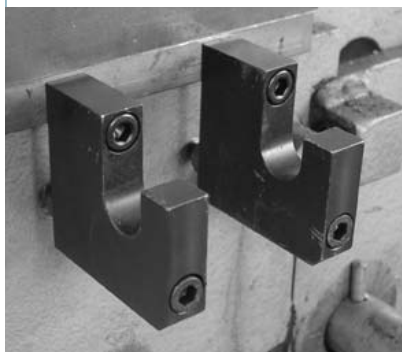
e.g.: TCP 2 / 1250-PR-H800

Pair of tool change rails capacity 2000 kg, working length of 1250 mm.,

leg with castor + table height = 800 mm.

| Models     | B<br>mm | F<br>kg | M<br>mm | L<br>mm | H min.<br>mm | N<br>mm | Nb | Weight<br>kg/pair |
|------------|---------|---------|---------|---------|--------------|---------|----|-------------------|
| TCP 2/1250 | 1204    | 2000    | 205     | 1259    | 455          | 400     | 16 | 71                |
| TCP 2/1600 | 1554    | 2000    | 205     | 1009    | 455          | 400     | 21 | 83                |
| TCP 2/2000 | 1954    | 2000    | 205     | 2009    | 455          | 400     | 26 | 96                |
| TCP 4/1000 | 954     | 4000    | 205     | 1009    | 455          | 400     | 13 | 61                |
| TCP 4/1250 | 1204    | 4000    | 205     | 1259    | 455          | 400     | 16 | 71                |
| TCP 4/1600 | 1554    | 4000    | 205     | 1609    | 455          | 400     | 21 | 84                |
| TCP 4/2000 | 1954    | 4000    | 205     | 2009    | 455          | 400     | 26 | 97                |
| TCP 6/1250 | 1200    | 6000    | 205     | 1255    | 455          | 400     | 16 | 71                |
| TCP 6/1600 | 1550    | 6000    | 205     | 1605    | 455          | 400     | 21 | 84                |
| TCP 6/2000 | 1950    | 6000    | 405     | 2005    | 655          | 400     | 26 | 148               |
| TCP 6/2500 | 2450    | 6000    | 405     | 2505    | 655          | 400     | 32 | 180               |





### APPLICATION

BF brackets are used to attach TCF and TCP-type tool change rails. Several types exist (BF1, BF2, BF3 and BFR and BSR) depending upon the tool change rails for which they are intended.

### ASSEMBLY & USE

The brackets are screwed onto the front of the press tables and allow for quick assembly and dismantling of TCF and TCP tool change rails.

Table 2 shows the bulk and mounting dimensions of the different brackets.

### To order:

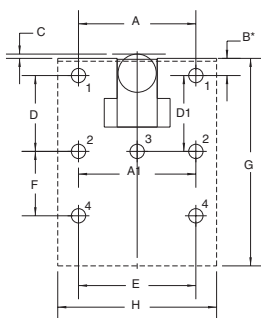
- Choose the set of brackets from the table according to the tool change rails type
- Specify the complete reference number for the set of brackets.

E.g.:

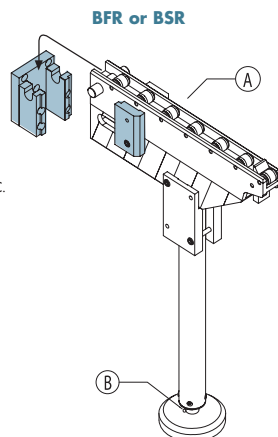
BF 3 set of brackets (BF3 brackets for TCF 3-type tool change rails).

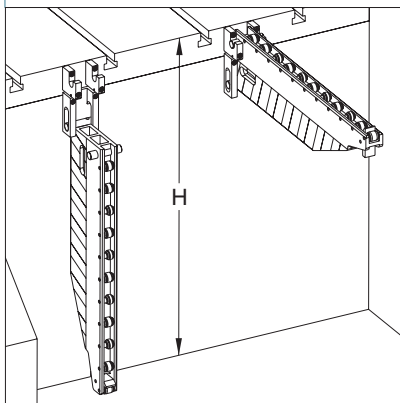
| Models | A  | A1  | B  | D  | D1 | E   | F  | G   | H   | Threads  | Item Nos.     |
|--------|----|-----|----|----|----|-----|----|-----|-----|----------|---------------|
| BF 1   | 82 | 82  | 13 | 53 | 53 |     |    | 80  | 110 | M10 x 40 | 1 - 2         |
| BF 2   | 82 | 82  | 13 | 53 | 53 |     |    | 80  | 110 | M12 x 45 | 1 - 2         |
| BF 3   | 76 |     | 13 | 53 | 53 |     |    | 80  | 110 | M12 x 45 | 1 - 3         |
| BF R   | 76 | 85  | 13 | 60 | 60 | 85  | 45 | 145 | 111 | M12 x 45 | 1 - 2 - 4     |
| BS R   | 76 | 105 | 13 | 60 | 53 | 105 | 45 | 145 | 131 | M12 x 45 | 1 - 2 - 3 - 4 |

| Set of brackets | Tool change rails       |
|-----------------|-------------------------|
| BF 1            | TCF 05                  |
| BF 2            | TCF 1<br>TCF 2          |
| BF 3            | TCF 3                   |
| BFR             | TCP 2<br>TCP 3<br>TCP 4 |
| BSR             | TCP 6                   |



\*: If rotabilles or transrollers, reduce dimension of C.





### APPLICATION

BFA brackets are used to allow access from the front of a press table when the tool change rails are not used. These brackets are only used with TCF-type tool change rails.

### ASSEMBLY & USE

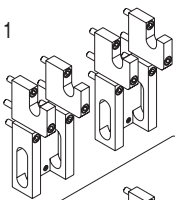
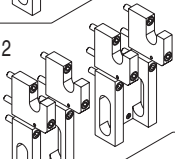
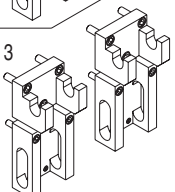
BFA brackets feature a slide which allows you to tilt the TCF tool change rails downwards along the press table. The maximum length of tool change rails for this application is defined in relation to the height, H, of the press table.

The length, B, given in the dimensional table for TCF tool change rails must be equal to or less than the height, H, of the table less 290 mm. ( $B < H - 290$ ). The brackets are adjustable to allow the levelling of the running surface. Table 2 shows the bulk and mounting dimensions of the different brackets.

### To order :

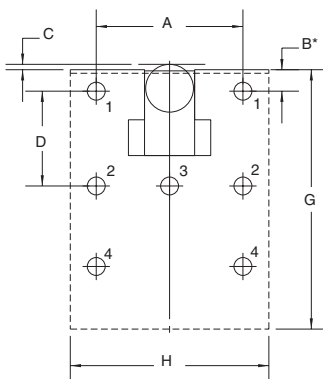
- Choose the set of brackets from table 1 according to the reference details of the TCF tool change rails in place. N.B.: the set of brackets is designed to fully mount one pair of tool change rails.
- Quote the complete reference number for the set of brackets.

| MODELS | A  | B  | D  | E  | F  | G   | H   | Threads  | Item Nos. |
|--------|----|----|----|----|----|-----|-----|----------|-----------|
| BFA 1  | 82 | 13 | 53 | 80 | 40 | 230 | 110 | M10 x 40 | 1 + 2 + 4 |
| BFA 2  | 82 | 13 | 53 | 80 | 40 | 230 | 110 | M12 X 45 | 1 + 2 + 4 |
| BFA 3  | 76 | 13 | 53 | 80 | 40 | 230 | 110 | M12 x 45 | 1 + 3 + 4 |
|        |    |    |    |    |    |     |     | M10 x 45 | 4         |

| Set of brackets                                                                              | Tool change rails |
|----------------------------------------------------------------------------------------------|-------------------|
| BFA 1<br>  | TCF 05            |
| BFA 2<br> | TCF 1<br>TCF 2    |
| BFA 3<br> | TCF 3             |

E.g.: Set of BFA 3 brackets

BFA3 brackets for TCF 3-type tool change rails = tool change rails with capacity  $F = 3000$  kg. according to dimensional table.



\*: If rotobilles or transrollers, reduce dimension of C.



### APPLICATION

TCRSF/TCRDF tool change rails are used to load tools onto press tables safely and quickly. They are permanently fixed to the front of press tables with rotating brackets. They can adopt two set positions, the working position and the slide position that allows complete access to the front of the press.

### DESCRIPTION

Made from steel, their movement plane is constituted by compact bearing modules (A). These units are of the combined needle roller type with heavy cages.

An indexing pedal (C) allows for effective locking and rapid unlocking of the arm so that you can obtain the positions desired.

The ends of the tool change rails are equipped with a progressive stop.

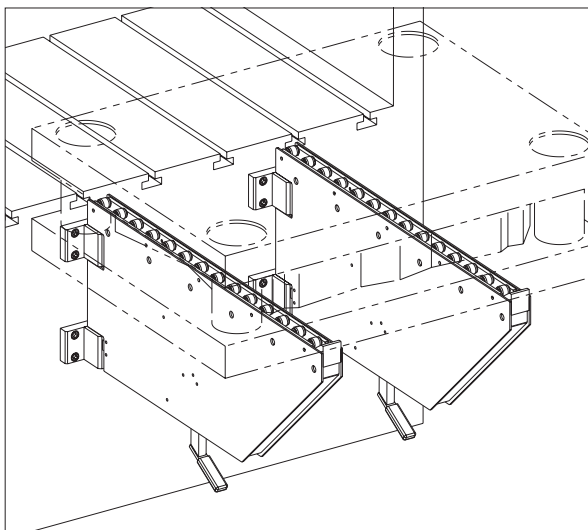
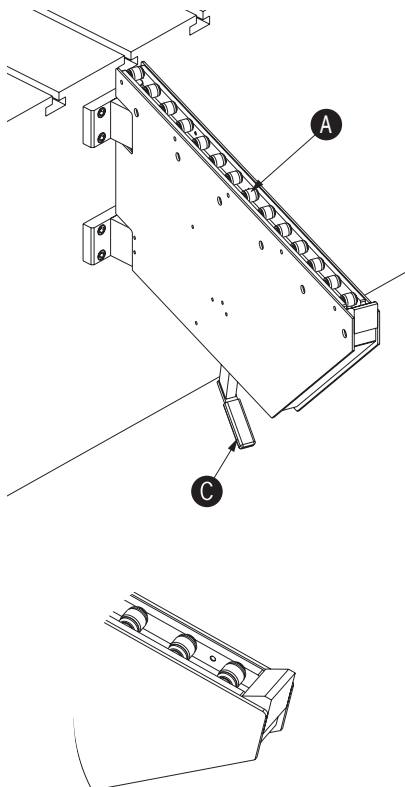
### ASSEMBLY & USE

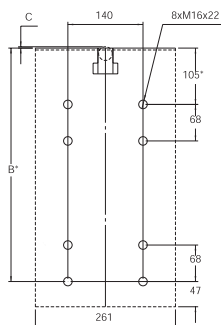
The tool change rails are used exclusively in pairs and are positioned and held in place at the front of the press tables with screwed plates.

The tool change rails can be slid to the right or to the left, without distinction.

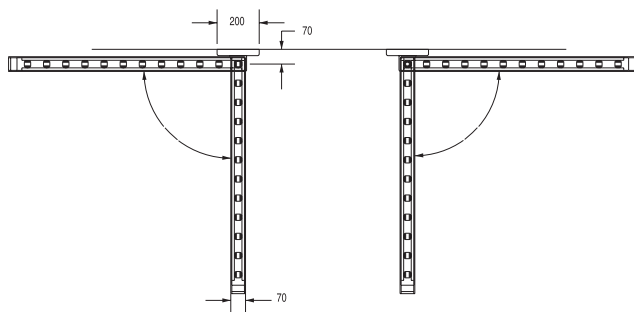
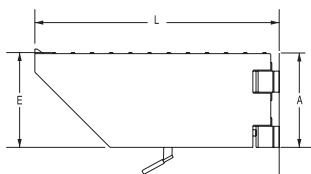
Tools are moved manually or with the assistance of a motorised unit. The force required for movement depends upon the mass of the tool, its material and the quality of the surface finish. An average rolling friction coefficient is quoted in the specifications for the purpose of evaluating that force.

All the load values are given for static working conditions and are uniformly distributed per pair of tool change rails. Please abide by and reduce laying down speeds as much as possible in order to avoid impact that may engender dynamic overloads. Please see specifications.





\*: Rotobilles or Transrollers, reduce dimension of C.



## USE

The joint in TCRSF tool change rails allows them to be folded up: OUTWARDS.  
The tool change rails are only used as a pair.

## GENERAL TCRSF USER SPECIFICATIONS

Rolling friction coefficient: 0.03 for steel tools with a surface finish of  $R_a = 3.2$

Admissible tool laying down speed < 20 mm/sec.

Loads F Static uniformly distributed between 2 support arms

Admissible temperature < 60.c

## Example of travel force calculation:

Data:

Tool mass = 4000 kg, steel material,  $R_a = 3.2$

Rolling friction coefficient = 0.03

## Approximate travel force

$4000 \times 0,03 = 120 \text{ Kg (120 daN)}$

## To order:

To order:

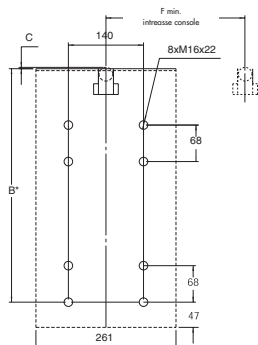
Specify the complete reference details of the pair of tool change rails :

e.g.: TCRSF 4 / 1000

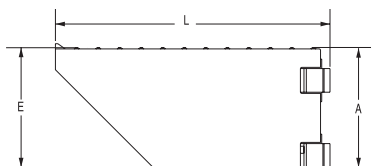
(Tool change rails pair capacity 4000 kg, working length of 1000 mm.).

| Models       | Capacities |         | Dimensions (mm.) |     | Installation<br>B (mm) |
|--------------|------------|---------|------------------|-----|------------------------|
|              | P (Kg)     | Lu (mm) | A                | E   |                        |
| TCRSF 4-800  | 4000       | 800     | 448              | 450 | 434                    |
| TCRSF 4-1000 | 4000       | 1000    | 448              | 450 | 434                    |
| TCRSF 4-1250 | 4000       | 1250    | 448              | 450 | 434                    |
| TCRSF 4-1500 | 4000       | 1500    | 448              | 450 | 434                    |
| TCRSF 6-800  | 6000       | 800     | 548              | 550 | 534                    |
| TCRSF 6-1000 | 6000       | 1000    | 548              | 550 | 534                    |
| TCRSF 6-1250 | 6000       | 1250    | 548              | 550 | 534                    |
| TCRSF 6-1500 | 6000       | 1500    | 548              | 550 | 534                    |

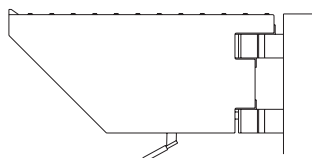
Dimensions and data subject to amendment



\*: Rotobilles or Transrollers, reduce dimension of C.



Guide a tool change A



Guide a tool change B

**USE**

The dissymmetrical joints in TCRDF tool change rails allow them to be folded INWARDS AND ONE OVER THE OTHER.

The tool change rails are only used as a pair.

**GENERAL TCRF USER SPECIFICATIONS**

 Rolling friction coefficient: 0.03 for steel tools with a surface finish of  $Ra = 3.2$ 

Admissible tool laying down speed &lt; 20 mm/sec.

Loads F Static uniformly distributed between 2 arms

Admissible temperature &lt; 60.c

Example of travel force calculation:

Data:

 Tool mass = 4000 kg, steel material,  $Ra = 3.2$ 

Rolling friction coefficient = 0.03

Approximate travel force

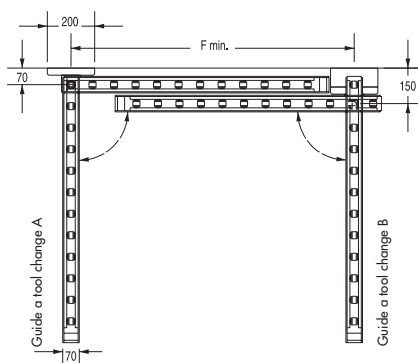
$$4000 \times 0.03 = 120 \text{ kg (120 daN)}$$

**To order :**

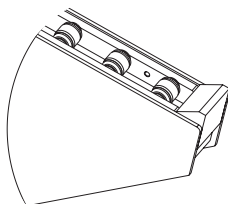
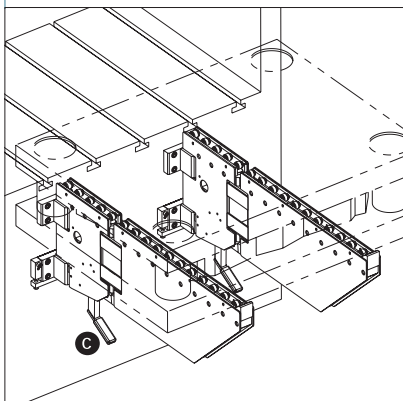
Specify the complete reference details of the pair of tool change rails :

e.g.: TCRSF 4 / 1000

(Tool change rails pair capacity 4000 kg, working length of 1000 mm.).



| Models       | Capacities |         | Dimensions (mm.) |     |     | Installation<br>B (mm) |
|--------------|------------|---------|------------------|-----|-----|------------------------|
|              | P (Kg)     | Lu (mm) | F mini           | A   | E   |                        |
| TCRDF 4-800  | 4000       | 800     | 1000             | 448 | 450 | 434                    |
| TCRDF 4-1000 | 4000       | 1000    | 1200             | 448 | 450 | 434                    |
| TCRDF 4-1250 | 4000       | 1250    | 1450             | 448 | 450 | 434                    |
| TCRDF 4-1500 | 4000       | 1500    | 1700             | 448 | 450 | 434                    |
| TCRDF 6-800  | 6000       | 800     | 1000             | 548 | 550 | 534                    |
| TCRDF 6-1000 | 6000       | 1000    | 1200             | 548 | 550 | 534                    |
| TCRDF 6-1250 | 6000       | 1250    | 1450             | 548 | 550 | 534                    |
| TCRDF 6-1500 | 6000       | 1500    | 1700             | 548 | 550 | 534                    |



### APPLICATION

TCAF tool change rails are used to load tools onto press tables safely and quickly. They are permanently fixed to the front of press tables with rotating brackets. They can adopt two set positions, the working position and the slide position that allows complete access to the front of the press.

### DESCRIPTION

Made from steel, their movement plane is constituted by compact bearing modules (A). These units are of the combined needle roller type with solid cages for heavy loads. An indexing pedal (C) allows for effective locking and rapid unlocking of the bracket so that you can obtain the positions desired. The ends of the tool change rails are equipped with a progressive stop.

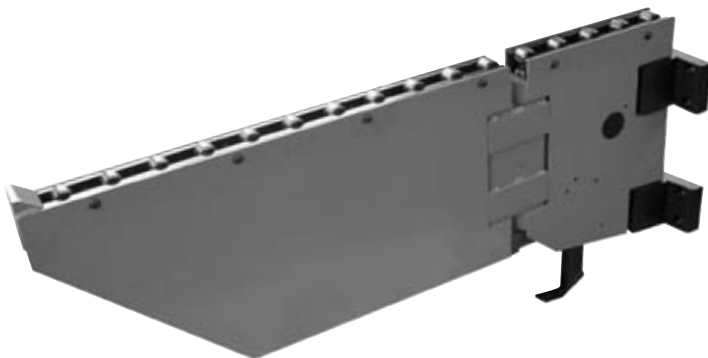
### ASSEMBLY & USE

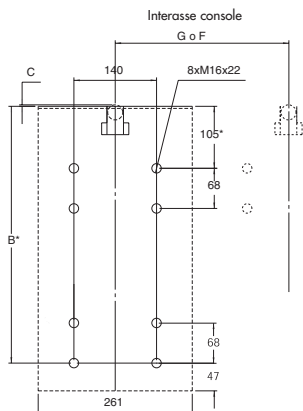
The tool change rails are used exclusively in pairs and are positioned and held in place at the front of the press tables with a set of threaded attachments.

The tool change rails can be slid to the right or to the left, without distinction.

Tools are moved manually or with the assistance of a motorised unit. The force required for movement depends upon the mass of the tool, its material and the quality of the surface finish. An average rolling friction coefficient is quoted in the specifications for the purpose of evaluating that force.

All the load values are given for static working conditions and are uniformly distributed per pair of tool change rails. Please abide by and reduce laying down speeds as much as possible in order to avoid impact that may engender dynamic overloads. Please see specifications.





\*: If Rotoball or Transroller, reduce dimension of C.

### GENERAL TCAF USER SPECIFICATIONS

Rolling friction coefficient: 0.03 for steel tools with a surface finish of  $R_a = 3.2$

Admissible tool laying down speed < 20 mm/sec.

Loads F Static uniformly distributed between 2 tool change rails

Admissible temperature < 60.c

Example of travel force calculation:

Data:

Tool mass = 4000 kg, steel material,  $R_a = 3.2$

Rolling friction coefficient = 0.03

Approximate travel force

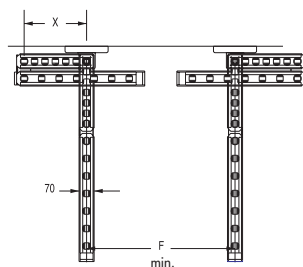
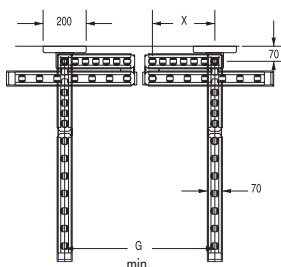
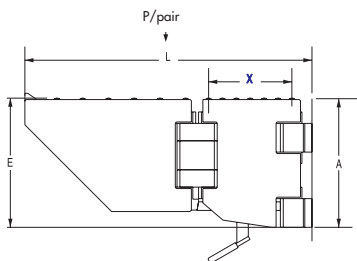
$4000 \times 0.03 = 120 \text{ kg (120 daN)}$

To order :

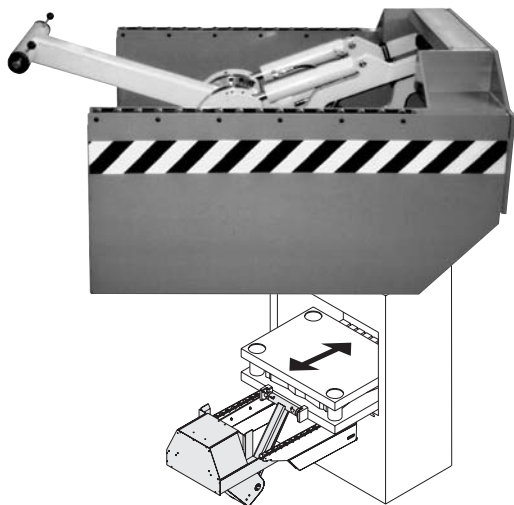
Quote the complete reference details of the pair of tool change rails:

e.g.: TCAF 4 / 1000

(Tool change rails pair capacity 4000 kg, working length of 1000 mm.).



| Models<br>BASE | Capacities |         | X (mm) | Dimensions (mm.) |        |     |     | Installation<br>B (mm) |
|----------------|------------|---------|--------|------------------|--------|-----|-----|------------------------|
|                | P (Kg)     | Lu (mm) |        | F mini           | G mini | A   | E   |                        |
| TCAF 4-800     | 4000       | 750     | 290    | 150              | 680    | 448 | 450 | 434                    |
| TCAF 4-1000    | 4000       | 950     | 290    | 550              | 680    | 448 | 450 | 434                    |
| TCAF 4-1000    | 4000       | 950     | 380    | 190              | 870    | 448 | 450 | 434                    |
| TCAF 4-1250    | 4000       | 1200    | 290    | 1050             | 680    | 448 | 450 | 434                    |
| TCAF 4-1250    | 4000       | 1200    | 380    | 690              | 870    | 448 | 450 | 434                    |
| TCAF 4-1250    | 4000       | 1200    | 470    | 330              | 1040   | 448 | 450 | 434                    |
| TCAF 4-1500    | 4000       | 1450    | 380    | 1350             | 870    | 448 | 450 | 434                    |
| TCAF 4-1500    | 4000       | 1450    | 470    | 1070             | 1040   | 448 | 450 | 434                    |
| TCAF 4-1500    | 4000       | 1450    | 560    | 710              | 1220   | 448 | 450 | 434                    |
| TCAF 6-800     | 6000       | 750     | 290    | 150              | 680    | 548 | 550 | 534                    |
| TCAF 6-1000    | 6000       | 950     | 290    | 550              | 680    | 548 | 550 | 534                    |
| TCAF 6-1000    | 6000       | 950     | 380    | 190              | 870    | 548 | 550 | 534                    |
| TCAF 6-1250    | 6000       | 1200    | 290    | 1050             | 680    | 548 | 550 | 534                    |
| TCAF 6-1250    | 6000       | 1200    | 380    | 690              | 870    | 548 | 550 | 534                    |
| TCAF 6-1250    | 6000       | 1200    | 470    | 330              | 1040   | 548 | 550 | 534                    |
| TCAF 6-1500    | 6000       | 1450    | 380    | 1350             | 870    | 548 | 550 | 534                    |
| TCAF 6-1500    | 6000       | 1450    | 470    | 1070             | 1040   | 548 | 550 | 534                    |
| TCAF 6-1500    | 6000       | 1450    | 560    | 710              | 1220   | 548 | 550 | 534                    |



**TCFM - MOTORISED TOOL CHANGE RAILS :  
INTERNATIONALLY PATENTED "QUICK BLOC" PUSH/PULL**

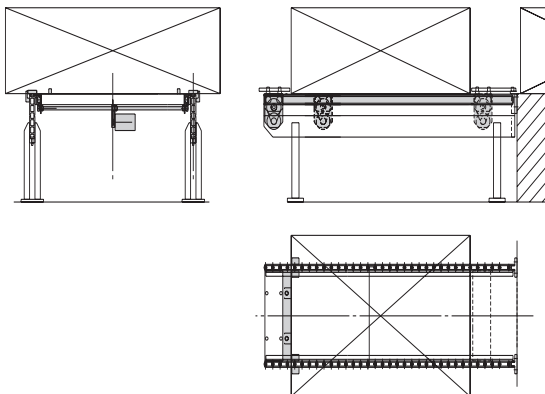
- Principle :  
Synchronous, double-jointed hydraulic scissors

- Hooking/unhooking :  
Standard : automatic/manual  
Optional : hydraulic

- Range :  
Stroke from 1000 to 1800 mm.  
Weight of tools: up to 10,000 kg.

- Applications :  
Referencing of tools on press bed;  
Extraction of tools from bed to support arms

NB :  
Tools are lowered onto the tool change rails directly via an overhead crane or a lift truck (ASK US FOR GUIDANCE).



**TCPM - MOTORISED TOOL CHANGE RAILS :  
"MOTORISED RAIL" PUSH/PULL**

- Principle :  
Mobile rail guided by tool change rails

- Hooking/unhooking :  
Standard: automatic/manual;  
Optional: hydraulic

- Range :  
Unlimited stroke  
Weight of tools: up to 20 T (above this, ask us for guidance).

- Application :  
Placement and extraction of tools of any capacity

NB :  
Tools are lowered onto the brackets directly via an overhead crane.



**SPECIAL TOOL CHANGE RAILS**

ROTOBLOC manufactures special tool change rails (in steel or aluminium) for specific applications.

These tool change rails may be independent or assembled through rails so as to create an assembly that can be handled in a single operation via an overhead crane or lift truck (ASK US FOR GUIDANCE).

## APPLICATION

Positioned in the press bed T slots, ROTOBILLES and TRANSROLLERS are used to move and change tools quickly and safely..

## DESCRIPTION

ROTOBILLES and TRANSROLLERS (Fig. 1) comprise a rectangular cross-section segment that can, as standard, take "ROTOBILLE" ball-type bearing modules (A) and/or bearing modules of the straight-roller (B) or TRANSROLLER-oriented (C) variety.

The sections made from high-resistance treated light alloy are rigid single blocks. The treated steel alloy bearing modules are equipped with high-quality BALLS for the ROTOBILLES and combined NEEDLE ROLLERS for TRANSROLLERS.

Modules of different types can be combined when equipping a particular section with the aim of resolving specific problems.

E.g.: (fig. 2) ROTOBILLE equipped with a roller module at each end in order to improve the tool's contact and to avoid marking it.

## HYDRAULIC AND MECHANICAL PRINCIPLES

A mechanical or a hydraulic version of TRANSROLLERS and ROTOBILLES can be used.

- *Mechanical version (fig. 3):* bearing modules lift the tool with the help of a spring (A). When the tool has been clamped or when its weight exceeds the total load capacity of the modules in operation, the spring is compressed and the tool rests on the press bed.

- *Hydraulic version (fig. 4):* The bearing module lifts the tool with the help of hydraulic pressure in the chamber (B). When the hydraulic pressure is removed, the tool rests on the press bed.

## LOAD & STROKE

The loads given in the table are dynamic unitary loads per segment (F) or per module (F/n), uniformly distributed. These loads have been evaluated in order to satisfy the majority of circumstances. A greater weight may be taken but it will have the effect of reducing the lifespan of the module as well as marking the lower part of the tools. Any use with excess weights is to be avoided.

The nominal stroke "C" is 1 mm. This stroke is standard for all types of segments installed in DIN650 T slots.

C = 1.25 mm. for a T slot with a nominal width of 18.

C = 1.50 mm. for a T slot with a nominal width of 22.

C = 1.50 mm. for a T slot with a nominal width of 24.

C = 2.00 mm. for a T slot with a nominal width of 28.

C = 2.00 mm. for a T slot with a nominal width of 36.

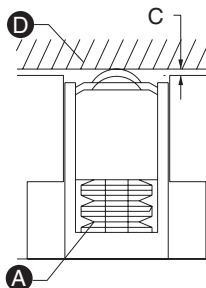
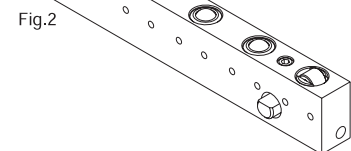
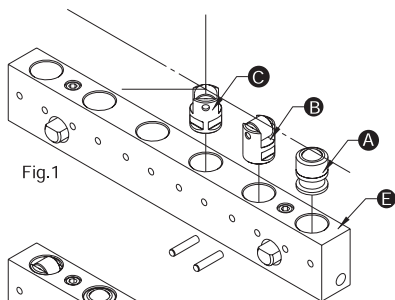


Fig.3

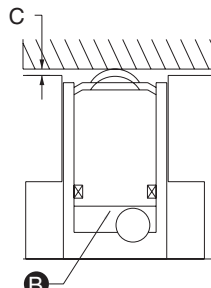


Fig.4

| Designation | DIN 650 |    |    |    | TS * M (Special) |    |    |    | TS * H (Special) |    |    |    |
|-------------|---------|----|----|----|------------------|----|----|----|------------------|----|----|----|
|             | a       | b  | c  | h  | a+               | a- | h+ | h- | a+               | a- | h+ | h- |
| 18 segment  | 18      | 30 | 12 | 30 | 22               | 17 | 38 | 24 | 22               | 18 | 38 | 29 |
| 22 segment  | 22      | 37 | 16 | 38 | 28               | 20 | 48 | 32 | 28               | 20 | 48 | 37 |
| 24 segment  | 24      | 42 | 18 | 42 | 28               | 20 | 48 | 33 | 28               | 22 | 48 | 38 |
| 28 segment  | 28      | 46 | 20 | 48 | 36               | 25 | 61 | 40 | 36               | 26 | 61 | 44 |
| 36 segment  | 36      | 56 | 25 | 61 | 36               | 32 | 86 | 51 | 36               | 32 | 86 | 54 |

## DIMENSIONS

The segments are installed in T-shaped slots meeting DIN 650 standard or rectangular slots. They are defined by the width,  $a$ , of the slot. Special sections are manufactured on demand. The table above shows DIN 650 standard and the special "a" and "h" possible designs under this standard.

## ASSEMBLY & USE

There are 3 different ways to fasten the segments in the T slots:

- Type BT (fig. 1): quick fastening with vertical grip spanner in any type of T-shaped slot. This type is only available for mechanical segments.

- Type BL (fig.2): quick fastening with lateral grip in any type of slot.

- Type BS (fig.3): Permanent fastening using screws and female threads in the bottom of T slots.

Any type of segment. The dimensional table gives the position of the attachments.

Refer to the HYDRAULIC PRESSURE GENERATORS section to choose an appropriate generator and ACCESSORIES for the connection.

## ORDER IDENTIFICATION

Complete the following coding grid:

|   |   |   |         |
|---|---|---|---------|
| 1 | 2 | 3 | 4 - 5/6 |
|---|---|---|---------|

1: Segment type: TU for slot complying with standard DIN 650,

S for slot not covered by standard DIN 650.

2: Assembly type: B same assembly with balls, R same assembly with rollers.

C\*\*RB combined assembly with rollers and balls.

The figure \*\* indicates the number of roller modules.

O\*\*DR right-oriented roller assembly. The figure \*\* indicates the angle.

O\*\*GR left-oriented roller assembly. The figure \*\* indicates the angle.

3: Action type: H hydraulic, M mechanical.

4: Width of DIN 650 "a" slot.

5: Total length, LT, of segment.

6: Type of fastening for the segment BT, BL or BS.

**Example 1:** TUBM 22-1116/BT: mechanical DIN650 segment, same assembly with ball modules; BT quick fastening;  $a = 22$ ;  $LT = 1116$ .

**Example 2:** TUC2RBH22-1116/BL: hydraulic DIN650 segment, combined assembly with 2 roller modules and the rest with balls; BL quick fastening;  $a = 22$ ;  $LT = 1116$ .

N.B.: indicate  $a$ ,  $l$  and  $h$  dimensions of non-DIN650 TS segments.

Note: oriented roller segments not available in width  $a = 18$ .

## GENERAL USER SPECIFICATIONS

Create a 1 mm. chamfer at 30° (of the corner of the tool to the passing level of the roller modules, in order to avoid impact). Keep tool-table interfaces clean.

The following values are given in the dimensional tables:

$V$  = Nominal tool movement speed;

$F/nB$  = nominal load per ball module;

$P_{max}$  = Max. hydraulic pressure;

$P_{noR}$  = Nominal Transrollers hydraulic pressure;

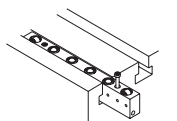
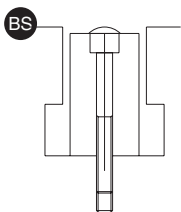
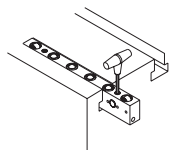
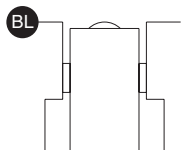
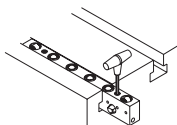
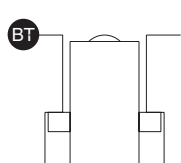
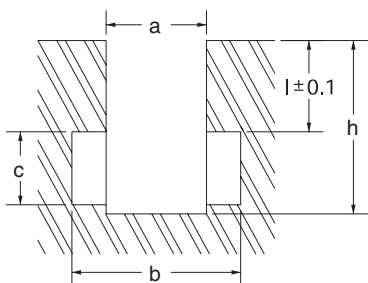
$Cf$  = Approx. rolling friction coefficient

(load distributed throughout hydraulic module, steel tool  $R_a = 3.2$ . Nominal hydraulic pressure).

$D$  = diameter of ball or roller of module;

$F/nR$  = nominal load per roller module;

$P_{noB}$  = Nominal Rotobilles hydraulic pressure;

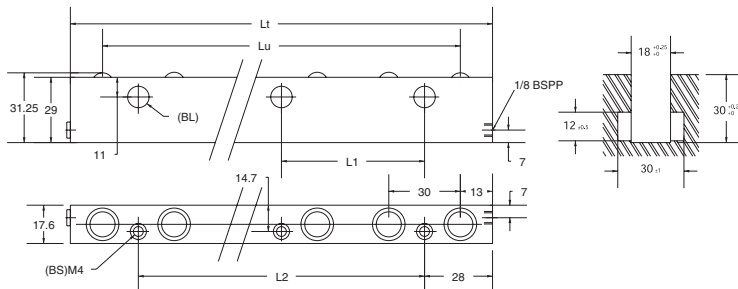


Dimensions and data subject to amendment

| TURH 18<br>TUBH 18 | Dimensions |          |          |          |    | Lifting power         |                       | Weight<br>kg |
|--------------------|------------|----------|----------|----------|----|-----------------------|-----------------------|--------------|
|                    | Lt<br>mm   | Lu<br>mm | L1<br>mm | L2<br>mm | n  | TUBH<br>F<br>daN (kg) | TURH<br>F<br>daN (kg) |              |
| Unit               |            |          |          |          |    |                       |                       |              |
| 18 - 86            | 86         | 60       |          |          | 3  | 120                   | 240                   | 0,16         |
| 18 - 116           | 116        | 90       |          | 60       | 4  | 160                   | 320                   | 0,20         |
| 18 - 146           | 146        | 120      |          | 90       | 5  | 200                   | 400                   | 0,25         |
| 18 - 176           | 176        | 150      |          | 120      | 6  | 240                   | 480                   | 0,29         |
| 18 - 206           | 206        | 180      |          | 150      | 7  | 280                   | 560                   | 0,33         |
| 18 - 236           | 236        | 210      |          | 180      | 8  | 320                   | 640                   | 0,38         |
| 18 - 266           | 266        | 240      |          | 210      | 9  | 360                   | 720                   | 0,42         |
| 18 - 296           | 296        | 270      |          | 240      | 10 | 400                   | 800                   | 0,47         |
| 18 - 326           | 326        | 300      |          | 270      | 11 | 440                   | 880                   | 0,51         |
| 18 - 356           | 356        | 330      |          | 300      | 12 | 480                   | 960                   | 0,55         |
| 18 - 386           | 386        | 360      |          | 330      | 13 | 520                   | 1040                  | 0,60         |
| 18 - 416           | 416        | 390      |          | 360      | 14 | 560                   | 1120                  | 0,64         |
| 18 - 446           | 446        | 420      |          | 390      | 15 | 600                   | 1200                  | 0,69         |
| 18 - 476           | 476        | 450      |          | 420      | 16 | 640                   | 1280                  | 0,73         |
| 18 - 506           | 506        | 480      |          | 450      | 17 | 680                   | 1360                  | 0,77         |
| 18 - 536           | 536        | 510      |          | 480      | 18 | 720                   | 1440                  | 0,82         |
| 18 - 566           | 566        | 540      |          | 510      | 19 | 760                   | 1520                  | 0,86         |
| 18 - 596           | 596        | 570      |          | 540      | 20 | 800                   | 1600                  | 0,91         |
| 18 - 626           | 626        | 600      |          | 570      | 21 | 840                   | 1680                  | 0,95         |
| 18 - 656           | 656        | 630      |          | 600      | 22 | 880                   | 1760                  | 0,99         |
| 18 - 686           | 686        | 660      |          | 630      | 23 | 920                   | 1840                  | 1,04         |
| 18 - 716           | 716        | 690      |          | 660      | 24 | 960                   | 1920                  | 1,08         |
| 18 - 746           | 746        | 720      | 360      | 690      | 25 | 1000                  | 2000                  | 1,13         |
| 18 - 776           | 776        | 750      | 360      | 720      | 26 | 1040                  | 2080                  | 1,17         |
| 18 - 806           | 806        | 780      | 390      | 750      | 27 | 1080                  | 2160                  | 1,21         |
| 18 - 836           | 836        | 810      | 390      | 780      | 28 | 1120                  | 2240                  | 1,26         |
| 18 - 866           | 866        | 840      | 420      | 810      | 29 | 1160                  | 2320                  | 1,30         |
| 18 - 896           | 896        | 870      | 420      | 840      | 30 | 1200                  | 2400                  | 1,35         |
| 18 - 926           | 926        | 900      | 450      | 870      | 31 | 1240                  | 2480                  | 1,39         |
| 18 - 956           | 956        | 930      | 450      | 900      | 32 | 1280                  | 2560                  | 1,43         |
| 18 - 986           | 986        | 960      | 480      | 930      | 33 | 1320                  | 2640                  | 1,48         |
| 18 - 1016          | 1016       | 990      | 480      | 960      | 34 | 1360                  | 2720                  | 1,52         |
| 18 - 1046          | 1046       | 1020     | 510      | 990      | 35 | 1400                  | 2800                  | 1,57         |
| 18 - 1076          | 1076       | 1050     | 510      | 1020     | 36 | 1440                  | 2880                  | 1,61         |
| 18 - 1106          | 1106       | 1080     | 540      | 1050     | 37 | 1480                  | 2960                  | 1,65         |
| 18 - 1136          | 1136       | 1110     | 540      | 1080     | 38 | 1520                  | 3040                  | 1,70         |
| 18 - 1166          | 1166       | 1140     | 570      | 1110     | 39 | 1560                  | 3120                  | 1,74         |
| 18 - 1196          | 1196       | 1170     | 570      | 1140     | 40 | 1600                  | 3200                  | 1,79         |
| 18 - 1226          | 1226       | 1200     | 600      | 1170     | 41 | 1640                  | 3280                  | 1,83         |
| 18 - 1256          | 1256       | 1230     | 600      | 1200     | 42 | 1680                  | 3360                  | 1,87         |
| 18 - 1286          | 1286       | 1260     | 630      | 1230     | 43 | 1720                  | 3440                  | 1,92         |
| 18 - 1316          | 1316       | 1290     | 630      | 1260     | 44 | 1760                  | 3520                  | 1,96         |
| 18 - 1346          | 1346       | 1320     | 660      | 1290     | 45 | 1800                  | 3600                  | 2,01         |
| 18 - 1376          | 1376       | 1350     | 660      | 1320     | 46 | 1840                  | 3680                  | 2,05         |
| 18 - 1406          | 1406       | 1380     | 690      | 1350     | 47 | 1880                  | 3760                  | 2,09         |
| 18 - 1436          | 1436       | 1410     | 690      | 1380     | 48 | 1920                  | 3840                  | 2,14         |
| 18 - 1466          | 1466       | 1440     | 720      | 1410     | 49 | 1960                  | 3920                  | 2,18         |
| 18 - 1496          | 1496       | 1470     | 720      | 1440     | 50 | 2000                  | 4000                  | 2,23         |

## General user specifications

|      |          |      |
|------|----------|------|
| V    | m/mn     | 8    |
| D    | mm       | 8    |
| F/nB | daN (kg) | 40   |
| F/nR | daN (kg) | 80   |
| PnoB | bar      | 32   |
| PnoR | bar      | 64   |
| Pmax | bar      | 100  |
| Cf   |          | 0,05 |

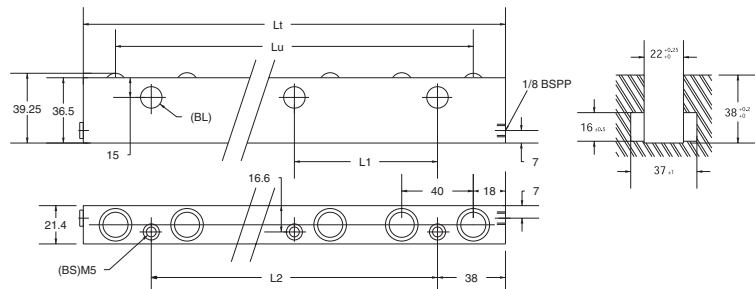


Dimensions and data subject to amendment

| TURH 22<br>TUBH 22<br><br>Unit | Dimensions |          |          |          |    | Lifting power         |                       | Weight<br>kg |
|--------------------------------|------------|----------|----------|----------|----|-----------------------|-----------------------|--------------|
|                                | Lt<br>mm   | Lu<br>mm | L1<br>mm | L2<br>mm | n  | TUBH<br>F<br>daN (kg) | TURH<br>F<br>daN (kg) |              |
| 22 - 116                       | 116        | 80       |          |          | 3  | 240                   | 480                   | 0,3          |
| 22 - 156                       | 156        | 120      |          | 80       | 4  | 320                   | 640                   | 0,4          |
| 22 - 196                       | 196        | 160      |          | 120      | 5  | 400                   | 800                   | 0,5          |
| 22 - 236                       | 236        | 200      |          | 160      | 6  | 480                   | 960                   | 0,6          |
| 22 - 276                       | 276        | 240      |          | 200      | 7  | 560                   | 1120                  | 0,7          |
| 22 - 316                       | 316        | 280      |          | 240      | 8  | 640                   | 1280                  | 0,8          |
| 22 - 356                       | 356        | 320      |          | 280      | 9  | 720                   | 1440                  | 0,9          |
| 22 - 396                       | 396        | 360      |          | 320      | 10 | 800                   | 1600                  | 1            |
| 22 - 436                       | 436        | 400      |          | 360      | 11 | 880                   | 1760                  | 1,1          |
| 22 - 476                       | 476        | 440      |          | 400      | 12 | 960                   | 1920                  | 1,2          |
| 22 - 516                       | 516        | 480      |          | 440      | 13 | 1040                  | 2080                  | 1,3          |
| 22 - 556                       | 556        | 520      |          | 480      | 14 | 1120                  | 2240                  | 1,4          |
| 22 - 596                       | 596        | 560      |          | 520      | 15 | 1200                  | 2400                  | 1,5          |
| 22 - 636                       | 636        | 600      |          | 560      | 16 | 1280                  | 2560                  | 1,6          |
| 22 - 676                       | 676        | 640      |          | 600      | 17 | 1360                  | 2720                  | 1,7          |
| 22 - 716                       | 716        | 680      |          | 640      | 18 | 1440                  | 2880                  | 1,7          |
| 22 - 756                       | 756        | 720      |          | 680      | 19 | 1520                  | 3040                  | 1,8          |
| 22 - 796                       | 796        | 760      |          | 720      | 20 | 1600                  | 3200                  | 1,9          |
| 22 - 836                       | 836        | 800      |          | 760      | 21 | 1680                  | 3360                  | 2            |
| 22 - 876                       | 876        | 840      |          | 800      | 22 | 1760                  | 3520                  | 2,1          |
| 22 - 916                       | 916        | 880      |          | 840      | 23 | 1840                  | 3680                  | 2,2          |
| 22 - 956                       | 956        | 920      |          | 880      | 24 | 1920                  | 3840                  | 2,3          |
| 22 - 996                       | 996        | 960      |          | 920      | 25 | 2000                  | 4000                  | 2,4          |
| 22 - 1036                      | 1036       | 1000     | 480      | 960      | 26 | 2080                  | 4160                  | 2,5          |
| 22 - 1076                      | 1076       | 1040     | 480      | 1000     | 27 | 2160                  | 4320                  | 2,6          |
| 22 - 1116                      | 1116       | 1080     | 520      | 1040     | 28 | 2240                  | 4480                  | 2,7          |
| 22 - 1156                      | 1156       | 1120     | 520      | 1080     | 29 | 2320                  | 4640                  | 2,8          |
| 22 - 1196                      | 1196       | 1160     | 560      | 1120     | 30 | 2400                  | 4800                  | 2,9          |
| 22 - 1236                      | 1236       | 1200     | 560      | 1160     | 31 | 2480                  | 4960                  | 3            |
| 22 - 1276                      | 1276       | 1240     | 600      | 1200     | 32 | 2560                  | 5120                  | 3,1          |
| 22 - 1316                      | 1316       | 1280     | 600      | 1240     | 33 | 2640                  | 5280                  | 3,2          |
| 22 - 1356                      | 1356       | 1320     | 640      | 1280     | 34 | 2720                  | 5440                  | 3,3          |
| 22 - 1396                      | 1396       | 1360     | 640      | 1320     | 35 | 2800                  | 5600                  | 3,3          |
| 22 - 1436                      | 1436       | 1400     | 680      | 1360     | 36 | 2880                  | 5760                  | 3,4          |
| 22 - 1476                      | 1476       | 1440     | 680      | 1400     | 37 | 2960                  | 5920                  | 3,5          |
| 22 - 1516                      | 1516       | 1480     | 720      | 1440     | 38 | 3040                  | 6080                  | 3,6          |
| 22 - 1556                      | 1556       | 1520     | 720      | 1480     | 39 | 3120                  | 6240                  | 3,7          |
| 22 - 1596                      | 1596       | 1560     | 760      | 1520     | 40 | 3200                  | 6400                  | 3,8          |
| 22 - 1636                      | 1636       | 1600     | 760      | 1560     | 41 | 3280                  | 6560                  | 3,9          |
| 22 - 1676                      | 1676       | 1640     | 800      | 1600     | 42 | 3360                  | 6720                  | 4            |
| 22 - 1716                      | 1716       | 1680     | 800      | 1640     | 43 | 3440                  | 6880                  | 4,1          |
| 22 - 1756                      | 1756       | 1720     | 840      | 1680     | 44 | 3520                  | 7040                  | 4,2          |
| 22 - 1796                      | 1796       | 1760     | 840      | 1720     | 45 | 3600                  | 7200                  | 4,3          |
| 22 - 1836                      | 1836       | 1800     | 880      | 1760     | 46 | 3680                  | 7360                  | 4,4          |
| 22 - 1876                      | 1876       | 1840     | 880      | 1800     | 47 | 3760                  | 7520                  | 4,5          |
| 22 - 1916                      | 1916       | 1880     | 920      | 1840     | 48 | 3840                  | 7680                  | 4,6          |
| 22 - 1956                      | 1956       | 1920     | 920      | 1880     | 49 | 3920                  | 7840                  | 4,7          |
| 22 - 1996                      | 1996       | 1960     | 960      | 1920     | 50 | 4000                  | 8000                  | 4,8          |

## General user specifications

|      |          |      |
|------|----------|------|
| V    | m/mn     | 10   |
| D    | mm       | 12   |
| F/nB | daN (kg) | 80   |
| F/nR | daN (kg) | 160  |
| PnoB | bar      | 40   |
| PnoR | bar      | 80   |
| Pmax | bar      | 100  |
| Cf   |          | 0,05 |

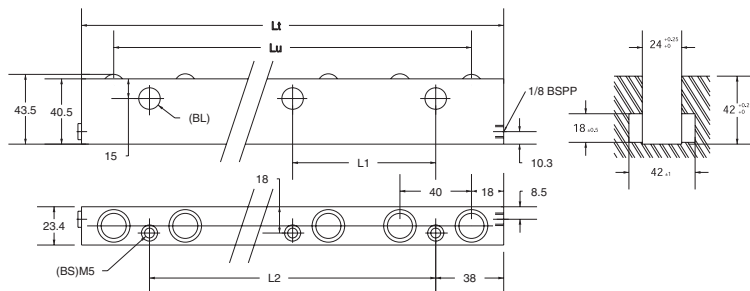


Dimensions and data subject to amendment

| TURH 24<br>TUBH 24 | Dimensions |          |          |          |    | Lifting power         |                       | Weight<br>kg |
|--------------------|------------|----------|----------|----------|----|-----------------------|-----------------------|--------------|
|                    | Lt<br>mm   | Lu<br>mm | L1<br>mm | L2<br>mm | n  | TUBH<br>F<br>daN (kg) | TURH<br>F<br>daN (kg) |              |
| Unit               |            |          |          |          |    |                       |                       |              |
| 24 - 116           | 116        | 80       |          |          | 3  | 240                   | 480                   | 0,4          |
| 24 - 156           | 156        | 120      |          | 80       | 4  | 320                   | 640                   | 0,5          |
| 24 - 196           | 196        | 160      |          | 120      | 5  | 400                   | 800                   | 0,6          |
| 24 - 236           | 236        | 200      |          | 160      | 6  | 480                   | 960                   | 0,7          |
| 24 - 276           | 276        | 240      |          | 200      | 7  | 560                   | 1120                  | 0,8          |
| 24 - 316           | 316        | 280      |          | 240      | 8  | 640                   | 1280                  | 1            |
| 24 - 356           | 356        | 320      |          | 280      | 9  | 720                   | 1440                  | 1,1          |
| 24 - 396           | 396        | 360      |          | 320      | 10 | 800                   | 1600                  | 1,2          |
| 24 - 436           | 436        | 400      |          | 360      | 11 | 880                   | 1760                  | 1,3          |
| 24 - 476           | 476        | 440      |          | 400      | 12 | 960                   | 1920                  | 1,4          |
| 24 - 516           | 516        | 480      |          | 440      | 13 | 1040                  | 2080                  | 1,5          |
| 24 - 556           | 556        | 520      |          | 480      | 14 | 1120                  | 2240                  | 1,6          |
| 24 - 596           | 596        | 560      |          | 520      | 15 | 1200                  | 2400                  | 1,7          |
| 24 - 636           | 636        | 600      |          | 560      | 16 | 1280                  | 2560                  | 1,8          |
| 24 - 676           | 676        | 640      |          | 600      | 17 | 1360                  | 2720                  | 1,9          |
| 24 - 716           | 716        | 680      |          | 640      | 18 | 1440                  | 2880                  | 2,1          |
| 24 - 756           | 756        | 720      |          | 680      | 19 | 1520                  | 3040                  | 2,2          |
| 24 - 796           | 796        | 760      |          | 720      | 20 | 1600                  | 3200                  | 2,3          |
| 24 - 836           | 836        | 800      |          | 760      | 21 | 1680                  | 3360                  | 2,4          |
| 24 - 876           | 876        | 840      |          | 800      | 22 | 1760                  | 3520                  | 2,5          |
| 24 - 916           | 916        | 880      |          | 840      | 23 | 1840                  | 3680                  | 2,6          |
| 24 - 956           | 956        | 920      |          | 880      | 24 | 1920                  | 3840                  | 2,7          |
| 24 - 996           | 996        | 960      |          | 920      | 25 | 2000                  | 4000                  | 2,8          |
| 24 - 1036          | 1036       | 1000     | 480      | 960      | 26 | 2080                  | 4160                  | 2,9          |
| 24 - 1076          | 1076       | 1040     | 480      | 1000     | 27 | 2160                  | 4320                  | 3            |
| 24 - 1116          | 1116       | 1080     | 520      | 1040     | 28 | 2240                  | 4480                  | 3,2          |
| 24 - 1156          | 1156       | 1120     | 520      | 1080     | 29 | 2320                  | 4640                  | 3,3          |
| 24 - 1196          | 1196       | 1160     | 560      | 1120     | 30 | 2400                  | 4800                  | 3,4          |
| 24 - 1236          | 1236       | 1200     | 560      | 1160     | 31 | 2480                  | 4960                  | 3,5          |
| 24 - 1276          | 1276       | 1240     | 600      | 1200     | 32 | 2560                  | 5120                  | 3,6          |
| 24 - 1316          | 1316       | 1280     | 600      | 1240     | 33 | 2640                  | 5280                  | 3,7          |
| 24 - 1356          | 1356       | 1320     | 640      | 1280     | 34 | 2720                  | 5440                  | 3,8          |
| 24 - 1396          | 1396       | 1360     | 640      | 1320     | 35 | 2800                  | 5600                  | 3,9          |
| 24 - 1436          | 1436       | 1400     | 680      | 1360     | 36 | 2880                  | 5760                  | 4            |
| 24 - 1476          | 1476       | 1440     | 680      | 1400     | 37 | 2960                  | 5920                  | 4,1          |
| 24 - 1516          | 1516       | 1480     | 720      | 1440     | 38 | 3040                  | 6080                  | 4,3          |
| 24 - 1556          | 1556       | 1520     | 720      | 1480     | 39 | 3120                  | 6240                  | 4,4          |
| 24 - 1596          | 1596       | 1560     | 760      | 1520     | 40 | 3200                  | 6400                  | 4,5          |
| 24 - 1636          | 1636       | 1600     | 760      | 1560     | 41 | 3280                  | 6560                  | 4,6          |
| 24 - 1676          | 1676       | 1640     | 800      | 1600     | 42 | 3360                  | 6720                  | 4,7          |
| 24 - 1716          | 1716       | 1680     | 800      | 1640     | 43 | 3440                  | 6880                  | 4,8          |
| 24 - 1756          | 1756       | 1720     | 840      | 1680     | 44 | 3520                  | 7040                  | 4,9          |
| 24 - 1796          | 1796       | 1760     | 840      | 1720     | 45 | 3600                  | 7200                  | 5            |
| 24 - 1836          | 1836       | 1800     | 880      | 1760     | 46 | 3680                  | 7360                  | 5,1          |
| 24 - 1876          | 1876       | 1840     | 880      | 1800     | 47 | 3760                  | 7520                  | 5,2          |
| 24 - 1916          | 1916       | 1880     | 920      | 1840     | 48 | 3840                  | 7680                  | 5,4          |
| 24 - 1956          | 1956       | 1920     | 920      | 1880     | 49 | 3920                  | 7840                  | 5,5          |
| 24 - 1996          | 1996       | 1960     | 960      | 1920     | 50 | 4000                  | 8000                  | 5,6          |

## General user specifications

|      |          |      |
|------|----------|------|
| V    | m/mn     | 10   |
| D    | mm       | 12   |
| F/nB | daN (kg) | 80   |
| F/nR | daN (kg) | 160  |
| PnoB | bar      | 40   |
| PnoR | bar      | 80   |
| Pmax | bar      | 100  |
| Cf   |          | 0,05 |

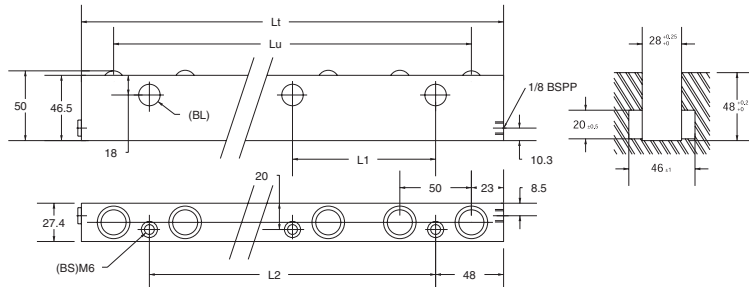


Dimensions and data subject to amendment

| TURH 28<br>TUBH 28 | Dimensions |          |          |          |    | Lifting power         |                       | Weight<br>kg |
|--------------------|------------|----------|----------|----------|----|-----------------------|-----------------------|--------------|
|                    | Lt<br>mm   | Lu<br>mm | L1<br>mm | L2<br>mm | n  | TUBH<br>F<br>daN (kg) | TURH<br>F<br>daN (kg) |              |
| 28 - 146           | 146        | 100      |          |          | 3  | 375                   | 750                   | 0,7          |
| 28 - 196           | 196        | 150      |          | 100      | 4  | 500                   | 1000                  | 0,9          |
| 28 - 246           | 246        | 200      |          | 150      | 5  | 625                   | 1250                  | 1,1          |
| 28 - 296           | 296        | 250      |          | 200      | 6  | 750                   | 1500                  | 1,3          |
| 28 - 346           | 346        | 300      |          | 250      | 7  | 875                   | 1750                  | 1,5          |
| 28 - 396           | 396        | 350      |          | 300      | 8  | 1000                  | 2000                  | 1,7          |
| 28 - 446           | 446        | 400      |          | 350      | 9  | 1125                  | 2250                  | 1,9          |
| 28 - 496           | 496        | 450      |          | 400      | 10 | 1250                  | 2500                  | 2,1          |
| 28 - 546           | 546        | 500      |          | 450      | 11 | 1375                  | 2750                  | 2,3          |
| 28 - 596           | 596        | 550      |          | 500      | 12 | 1500                  | 3000                  | 2,5          |
| 28 - 646           | 646        | 600      |          | 550      | 13 | 1625                  | 3250                  | 2,7          |
| 28 - 696           | 696        | 650      |          | 600      | 14 | 1750                  | 3500                  | 2,9          |
| 28 - 746           | 746        | 700      |          | 650      | 15 | 1875                  | 3750                  | 3,1          |
| 28 - 796           | 796        | 750      |          | 700      | 16 | 2000                  | 4000                  | 3,2          |
| 28 - 846           | 846        | 800      |          | 750      | 17 | 2125                  | 4250                  | 3,4          |
| 28 - 896           | 896        | 850      |          | 800      | 18 | 2250                  | 4500                  | 3,6          |
| 28 - 946           | 946        | 900      |          | 850      | 19 | 2375                  | 4750                  | 3,8          |
| 28 - 996           | 996        | 950      |          | 900      | 20 | 2500                  | 5000                  | 4            |
| 28 - 1046          | 1046       | 1000     |          | 950      | 21 | 2625                  | 5250                  | 4,2          |
| 28 - 1096          | 1096       | 1050     |          | 1000     | 22 | 2750                  | 5500                  | 4,4          |
| 28 - 1146          | 1146       | 1100     |          | 1050     | 23 | 2875                  | 5750                  | 4,6          |
| 28 - 1196          | 1196       | 1150     | 550      | 1100     | 24 | 3000                  | 6000                  | 4,8          |
| 28 - 1246          | 1246       | 1200     | 550      | 1150     | 25 | 3125                  | 6250                  | 5            |
| 28 - 1296          | 1296       | 1250     | 600      | 1200     | 26 | 3250                  | 6500                  | 5,2          |
| 28 - 1346          | 1346       | 1300     | 600      | 1250     | 27 | 3375                  | 6750                  | 5,4          |
| 28 - 1396          | 1396       | 1350     | 650      | 1300     | 28 | 3500                  | 7000                  | 5,6          |
| 28 - 1446          | 1446       | 1400     | 650      | 1350     | 29 | 3625                  | 7250                  | 5,8          |
| 28 - 1496          | 1496       | 1450     | 700      | 1400     | 30 | 3750                  | 7500                  | 6            |
| 28 - 1546          | 1546       | 1500     | 700      | 1450     | 31 | 3875                  | 7750                  | 6,2          |
| 28 - 1596          | 1596       | 1550     | 750      | 1500     | 32 | 4000                  | 8000                  | 6,4          |
| 28 - 1646          | 1646       | 1600     | 750      | 1550     | 33 | 4125                  | 8250                  | 6,6          |
| 28 - 1696          | 1696       | 1650     | 800      | 1600     | 34 | 4250                  | 8500                  | 6,8          |
| 28 - 1746          | 1746       | 1700     | 800      | 1650     | 35 | 4375                  | 8750                  | 7            |
| 28 - 1796          | 1796       | 1750     | 850      | 1700     | 36 | 4500                  | 9000                  | 7,1          |
| 28 - 1846          | 1846       | 1800     | 850      | 1750     | 37 | 4625                  | 9250                  | 7,3          |
| 28 - 1896          | 1896       | 1850     | 900      | 1800     | 38 | 4750                  | 9500                  | 7,5          |
| 28 - 1946          | 1946       | 1900     | 900      | 1850     | 39 | 4875                  | 9750                  | 7,7          |
| 28 - 1996          | 1996       | 1950     | 950      | 1900     | 40 | 5000                  | 10000                 | 7,9          |
| 28 - 2046          | 2046       | 2000     | 950      | 1950     | 41 | 5125                  | 10250                 | 8,1          |
| 28 - 2096          | 2096       | 2050     | 1000     | 2000     | 42 | 5250                  | 10500                 | 8,3          |
| 28 - 2146          | 2146       | 2100     | 1000     | 2050     | 43 | 5375                  | 10750                 | 8,5          |
| 28 - 2196          | 2196       | 2150     | 1050     | 2100     | 44 | 5500                  | 11000                 | 8,7          |
| 28 - 2246          | 2246       | 2200     | 1050     | 2150     | 45 | 5625                  | 11250                 | 8,9          |
| 28 - 2296          | 2296       | 2250     | 2 x 750  | 2200     | 46 | 5750                  | 11500                 | 9,1          |
| 28 - 2346          | 2346       | 2300     | 2 x 750  | 2250     | 47 | 5875                  | 11750                 | 9,3          |
| 28 - 2396          | 2396       | 2350     | 2 x 750  | 2300     | 48 | 6000                  | 12000                 | 9,5          |
| 28 - 2446          | 2446       | 2400     | 2 x 800  | 2350     | 49 | 6125                  | 12250                 | 9,7          |
| 28 - 2496          | 2496       | 2450     | 2 x 800  | 2400     | 50 | 6250                  | 12500                 | 9,9          |

## General user specifications

|      |          |      |
|------|----------|------|
| V    | m/mn     | 12   |
| D    | mm       | 15   |
| F/nB | daN (kg) | 125  |
| F/nR | daN (kg) | 250  |
| PnoB | bar      | 42   |
| PnoR | bar      | 85   |
| Pmax | bar      | 100  |
| Cf   |          | 0,05 |

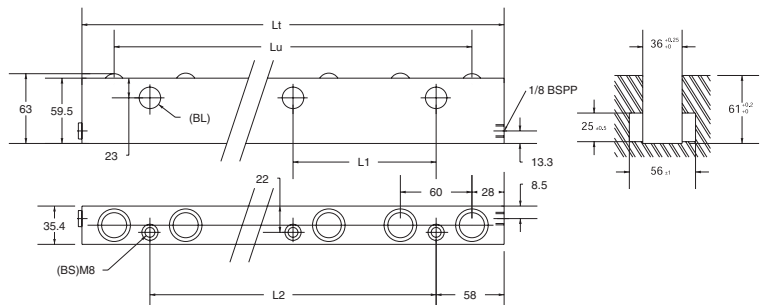


*Dimensions and data subject to amendment*

| TURH 36<br>TUBH 36 | Dimensions |          |          |          |    | Lifting power         |                       | Weight<br>kg |
|--------------------|------------|----------|----------|----------|----|-----------------------|-----------------------|--------------|
|                    | Lt<br>mm   | Lu<br>mm | L1<br>mm | L2<br>mm | n  | TUBH<br>F<br>daN (kg) | TURH<br>F<br>daN (kg) |              |
| Unit               |            |          |          |          |    |                       |                       |              |
| 36 - 176           | 176        | 120      |          |          | 3  | 600                   | 1200                  | 1,3          |
| 36 - 236           | 236        | 180      |          | 120      | 4  | 800                   | 1600                  | 1,7          |
| 36 - 296           | 296        | 240      |          | 180      | 5  | 1000                  | 2000                  | 2,1          |
| 36 - 356           | 356        | 300      |          | 240      | 6  | 1200                  | 2400                  | 2,5          |
| 36 - 416           | 416        | 360      |          | 300      | 7  | 1400                  | 2800                  | 2,9          |
| 36 - 476           | 476        | 420      |          | 360      | 8  | 1600                  | 3200                  | 3,2          |
| 36 - 536           | 536        | 480      |          | 420      | 9  | 1800                  | 3600                  | 3,6          |
| 36 - 596           | 596        | 540      |          | 480      | 10 | 2000                  | 4000                  | 4            |
| 36 - 656           | 656        | 600      |          | 540      | 11 | 2200                  | 4400                  | 4,4          |
| 36 - 716           | 716        | 660      |          | 600      | 12 | 2400                  | 4800                  | 4,8          |
| 36 - 776           | 776        | 720      |          | 660      | 13 | 2600                  | 5200                  | 5,1          |
| 36 - 836           | 836        | 780      |          | 720      | 14 | 2800                  | 5600                  | 5,5          |
| 36 - 896           | 896        | 840      |          | 780      | 15 | 3000                  | 6000                  | 5,9          |
| 36 - 956           | 956        | 900      |          | 840      | 16 | 3200                  | 6400                  | 6,3          |
| 36 - 1016          | 1016       | 960      |          | 900      | 17 | 3400                  | 6800                  | 6,7          |
| 36 - 1076          | 1076       | 1020     |          | 960      | 18 | 3600                  | 7200                  | 7,0          |
| 36 - 1136          | 1136       | 1080     |          | 1020     | 19 | 3800                  | 7600                  | 7,4          |
| 36 - 1196          | 1196       | 1140     |          | 1080     | 20 | 4000                  | 8000                  | 7,8          |
| 36 - 1256          | 1256       | 1200     |          | 1140     | 21 | 4200                  | 8400                  | 8,2          |
| 36 - 1316          | 1316       | 1260     | 600      | 1200     | 22 | 4400                  | 8800                  | 8,6          |
| 36 - 1376          | 1376       | 1320     | 600      | 1260     | 23 | 4600                  | 9200                  | 8,9          |
| 36 - 1436          | 1436       | 1380     | 660      | 1320     | 24 | 4800                  | 9600                  | 9,3          |
| 36 - 1496          | 1496       | 1440     | 660      | 1380     | 25 | 5000                  | 10000                 | 9,7          |
| 36 - 1556          | 1556       | 1500     | 720      | 1440     | 26 | 5200                  | 10400                 | 10,1         |
| 36 - 1616          | 1616       | 1560     | 720      | 1500     | 27 | 5400                  | 10800                 | 10,5         |
| 36 - 1676          | 1676       | 1620     | 780      | 1560     | 28 | 5600                  | 11200                 | 10,8         |
| 36 - 1736          | 1736       | 1680     | 780      | 1620     | 29 | 5800                  | 11600                 | 11,2         |
| 36 - 1796          | 1796       | 1740     | 840      | 1680     | 30 | 6000                  | 12000                 | 11,6         |
| 36 - 1856          | 1856       | 1800     | 840      | 1740     | 31 | 6200                  | 12400                 | 12,0         |
| 36 - 1916          | 1916       | 1860     | 900      | 1800     | 32 | 6400                  | 12800                 | 12,4         |
| 36 - 1976          | 1976       | 1920     | 900      | 1860     | 33 | 6600                  | 13200                 | 12,7         |
| 36 - 2036          | 2036       | 1980     | 960      | 1920     | 34 | 6800                  | 13600                 | 13,1         |
| 36 - 2096          | 2096       | 2040     | 960      | 1980     | 35 | 7000                  | 14000                 | 13,5         |
| 36 - 2156          | 2156       | 2100     | 1020     | 2040     | 36 | 7200                  | 14400                 | 13,9         |
| 36 - 2216          | 2216       | 2160     | 1020     | 2100     | 37 | 7400                  | 14800                 | 14,3         |
| 36 - 2276          | 2276       | 2220     | 1080     | 2160     | 38 | 7600                  | 15200                 | 14,6         |
| 36 - 2336          | 2336       | 2280     | 1080     | 2220     | 39 | 7800                  | 15600                 | 15,0         |
| 36 - 2396          | 2396       | 2340     | 1140     | 2280     | 40 | 8000                  | 16000                 | 15,4         |
| 36 - 2456          | 2456       | 2400     | 1140     | 2340     | 41 | 8200                  | 16400                 | 15,8         |
| 36 - 2516          | 2516       | 2460     | 1200     | 2400     | 42 | 8400                  | 16800                 | 16,2         |
| 36 - 2576          | 2576       | 2520     | 2 x 840  | 2460     | 43 | 8600                  | 17200                 | 16,5         |
| 36 - 2636          | 2636       | 2580     | 2 x 840  | 2520     | 44 | 8800                  | 17600                 | 16,9         |
| 36 - 2696          | 2696       | 2640     | 2 x 840  | 2580     | 45 | 9000                  | 18000                 | 17,3         |
| 36 - 2756          | 2756       | 2700     | 2 x 900  | 2640     | 46 | 9200                  | 18400                 | 17,7         |
| 36 - 2816          | 2816       | 2760     | 2 x 900  | 2700     | 47 | 9400                  | 18800                 | 18,0         |
| 36 - 2876          | 2876       | 2820     | 2 x 900  | 2760     | 48 | 9600                  | 19200                 | 18,4         |
| 36 - 2936          | 2936       | 2880     | 2 x 960  | 2820     | 49 | 9800                  | 19600                 | 18,8</       |

## General user specifications

|      |          |      |
|------|----------|------|
| V    | m/mn     | 15   |
| D    | mm       | 19   |
| F/nB | daN (kg) | 200  |
| F/nR | daN (kg) | 400  |
| PnoB | bar      | 42   |
| PnoR | bar      | 85   |
| Pmax | bar      | 100  |
| Cf   |          | 0,05 |



## APPLICATION

These types of smooth cartridges are movement equipment designed to be installed in press bed bore holes to allow tools to be moved easily.

The cartridges are often used when the option of installing Transrollers or Rotobilles is tricky or impossible.

## DESCRIPTION

The upper bearing element of the cartridges may be: ball (CB\*\*) or roller (CR\*\*).

These bearings are lifted up thanks to a hydraulic action.

- The hydraulic action particular to each cartridge supports the load  $F$  on the stroke  $E$ .

- The cartridges are fitted directly into drilled holes. An elastomer joint (o-ring) inserted in a groove allows them to be immobilised. The orientation of roller cartridges is carried out using a pin tool. The cartridges may be extracted using screws in the M4 female thread holes,  $G$ .

The cartridges are supplied without any connection or tool.

## TO ORDER

Quote the complete reference number of the cartridge.

E.g.: cartridge CRHL 28

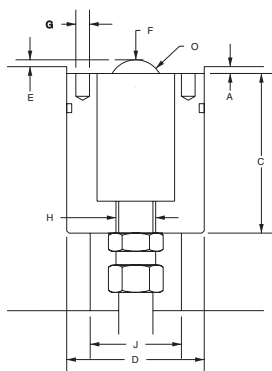
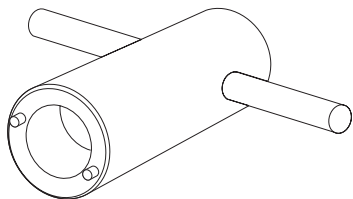
Smooth hydraulic-action roller cartridge, drilling  $\varnothing$  35.25.

## Tools for cartridges

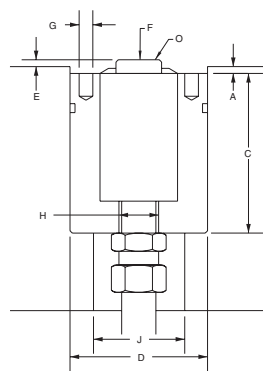
### Reference data

$D = 30,25$  OTL 30

$D = 35,25$  OTL 35



CBHL



CRHL

| MODELS  | A<br>mm | C<br>mm | D<br>H11/mm | E<br>mm | F<br>daN | G<br>mm | O<br>mm | H<br>mm | J<br>mm | P nom<br>bar | P max<br>bar |
|---------|---------|---------|-------------|---------|----------|---------|---------|---------|---------|--------------|--------------|
| CBHL 22 | 1,5     | 36,5    | 30,25       | 1,5     | 80       | 3,3     | 12      | 1/8bsp  | 20      | 40           | 100          |
| CBHL 28 | 1,5     | 44,5    | 35,25       | 2       | 125      | 3,3     | 15      | 1/8bsp  | 25      | 42           | 100          |
| CRHL 22 | 1,5     | 36,5    | 30,25       | 1,5     | 160      | 3,3     | 12      | 1/8bsp  | 20      | 80           | 100          |
| CRHL 28 | 1,5     | 44,5    | 35,25       | 2       | 250      | 3,3     | 15      | 1/8bsp  | 25      | 85           | 100          |



### APPLICATION

These types of threaded cartridge are movement equipment designed to be fitted in press bed bore holes to allow tools to be moved easily.

The cartridges are often used when the option of installing Transrollers or Rotobilles is tricky or impossible.

### DESCRIPTION

The upper bearing element of the cartridges may be: ball (CB\*\*) or roller (CR\*\*).

These bearings are lifted up thanks to a hydraulic action.

- The hydraulic action particular to each cartridge supports the load  $F$  on the stroke  $E$ .

- The cartridges are fitted directly into threaded holes. An elastomer joint (o-ring) inserted in a groove allows them to be immobilised. The cartridges are immobilised by applying a light coating of anaerobic glue to the thread. The disassembly and/or orientation of roller cartridges are carried out using a pin tool and the holes,  $G$ . The cartridges are supplied without any connection or tool.

### TO ORDER

Quote the complete reference details of the cartridge.

E.g.: cartridge CRHF 28

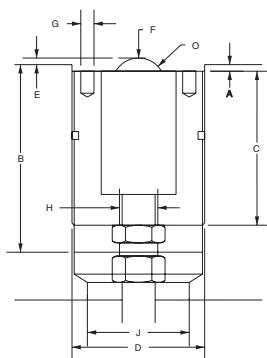
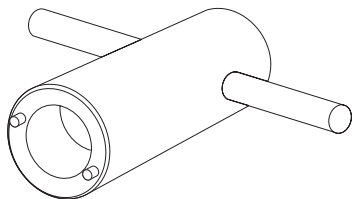
Threaded hydraulic-action roller cartridge, M35 thread, 1.5 lead.

### Tools for cartridges

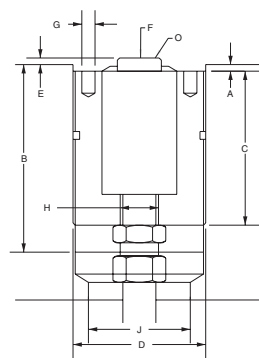
#### Reference data

$D = M30$  OTL 30

$D = M35$  OTL 35



CBHF



CRHF

| MODELS  | A<br>mm | B<br>mm | C<br>mm | D<br>mm | E<br>mm | F<br>daN | G<br>mm | O<br>mm | H<br>mm | J<br>mm | Pnom<br>bar | Pmax<br>bar |
|---------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|-------------|-------------|
| CBHF 22 | 1,5     | 42      | 36,5    | M30x1,5 | 1,5     | 80       | 3,3     | 12      | 1/8bspp | 20      | 40          | 100         |
| CBHF 28 | 1,5     | 50      | 44,5    | M35x1,5 | 2       | 125      | 3,3     | 15      | 1/8bspp | 25      | 42          | 100         |
| CRHF 22 | 1,5     | 42      | 36,5    | M30x1,5 | 1,5     | 160      | 3,3     | 12      | 1/8bspp | 20      | 80          | 100         |
| CRHF 28 | 1,5     | 50      | 44,5    | M35x1,5 | 2       | 250      | 3,3     | 15      | 1/8bspp | 25      | 85          | 100         |

## HPF 100



### APPLICATION

HPF and HPMS pressure generators are pneumo-hydraulic power units that allow you to operate components that only require a low flow rate (Rotobilles or Transrollers).

### DESCRIPTION

HPF and HPMS pressure generators are units of an anti-shock resin body forming a tank and containing a dynamic intensifier that transforms network supplied compressed air into hydraulic energy. The hydraulic action is of the single action type. The generators include a safety valve that limits hydraulic pressure so as to avoid overloading the sinks.

### USE: HPF model

single foot pedal action operate the generator

- Position 1: generator feed oil until nominal pressure is reached

- Position 2 (no foot action) :

hydraulic circuit is closed, pressure keep on in rotoballs, generator is not operating

- Position 3 : oil return to generator, pressure is down

## HPMS 100 - HPMD 100



### USE : HPMS/D model

The HPMS/D 100 pressure generator may power any of the following:

- A set of Rotobilles (or Transrollers) powered simultaneously by a single hydraulic circuit.

- Two sets of Rotobilles (or Transrollers) powered by two separate hydraulic circuits.

#### a) Powering a set of Rotobilles (or Transrollers) with simultaneous power

- Manual valve turned to meet the connected circuit.

- If you press control #1 the unit powers the sink up to the nominal pressure of the generator.

- If you release control #1 (spring return) the pressure to the sink is maintained.

- To put the pressure to the sink in reverse you just need to reposition the manual switch to a central position (c.f. next page).

#### b) Powering two sets of Rotobilles (or Transrollers) that are powered separately

Same procedure as previous paragraph (a), but select pressurisation of the sink required (c.f. next page).

### NB :

Using a valve to select a circuit simultaneously puts the other circuit into reverse.

**A mounting plate is available as an accessory for the HPMS/D.**

**The HPMS/D pneumo-hydraulic generator may be mounted vertically.**

### TO ORDER

Quote the complete reference details of the pump.

E.g.: Pump HPF 100;

Pump HPMS 100;

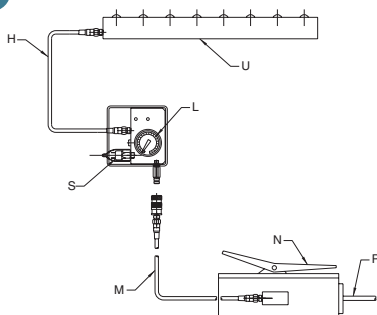
Pump HPMD 100.

\*Pos. H = Horizontal position;

Pos. V = Vertical position.

| Specifications  | Unit  | HPF 100     | HPMS 100                   | HPMD 100                |
|-----------------|-------|-------------|----------------------------|-------------------------|
| Air pressure    | bar   | 3,6         | 2,5                        | 2,5                     |
| Oil pressure    | bar   | 100         | 100                        | 100                     |
| Air connection  |       | 1/4 BSPP    | 1/4 BSPP                   | 1/4 BSPP                |
| Oil connection  |       | 3/8 18 NPTF | 1/4 BSPP                   | 1/4 BSPP                |
| Vacuum capacity | L/min | 0,8         | 1,8                        | 1,8                     |
| Tank volume     | L     | 1,4         | * Pos. O :2,1 - Pos. V:1,5 | Pos. O:2,1 - Pos. V:1,5 |
| Mass            | Kg    | 5           | 6,3                        | 6,3                     |
| Length          | mm    | 195         | 319,5                      | 319,5                   |
| Width           | mm    | 145         | 155                        | 155                     |
| Height          | mm    | 170         | 233                        | 233                     |

a



### DISTRIBUTION AND SAFETY BLOCKS

BD and BDS blocks etc. are safety blocks specially designed for use with hydraulic movement segments. Powered by hydraulic pressure generators, they allow you:

- to operate Transrollers or Rotobilles and to control and monitor the state of the pressure
- to reduce the pressure, if needed

N.B. An electric pressure switch controls the circuit pressure and gives the authorisation of start to the press.

### DESCRIPTION

The distribution block is made from treated aluminium and, depending upon the model selected, it has the following equipment:

- Control manometer for hydraulic pressure (calibrated up to 300 bar)
- Electric pressure gauge (only on BDS version)

### CONNECTION REFERENCES

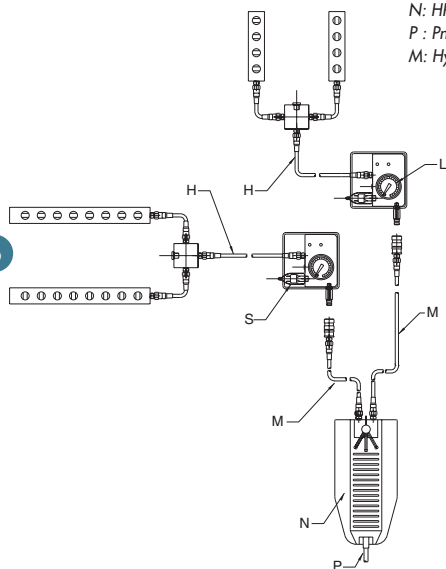
U: Movement segments (Rotobilles or Transrollers)

N: HPF 100/ HPMS/D100 pneumo-hydraulic power generator

P: Pneumatic input power supply (6 bar)

M: Hydraulic power supply of block (100 bar): ref. KH1R100.1-2M

b



NB:

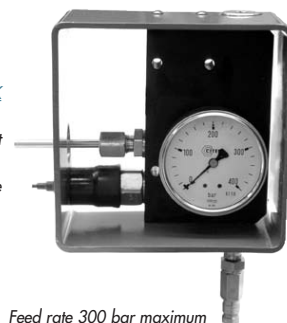
If ordering a hydraulic hose, the nozzles must be crimped in the factory. Specify the total length, L (including nozzles).

\*\*\* Please specify length for each connecting hose.

### SAFETY LOCK

100 bar output

Safety pressure gauge



Feed rate 300 bar maximum

### MODELS

Safety and distribution block

BDS 100,1

BDS 300,1 - 100,1\*

### FUNCTIONS

Manometer

Pressure gauge

Pressure reducer

### SINKS

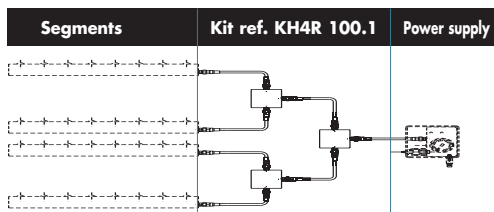
Rotobilles or transrollers

Rotobilles or transrollers +Dynambloc (c.f. p.46)

\* Max. feed pressure 300 bar

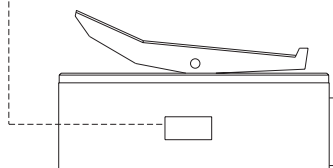
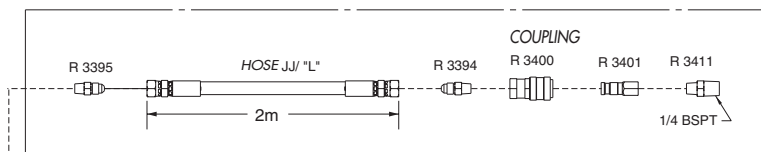
## SEGMENT PIPING KITS

| Models     | Number of segments connected           |
|------------|----------------------------------------|
| KH2R 100.1 | 2 connected Transrollers or Rotobilles |
| KH3R 100.1 | 3 connected Transrollers or Rotobilles |
| KH4R 100.1 | 4 connected Transrollers or Rotobilles |
| KH6R 100.1 | 6 connected Transrollers or Rotobilles |
| KH8R 100.1 | 8 connected Transrollers or Rotobilles |



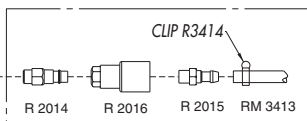
## GENERATOR PIPING KITS

KH1R 100.1 (1-2 m.) hydraulic connection kit



HPF 100/HPMS 100/HPMD 100  
Pneumo-hydraulic generator

Pneumatic connection



## STANDARD CONNECTIONS AND COMPONENTS USED

The R... references are from ROTOBLOC notices  
(to be copied for your orders)

### NB

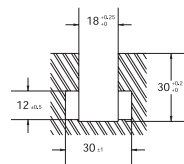
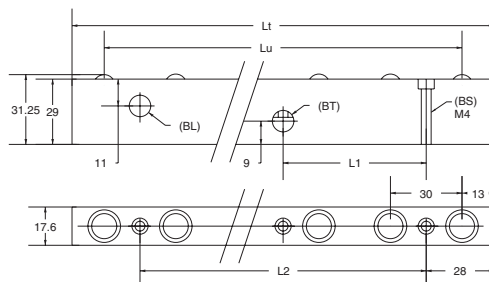
If ordering hydraulic hoses, the nozzles must be crimped in the factory. Please specify total length, L (including nozzles).

|               | 1/8 BSPP | rigid assembly | flexible assembly        |
|---------------|----------|----------------|--------------------------|
|               |          | RM 2925        | R 3684 RM 1599<br>37 JIC |
| BSPP parallel |          |                |                          |
| BSPT Conical  |          |                |                          |
| 1/8 BSPP      |          |                | R 3402                   |
| 1/8 BSPT      |          |                | R 3396                   |
| 1/8 BSPT      |          |                | R 3394                   |
| 1/8 BSPP      |          |                | R 3405                   |
| 1/8 BSPT      |          | R 1925         |                          |
| 1/8 BSPP      |          | R 1907         |                          |
| 1/8 BSPT      |          | R 3421         |                          |

| TURM 18<br>TUBM 18<br><br>Unit | Dimensions |          |          |          |    | Lifting power         |                       | Weight<br>kg |
|--------------------------------|------------|----------|----------|----------|----|-----------------------|-----------------------|--------------|
|                                | Lt<br>mm   | Lu<br>mm | L1<br>mm | L2<br>mm | n  | TUBM<br>F<br>daN (kg) | TURM<br>F<br>daN (kg) |              |
| 18 - 86                        | 86         | 60       |          |          | 3  | 60                    | 120                   | 0,16         |
| 18 - 116                       | 116        | 90       |          | 60       | 4  | 80                    | 160                   | 0,20         |
| 18 - 146                       | 146        | 120      |          | 90       | 5  | 100                   | 200                   | 0,25         |
| 18 - 176                       | 176        | 150      |          | 120      | 6  | 120                   | 240                   | 0,29         |
| 18 - 206                       | 206        | 180      |          | 150      | 7  | 140                   | 280                   | 0,33         |
| 18 - 236                       | 236        | 210      |          | 180      | 8  | 160                   | 320                   | 0,38         |
| 18 - 266                       | 266        | 240      |          | 210      | 9  | 180                   | 360                   | 0,42         |
| 18 - 296                       | 296        | 270      |          | 240      | 10 | 200                   | 400                   | 0,47         |
| 18 - 326                       | 326        | 300      |          | 270      | 11 | 220                   | 440                   | 0,51         |
| 18 - 356                       | 356        | 330      |          | 300      | 12 | 240                   | 480                   | 0,55         |
| 18 - 386                       | 386        | 360      |          | 330      | 13 | 260                   | 520                   | 0,60         |
| 18 - 416                       | 416        | 390      |          | 360      | 14 | 280                   | 560                   | 0,64         |
| 18 - 446                       | 446        | 420      |          | 390      | 15 | 300                   | 600                   | 0,69         |
| 18 - 476                       | 476        | 450      |          | 420      | 16 | 320                   | 640                   | 0,73         |
| 18 - 506                       | 506        | 480      |          | 450      | 17 | 340                   | 680                   | 0,77         |
| 18 - 536                       | 536        | 510      |          | 480      | 18 | 360                   | 720                   | 0,82         |
| 18 - 566                       | 566        | 540      |          | 510      | 19 | 380                   | 760                   | 0,86         |
| 18 - 596                       | 596        | 570      |          | 540      | 20 | 400                   | 800                   | 0,91         |
| 18 - 626                       | 626        | 600      |          | 570      | 21 | 420                   | 840                   | 0,95         |
| 18 - 656                       | 656        | 630      |          | 600      | 22 | 440                   | 880                   | 0,99         |
| 18 - 686                       | 686        | 660      |          | 630      | 23 | 460                   | 920                   | 1,04         |
| 18 - 716                       | 716        | 690      |          | 660      | 24 | 480                   | 960                   | 1,08         |
| 18 - 746                       | 746        | 720      | 360      | 690      | 25 | 500                   | 1000                  | 1,13         |
| 18 - 776                       | 776        | 750      | 360      | 720      | 26 | 520                   | 1040                  | 1,17         |
| 18 - 806                       | 806        | 780      | 390      | 750      | 27 | 540                   | 1080                  | 1,21         |
| 18 - 836                       | 836        | 810      | 390      | 780      | 28 | 560                   | 1120                  | 1,26         |
| 18 - 866                       | 866        | 840      | 420      | 810      | 29 | 580                   | 1160                  | 1,30         |
| 18 - 896                       | 896        | 870      | 420      | 840      | 30 | 600                   | 1200                  | 1,35         |
| 18 - 926                       | 926        | 900      | 450      | 870      | 31 | 620                   | 1240                  | 1,39         |
| 18 - 956                       | 956        | 930      | 450      | 900      | 32 | 640                   | 1280                  | 1,43         |
| 18 - 986                       | 986        | 960      | 480      | 930      | 33 | 660                   | 1320                  | 1,48         |
| 18 - 1016                      | 1016       | 990      | 480      | 960      | 34 | 680                   | 1360                  | 1,52         |
| 18 - 1046                      | 1046       | 1020     | 510      | 990      | 35 | 700                   | 1400                  | 1,57         |
| 18 - 1076                      | 1076       | 1050     | 510      | 1020     | 36 | 720                   | 1440                  | 1,61         |
| 18 - 1106                      | 1106       | 1080     | 540      | 1050     | 37 | 740                   | 1480                  | 1,65         |
| 18 - 1136                      | 1136       | 1110     | 540      | 1080     | 38 | 760                   | 1520                  | 1,70         |
| 18 - 1166                      | 1166       | 1140     | 570      | 1110     | 39 | 780                   | 1560                  | 1,74         |
| 18 - 1196                      | 1196       | 1170     | 570      | 1140     | 40 | 800                   | 1600                  | 1,79         |
| 18 - 1226                      | 1226       | 1200     | 600      | 1170     | 41 | 820                   | 1640                  | 1,83         |
| 18 - 1256                      | 1256       | 1230     | 600      | 1200     | 42 | 840                   | 1680                  | 1,87         |
| 18 - 1286                      | 1286       | 1260     | 630      | 1230     | 43 | 860                   | 1720                  | 1,92         |
| 18 - 1316                      | 1316       | 1290     | 630      | 1260     | 44 | 880                   | 1760                  | 1,96         |
| 18 - 1346                      | 1346       | 1320     | 660      | 1290     | 45 | 900                   | 1800                  | 2,01         |
| 18 - 1376                      | 1376       | 1350     | 660      | 1320     | 46 | 920                   | 1840                  | 2,05         |
| 18 - 1406                      | 1406       | 1380     | 690      | 1350     | 47 | 940                   | 1880                  | 2,09         |
| 18 - 1436                      | 1436       | 1410     | 690      | 1380     | 48 | 960                   | 1920                  | 2,14         |
| 18 - 1466                      | 1466       | 1440     | 720      | 1410     | 49 | 980                   | 1960                  | 2,18         |
| 18 - 1496                      | 1496       | 1470     | 720      | 1440     | 50 | 1000                  | 2000                  | 2,23         |

## General user specifications

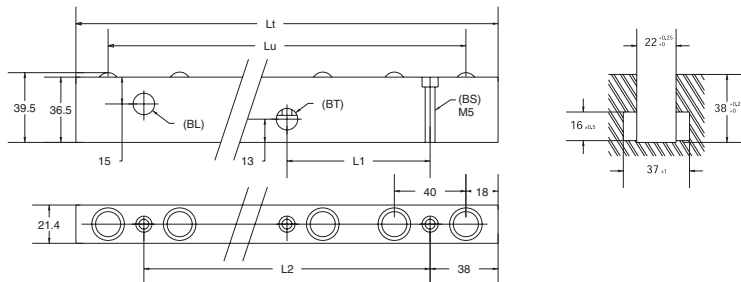
|      |          |      |
|------|----------|------|
| V    | m/mn     | 8    |
| D    | mm       | 8    |
| F/nB | daN (kg) | 20   |
| F/nR | daN (kg) | 40   |
| Cf   |          | 0,05 |



| TURM 22<br>TUBM 22 | Dimensions |          |          |          |    | Lifting power         |                       | Weight<br>kg |
|--------------------|------------|----------|----------|----------|----|-----------------------|-----------------------|--------------|
|                    | Lt<br>mm   | Lu<br>mm | L1<br>mm | L2<br>mm | n  | TUBM<br>F<br>daN (kg) | TURM<br>F<br>daN (kg) |              |
| Unit               |            |          |          |          |    |                       |                       |              |
| 22 - 116           | 116        | 80       |          |          | 3  | 120                   | 240                   | 0,3          |
| 22 - 156           | 156        | 120      |          | 80       | 4  | 160                   | 320                   | 0,4          |
| 22 - 196           | 196        | 160      |          | 120      | 5  | 200                   | 400                   | 0,5          |
| 22 - 236           | 236        | 200      |          | 160      | 6  | 240                   | 480                   | 0,6          |
| 22 - 276           | 276        | 240      |          | 200      | 7  | 280                   | 560                   | 0,7          |
| 22 - 316           | 316        | 280      |          | 240      | 8  | 320                   | 640                   | 0,8          |
| 22 - 356           | 356        | 320      |          | 280      | 9  | 360                   | 720                   | 0,9          |
| 22 - 396           | 396        | 360      |          | 320      | 10 | 400                   | 800                   | 1            |
| 22 - 436           | 436        | 400      |          | 360      | 11 | 440                   | 880                   | 1,1          |
| 22 - 476           | 476        | 440      |          | 400      | 12 | 480                   | 960                   | 1,2          |
| 22 - 516           | 516        | 480      |          | 440      | 13 | 520                   | 1040                  | 1,3          |
| 22 - 556           | 556        | 520      |          | 480      | 14 | 560                   | 1120                  | 1,4          |
| 22 - 596           | 596        | 560      |          | 520      | 15 | 600                   | 1200                  | 1,5          |
| 22 - 636           | 636        | 600      |          | 560      | 16 | 640                   | 1280                  | 1,6          |
| 22 - 676           | 676        | 640      |          | 600      | 17 | 680                   | 1360                  | 1,7          |
| 22 - 716           | 716        | 680      |          | 640      | 18 | 720                   | 1440                  | 1,7          |
| 22 - 756           | 756        | 720      |          | 680      | 19 | 760                   | 1520                  | 1,8          |
| 22 - 796           | 796        | 760      |          | 720      | 20 | 800                   | 1600                  | 1,9          |
| 22 - 836           | 836        | 800      |          | 760      | 21 | 840                   | 1680                  | 2            |
| 22 - 876           | 876        | 840      |          | 800      | 22 | 880                   | 1760                  | 2,1          |
| 22 - 916           | 916        | 880      |          | 840      | 23 | 920                   | 1840                  | 2,2          |
| 22 - 956           | 956        | 920      |          | 880      | 24 | 960                   | 1920                  | 2,3          |
| 22 - 996           | 996        | 960      |          | 920      | 25 | 1000                  | 2000                  | 2,4          |
| 22 - 1036          | 1036       | 1000     | 480      | 960      | 26 | 1040                  | 2080                  | 2,5          |
| 22 - 1076          | 1076       | 1040     | 480      | 1000     | 27 | 1080                  | 2160                  | 2,6          |
| 22 - 1116          | 1116       | 1080     | 520      | 1040     | 28 | 1120                  | 2240                  | 2,7          |
| 22 - 1156          | 1156       | 1120     | 520      | 1080     | 29 | 1160                  | 2320                  | 2,8          |
| 22 - 1196          | 1196       | 1160     | 560      | 1120     | 30 | 1200                  | 2400                  | 2,9          |
| 22 - 1236          | 1236       | 1200     | 560      | 1160     | 31 | 1240                  | 2480                  | 3            |
| 22 - 1276          | 1276       | 1240     | 600      | 1200     | 32 | 1280                  | 2560                  | 3,1          |
| 22 - 1316          | 1316       | 1280     | 600      | 1240     | 33 | 1320                  | 2640                  | 3,2          |
| 22 - 1356          | 1356       | 1320     | 640      | 1280     | 34 | 1360                  | 2720                  | 3,3          |
| 22 - 1396          | 1396       | 1360     | 640      | 1320     | 35 | 1400                  | 2800                  | 3,3          |
| 22 - 1436          | 1436       | 1400     | 680      | 1360     | 36 | 1440                  | 2880                  | 3,4          |
| 22 - 1476          | 1476       | 1440     | 680      | 1400     | 37 | 1480                  | 2960                  | 3,5          |
| 22 - 1516          | 1516       | 1480     | 720      | 1440     | 38 | 1520                  | 3040                  | 3,6          |
| 22 - 1556          | 1556       | 1520     | 720      | 1480     | 39 | 1560                  | 3120                  | 3,7          |
| 22 - 1596          | 1596       | 1560     | 760      | 1520     | 40 | 1600                  | 3200                  | 3,8          |
| 22 - 1636          | 1636       | 1600     | 760      | 1560     | 41 | 1640                  | 3280                  | 3,9          |
| 22 - 1676          | 1676       | 1640     | 800      | 1600     | 42 | 1680                  | 3360                  | 4            |
| 22 - 1716          | 1716       | 1680     | 800      | 1640     | 43 | 1720                  | 3440                  | 4,1          |
| 22 - 1756          | 1756       | 1720     | 840      | 1680     | 44 | 1760                  | 3520                  | 4,2          |
| 22 - 1796          | 1796       | 1760     | 840      | 1720     | 45 | 1800                  | 3600                  | 4,3          |
| 22 - 1836          | 1836       | 1800     | 880      | 1760     | 46 | 1840                  | 3680                  | 4,4          |
| 22 - 1876          | 1876       | 1840     | 880      | 1800     | 47 | 1880                  | 3760                  | 4,5          |
| 22 - 1916          | 1916       | 1880     | 920      | 1840     | 48 | 1920                  | 3840                  | 4,6          |
| 22 - 1956          | 1956       | 1920     | 920      | 1880     | 49 | 1960                  | 3920                  | 4,7          |
| 22 - 1996          | 1996       | 1960     | 960      | 1920     | 50 | 2000                  | 4000                  | 4,8          |

## General user specifications

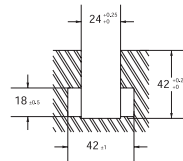
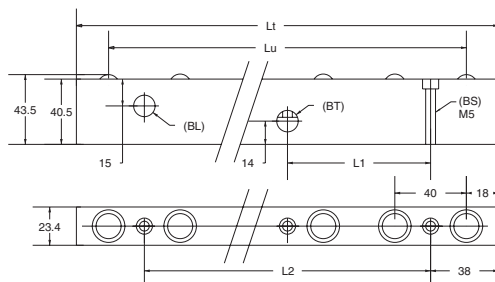
|      |          |      |
|------|----------|------|
| V    | m/mn     | 10   |
| D    | mm       | 12   |
| F/nB | daN (kg) | 40   |
| F/nR | daN (kg) | 80   |
| Cf   |          | 0,05 |



| TURM 24<br>TUBM 24<br><br>Unit | Dimensions |          |          |          |    | Lifting power         |                       | Weight<br>kg |
|--------------------------------|------------|----------|----------|----------|----|-----------------------|-----------------------|--------------|
|                                | Lt<br>mm   | Lu<br>mm | L1<br>mm | L2<br>mm | n  | TUBM<br>F<br>daN (kg) | TURM<br>F<br>daN (kg) |              |
| 24 - 116                       | 116        | 80       |          |          | 3  | 120                   | 240                   | 0,4          |
| 24 - 156                       | 156        | 120      |          | 80       | 4  | 160                   | 320                   | 0,5          |
| 24 - 196                       | 196        | 160      |          | 120      | 5  | 200                   | 400                   | 0,6          |
| 24 - 236                       | 236        | 200      |          | 160      | 6  | 240                   | 480                   | 0,7          |
| 24 - 276                       | 276        | 240      |          | 200      | 7  | 280                   | 560                   | 0,8          |
| 24 - 316                       | 316        | 280      |          | 240      | 8  | 320                   | 640                   | 1            |
| 24 - 356                       | 356        | 320      |          | 280      | 9  | 360                   | 720                   | 1,1          |
| 24 - 396                       | 396        | 360      |          | 320      | 10 | 400                   | 800                   | 1,2          |
| 24 - 436                       | 436        | 400      |          | 360      | 11 | 440                   | 880                   | 1,3          |
| 24 - 476                       | 476        | 440      |          | 400      | 12 | 480                   | 960                   | 1,4          |
| 24 - 516                       | 516        | 480      |          | 440      | 13 | 520                   | 1040                  | 1,5          |
| 24 - 556                       | 556        | 520      |          | 480      | 14 | 560                   | 1120                  | 1,6          |
| 24 - 596                       | 596        | 560      |          | 520      | 15 | 600                   | 1200                  | 1,7          |
| 24 - 636                       | 636        | 600      |          | 560      | 16 | 640                   | 1280                  | 1,8          |
| 24 - 676                       | 676        | 640      |          | 600      | 17 | 680                   | 1360                  | 1,9          |
| 24 - 716                       | 716        | 680      |          | 640      | 18 | 720                   | 1440                  | 2,1          |
| 24 - 756                       | 756        | 720      |          | 680      | 19 | 760                   | 1520                  | 2,2          |
| 24 - 796                       | 796        | 760      |          | 720      | 20 | 800                   | 1600                  | 2,3          |
| 24 - 836                       | 836        | 800      |          | 760      | 21 | 840                   | 1680                  | 2,4          |
| 24 - 876                       | 876        | 840      |          | 800      | 22 | 880                   | 1760                  | 2,5          |
| 24 - 916                       | 916        | 880      |          | 840      | 23 | 920                   | 1840                  | 2,6          |
| 24 - 956                       | 956        | 920      |          | 880      | 24 | 960                   | 1920                  | 2,7          |
| 24 - 996                       | 996        | 960      |          | 920      | 25 | 1000                  | 2000                  | 2,8          |
| 24 - 1036                      | 1036       | 1000     | 480      | 960      | 26 | 1040                  | 2080                  | 2,9          |
| 24 - 1076                      | 1076       | 1040     | 480      | 1000     | 27 | 1080                  | 2160                  | 3            |
| 24 - 1116                      | 1116       | 1080     | 520      | 1040     | 28 | 1120                  | 2240                  | 3,2          |
| 24 - 1156                      | 1156       | 1120     | 520      | 1080     | 29 | 1160                  | 2320                  | 3,3          |
| 24 - 1196                      | 1196       | 1160     | 560      | 1120     | 30 | 1200                  | 2400                  | 3,4          |
| 24 - 1236                      | 1236       | 1200     | 560      | 1160     | 31 | 1240                  | 2480                  | 3,5          |
| 24 - 1276                      | 1276       | 1240     | 600      | 1200     | 32 | 1280                  | 2560                  | 3,6          |
| 24 - 1316                      | 1316       | 1280     | 600      | 1240     | 33 | 1320                  | 2640                  | 3,7          |
| 24 - 1356                      | 1356       | 1320     | 640      | 1280     | 34 | 1360                  | 2720                  | 3,8          |
| 24 - 1396                      | 1396       | 1360     | 640      | 1320     | 35 | 1400                  | 2800                  | 3,9          |
| 24 - 1436                      | 1436       | 1400     | 680      | 1360     | 36 | 1440                  | 2880                  | 4            |
| 24 - 1476                      | 1476       | 1440     | 680      | 1400     | 37 | 1480                  | 2960                  | 4,1          |
| 24 - 1516                      | 1516       | 1480     | 720      | 1440     | 38 | 1520                  | 3040                  | 4,3          |
| 24 - 1556                      | 1556       | 1520     | 720      | 1480     | 39 | 1560                  | 3120                  | 4,4          |
| 24 - 1596                      | 1596       | 1560     | 760      | 1520     | 40 | 1600                  | 3200                  | 4,5          |
| 24 - 1636                      | 1636       | 1600     | 760      | 1560     | 41 | 1640                  | 3280                  | 4,6          |
| 24 - 1676                      | 1676       | 1640     | 800      | 1600     | 42 | 1680                  | 3360                  | 4,7          |
| 24 - 1716                      | 1716       | 1680     | 800      | 1640     | 43 | 1720                  | 3440                  | 4,8          |
| 24 - 1756                      | 1756       | 1720     | 840      | 1680     | 44 | 1760                  | 3520                  | 4,9          |
| 24 - 1796                      | 1796       | 1760     | 840      | 1720     | 45 | 1800                  | 3600                  | 5            |
| 24 - 1836                      | 1836       | 1800     | 880      | 1760     | 46 | 1840                  | 3680                  | 5,1          |
| 24 - 1876                      | 1876       | 1840     | 880      | 1800     | 47 | 1880                  | 3760                  | 5,2          |
| 24 - 1916                      | 1916       | 1880     | 920      | 1840     | 48 | 1920                  | 3840                  | 5,4          |
| 24 - 1956                      | 1956       | 1920     | 920      | 1880     | 49 | 1960                  | 3920                  | 5,5          |
| 24 - 1996                      | 1996       | 1960     | 960      | 1920     | 50 | 2000                  | 4000                  | 5,6          |

## General user specifications

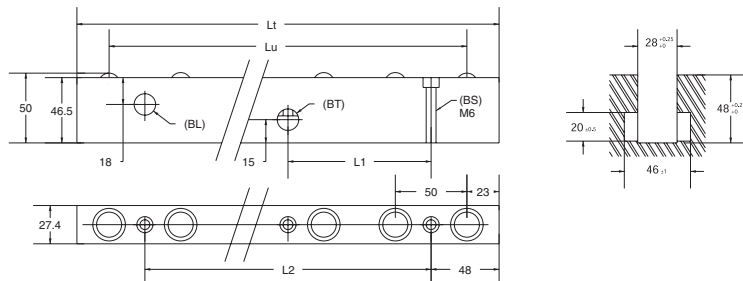
|      |          |      |
|------|----------|------|
| V    | m/mn     | 10   |
| D    | mm       | 12   |
| F/nB | daN (kg) | 40   |
| F/nR | daN (kg) | 80   |
| Cf   |          | 0,05 |



| TURM 28<br>TUBM 28 | Dimensions |          |          |          |    | Lifting power         |                       | Weight<br>kg |
|--------------------|------------|----------|----------|----------|----|-----------------------|-----------------------|--------------|
|                    | Lt<br>mm   | Lu<br>mm | L1<br>mm | L2<br>mm | n  | TUBM<br>F<br>daN (kg) | TURM<br>F<br>daN (kg) |              |
| Unit               |            |          |          |          |    |                       |                       |              |
| 28 - 146           | 146        | 100      |          |          | 3  | 180                   | 360                   | 0,7          |
| 28 - 196           | 196        | 150      |          | 100      | 4  | 240                   | 480                   | 0,9          |
| 28 - 246           | 246        | 200      |          | 150      | 5  | 300                   | 600                   | 1,1          |
| 28 - 296           | 296        | 250      |          | 200      | 6  | 360                   | 720                   | 1,3          |
| 28 - 346           | 346        | 300      |          | 250      | 7  | 420                   | 840                   | 1,5          |
| 28 - 396           | 396        | 350      |          | 300      | 8  | 480                   | 960                   | 1,7          |
| 28 - 446           | 446        | 400      |          | 350      | 9  | 540                   | 1080                  | 1,9          |
| 28 - 496           | 496        | 450      |          | 400      | 10 | 600                   | 1200                  | 2,1          |
| 28 - 546           | 546        | 500      |          | 450      | 11 | 660                   | 1320                  | 2,3          |
| 28 - 596           | 596        | 550      |          | 500      | 12 | 720                   | 1440                  | 2,5          |
| 28 - 646           | 646        | 600      |          | 550      | 13 | 780                   | 1560                  | 2,7          |
| 28 - 696           | 696        | 650      |          | 600      | 14 | 840                   | 1680                  | 2,9          |
| 28 - 746           | 746        | 700      |          | 650      | 15 | 900                   | 1800                  | 3,1          |
| 28 - 796           | 796        | 750      |          | 700      | 16 | 960                   | 1920                  | 3,2          |
| 28 - 846           | 846        | 800      |          | 750      | 17 | 1020                  | 2040                  | 3,4          |
| 28 - 896           | 896        | 850      |          | 800      | 18 | 1080                  | 2160                  | 3,6          |
| 28 - 946           | 946        | 900      |          | 850      | 19 | 1140                  | 2280                  | 3,8          |
| 28 - 996           | 996        | 950      |          | 900      | 20 | 1200                  | 2400                  | 4            |
| 28 - 1046          | 1046       | 1000     |          | 950      | 21 | 1260                  | 2520                  | 4,2          |
| 28 - 1096          | 1096       | 1050     |          | 1000     | 22 | 1320                  | 2640                  | 4,4          |
| 28 - 1146          | 1146       | 1100     |          | 1050     | 23 | 1380                  | 2760                  | 4,6          |
| 28 - 1196          | 1196       | 1150     | 550      | 1100     | 24 | 1440                  | 2880                  | 4,8          |
| 28 - 1246          | 1246       | 1200     | 550      | 1150     | 25 | 1500                  | 3000                  | 5            |
| 28 - 1296          | 1296       | 1250     | 600      | 1200     | 26 | 1560                  | 3120                  | 5,2          |
| 28 - 1346          | 1346       | 1300     | 600      | 1250     | 27 | 1620                  | 3240                  | 5,4          |
| 28 - 1396          | 1396       | 1350     | 650      | 1300     | 28 | 1680                  | 3360                  | 5,6          |
| 28 - 1446          | 1446       | 1400     | 650      | 1350     | 29 | 1740                  | 3480                  | 5,8          |
| 28 - 1496          | 1496       | 1450     | 700      | 1400     | 30 | 1800                  | 3600                  | 6            |
| 28 - 1546          | 1546       | 1500     | 700      | 1450     | 31 | 1860                  | 3720                  | 6,2          |
| 28 - 1596          | 1596       | 1550     | 750      | 1500     | 32 | 1920                  | 3840                  | 6,4          |
| 28 - 1646          | 1646       | 1600     | 750      | 1550     | 33 | 1980                  | 3960                  | 6,6          |
| 28 - 1696          | 1696       | 1650     | 800      | 1600     | 34 | 2040                  | 4080                  | 6,8          |
| 28 - 1746          | 1746       | 1700     | 800      | 1650     | 35 | 2100                  | 4200                  | 7            |
| 28 - 1796          | 1796       | 1750     | 850      | 1700     | 36 | 2160                  | 4320                  | 7,1          |
| 28 - 1846          | 1846       | 1800     | 850      | 1750     | 37 | 2220                  | 4440                  | 7,3          |
| 28 - 1896          | 1896       | 1850     | 900      | 1800     | 38 | 2280                  | 4560                  | 7,5          |
| 28 - 1946          | 1946       | 1900     | 900      | 1850     | 39 | 2340                  | 4680                  | 7,7          |
| 28 - 1996          | 1996       | 1950     | 950      | 1900     | 40 | 2400                  | 4800                  | 7,9          |
| 28 - 2046          | 2046       | 2000     | 950      | 1950     | 41 | 2460                  | 4920                  | 8,1          |
| 28 - 2096          | 2096       | 2050     | 1000     | 2000     | 42 | 2520                  | 5040                  | 8,3          |
| 28 - 2146          | 2146       | 2100     | 1000     | 2050     | 43 | 2580                  | 5160                  | 8,5          |
| 28 - 2196          | 2196       | 2150     | 1050     | 2100     | 44 | 2640                  | 5280                  | 8,7          |
| 28 - 2246          | 2246       | 2200     | 1050     | 2150     | 45 | 2700                  | 5400                  | 8,9          |
| 28 - 2296          | 2296       | 2250     | 2 x 750  | 2200     | 46 | 2760                  | 5520                  | 9,1          |
| 28 - 2346          | 2346       | 2300     | 2 x 750  | 2250     | 47 | 2820                  | 5640                  | 9,3          |
| 28 - 2396          | 2396       | 2350     | 2 x 750  | 2300     | 48 | 2880                  | 5760                  | 9,5          |
| 28 - 2446          | 2446       | 2400     | 2 x 800  | 2350     | 49 | 2940                  | 5880                  | 9,7          |

## General user specifications

|      |          |      |
|------|----------|------|
| V    | m/mn     | 12   |
| D    | mm       | 15   |
| F/nB | daN (kg) | 60   |
| F/nR | daN (kg) | 120  |
| Cf   |          | 0,05 |

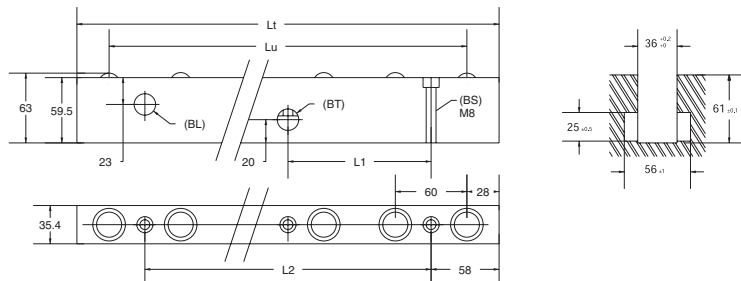


Dimensions and data subject to amendment

| TURM 36<br>TUBM 36<br><br>Unit | Dimensions |          |          |          |    | Lifting power         |                       | Weight<br>kg |
|--------------------------------|------------|----------|----------|----------|----|-----------------------|-----------------------|--------------|
|                                | Lt<br>mm   | Lu<br>mm | L1<br>mm | L2<br>mm | n  | TUBM<br>F<br>daN (kg) | TURM<br>F<br>daN (kg) |              |
| 36 - 176                       | 176        | 120      |          |          | 3  | 300                   | 600                   | 1,3          |
| 36 - 236                       | 236        | 180      |          | 120      | 4  | 400                   | 800                   | 1,7          |
| 36 - 296                       | 296        | 240      |          | 180      | 5  | 500                   | 1000                  | 2,1          |
| 36 - 356                       | 356        | 300      |          | 240      | 6  | 600                   | 1200                  | 2,5          |
| 36 - 416                       | 416        | 360      |          | 300      | 7  | 700                   | 1400                  | 2,9          |
| 36 - 476                       | 476        | 420      |          | 360      | 8  | 800                   | 1600                  | 3,2          |
| 36 - 536                       | 536        | 480      |          | 420      | 9  | 900                   | 1800                  | 3,6          |
| 36 - 596                       | 596        | 540      |          | 480      | 10 | 1000                  | 2000                  | 4            |
| 36 - 656                       | 656        | 600      |          | 540      | 11 | 1100                  | 2200                  | 4,4          |
| 36 - 716                       | 716        | 660      |          | 600      | 12 | 1200                  | 2400                  | 4,8          |
| 36 - 776                       | 776        | 720      |          | 660      | 13 | 1300                  | 2600                  | 5,1          |
| 36 - 836                       | 836        | 780      |          | 720      | 14 | 1400                  | 2800                  | 5,5          |
| 36 - 896                       | 896        | 840      |          | 780      | 15 | 1500                  | 3000                  | 5,9          |
| 36 - 956                       | 956        | 900      |          | 840      | 16 | 1600                  | 3200                  | 6,3          |
| 36 - 1016                      | 1016       | 960      |          | 900      | 17 | 1700                  | 3400                  | 6,7          |
| 36 - 1076                      | 1076       | 1020     |          | 960      | 18 | 1800                  | 3600                  | 7,0          |
| 36 - 1136                      | 1136       | 1080     |          | 1020     | 19 | 1900                  | 3800                  | 7,4          |
| 36 - 1196                      | 1196       | 1140     |          | 1080     | 20 | 2000                  | 4000                  | 7,8          |
| 36 - 1256                      | 1256       | 1200     |          | 1140     | 21 | 2100                  | 4200                  | 8,2          |
| 36 - 1316                      | 1316       | 1260     | 600      | 1200     | 22 | 2200                  | 4400                  | 8,6          |
| 36 - 1376                      | 1376       | 1320     | 600      | 1260     | 23 | 2300                  | 4600                  | 8,9          |
| 36 - 1436                      | 1436       | 1380     | 660      | 1320     | 24 | 2400                  | 4800                  | 9,3          |
| 36 - 1496                      | 1496       | 1440     | 660      | 1380     | 25 | 2500                  | 5000                  | 9,7          |
| 36 - 1556                      | 1556       | 1500     | 720      | 1440     | 26 | 2600                  | 5200                  | 10,1         |
| 36 - 1616                      | 1616       | 1560     | 720      | 1500     | 27 | 2700                  | 5400                  | 10,5         |
| 36 - 1676                      | 1676       | 1620     | 780      | 1560     | 28 | 2800                  | 5600                  | 10,8         |
| 36 - 1736                      | 1736       | 1680     | 780      | 1620     | 29 | 2900                  | 5800                  | 11,2         |
| 36 - 1796                      | 1796       | 1740     | 840      | 1680     | 30 | 3000                  | 6000                  | 11,6         |
| 36 - 1856                      | 1856       | 1800     | 840      | 1740     | 31 | 3100                  | 6200                  | 12,0         |
| 36 - 1916                      | 1916       | 1860     | 900      | 1800     | 32 | 3200                  | 6400                  | 12,4         |
| 36 - 1976                      | 1976       | 1920     | 900      | 1860     | 33 | 3300                  | 6600                  | 12,7         |
| 36 - 2036                      | 2036       | 1980     | 960      | 1920     | 34 | 3400                  | 6800                  | 13,1         |
| 36 - 2096                      | 2096       | 2040     | 960      | 1980     | 35 | 3500                  | 7000                  | 13,5         |
| 36 - 2156                      | 2156       | 2100     | 1020     | 2040     | 36 | 3600                  | 7200                  | 13,9         |
| 36 - 2216                      | 2216       | 2160     | 1020     | 2100     | 37 | 3700                  | 7400                  | 14,3         |
| 36 - 2276                      | 2276       | 2220     | 1080     | 2160     | 38 | 3800                  | 7600                  | 14,6         |
| 36 - 2336                      | 2336       | 2280     | 1080     | 2220     | 39 | 3900                  | 7800                  | 15,0         |
| 36 - 2396                      | 2396       | 2340     | 1140     | 2280     | 40 | 4000                  | 8000                  | 15,4         |
| 36 - 2456                      | 2456       | 2400     | 1140     | 2340     | 41 | 4100                  | 8200                  | 15,8         |
| 36 - 2516                      | 2516       | 2460     | 1200     | 2400     | 42 | 4200                  | 8400                  | 16,2         |
| 36 - 2576                      | 2576       | 2520     | 2 x 840  | 2460     | 43 | 4300                  | 8600                  | 16,5         |
| 36 - 2636                      | 2636       | 2580     | 2 x 840  | 2520     | 44 | 4400                  | 8800                  | 16,9         |
| 36 - 2696                      | 2696       | 2640     | 2 x 840  | 2580     | 45 | 4500                  | 9000                  | 17,3         |
| 36 - 2756                      | 2756       | 2700     | 2 x 900  | 2640     | 46 | 4600                  | 9200                  | 17,7         |
| 36 - 2816                      | 2816       | 2760     | 2 x 900  | 2700     | 47 | 4700                  | 9400                  | 18,0         |
| 36 - 2876                      | 2876       | 2820     | 2 x 900  | 2760     | 48 | 4800                  | 9600                  | 18,4         |
| 36 - 2936                      | 2936       | 2880     | 2 x 960  | 2820     | 49 | 4900                  | 9800                  | 18,8         |
| 36 - 2996                      | 2996       | 2940     | 2 x 960  | 2880     | 50 | 5000                  | 10000                 | 19,2         |

## General user specifications

|      |          |      |
|------|----------|------|
| V    | m/mn     | 15   |
| D    | mm       | 19   |
| F/nB | daN (kg) | 100  |
| F/nR | daN (kg) | 200  |
| Cf   |          | 0,05 |



## APPLICATION

These smooth types of cartridges are operating equipment designed to be housed in table bore holes so as to allow tools to be moved easily.

The cartridges are often used when the option of installing Transrollers or Rotobilles is tricky or impossible.

## DESCRIPTION

The upper bearing element of the cartridges may be: ball (CB\*\*) or roller (CR\*\*).

These bearings are lifted up thanks to a mechanical action (spring loaded)

- The mechanical action particular to each cartridge supports the load  $F$  on the stroke  $E$ .

- The cartridges are fitted directly into drilled holes. An elastomer joint (o-ring) inserted in a groove allows them to be immobilised. The base of a mechanical cartridge includes a height adjustment mechanism.

Roller cartridges are oriented using pin tools.

The cartridges may be extracted using screws in the M4 female thread holes,  $G$ .

## TO ORDER

Quote the complete reference details of the cartridge.

E.g.: cartridge CRML 28

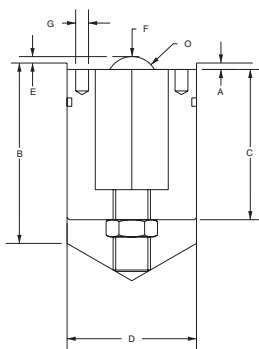
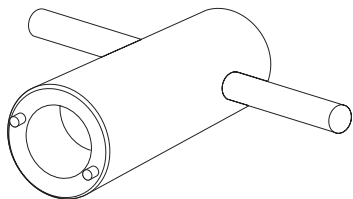
Smooth mechanically-operated roller cartridge, drilling  $\varnothing$  35.25.

## Tools for cartridges

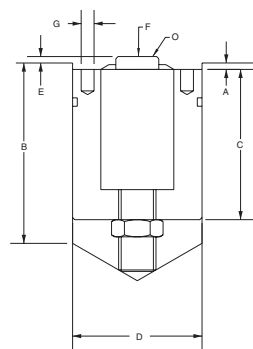
### Reference data

$D = 30,25$  OTL 30

$D = 35,25$  OTL 35



CBML



CRML

| MODELS  | A<br>mm | B<br>mm | C<br>mm | D<br>H11/mm | E<br>mm | F<br>daN | G<br>mm | O<br>mm |
|---------|---------|---------|---------|-------------|---------|----------|---------|---------|
| CBML 22 | 1,5     | 42      | 36,5    | 30,25       | 1,5     | 40       | 3,3     | 12      |
| CBML 28 | 1,5     | 49      | 44,5    | 35,25       | 2       | 60       | 3,3     | 15      |
| CRML 22 | 1,5     | 42      | 36,5    | 30,25       | 1,5     | 80       | 3,3     | 12      |
| CRML 28 | 1,5     | 49      | 44,5    | 35,25       | 2       | 120      | 3,3     | 15      |

### APPLICATION

These types of threaded cartridges are movement equipment designed to be fitted in press bed bore holes to allow tools to be moved easily.

The cartridges are often used when the option of installing Transrollers or Rotobilles is tricky or impossible.

### DESCRIPTION

The upper bearing element of the cartridges may be: ball (CB\*\*) or roller (CR\*\*).

These bearings are lifted up thanks to a mechanical action.

- The mechanical action particular to each cartridge supports the load  $F$  on the stroke  $E$

- - The cartridges are mounted directly into the threaded holes. The cartridges are immobilised through the application of a light coating of anaerobic glue to the thread. The disassembly and/or orientation of roller cartridges are carried out using a pin tool and the holes,  $G$ .

### TO ORDER

Quote the complete reference number of the cartridge.

E.g.: cartridge CRMF 28

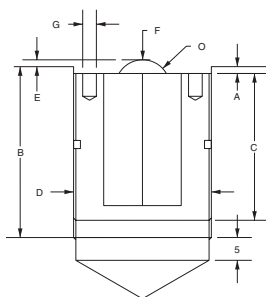
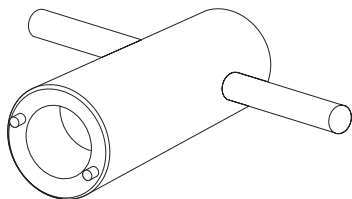
Threaded mechanically operated roller cartridge, M 35 thread, 1.5 lead.

### Tools for cartridges

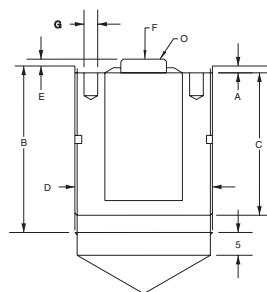
#### Reference data

$D = M30$  OTL 30

$D = M35$  OTL 35

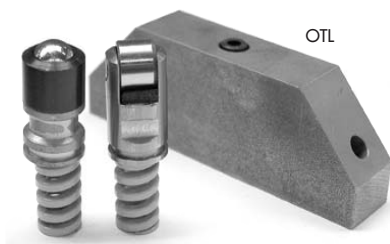


CBMF



CRMF

| MODELS  | A<br>mm | B<br>mm | C<br>mm | D<br>H11/mm | E<br>mm | F<br>daN | G<br>mm | O<br>mm |
|---------|---------|---------|---------|-------------|---------|----------|---------|---------|
| CBMF 22 | 1,5     | 42      | 36,5    | M30 x 1,5   | 1,5     | 40       | 3,3     | 12      |
| CBMF 28 | 1,5     | 50      | 44,5    | M35 x 1,5   | 2       | 60       | 3,3     | 15      |
| CRMF 22 | 1,5     | 42      | 36,5    | M30 x 1,5   | 1,5     | 80       | 3,3     | 12      |
| CRMF 28 | 1,5     | 50      | 44,5    | M35 x 1,5   | 2       | 120      | 3,3     | 15      |



### APPLICATION

TBU\* and TRU\* modules are operating equipment designed to be fitted in press bed bore holes to allow tools to be moved easily.

TBU\* and TRU\* modules are often used when the option of installing Transrollers or Rotobilles is tricky or impossible.

### DESCRIPTION

The upper bearing element of the modules may be: ball (CB\*\*) or roller (CR\*\*).

These bearings are lifted up using a spring placed directly beneath the module. The action of the spring allows to support the load F on the stroke E.

The modules are mounted into drilled holes. The axial immobilisation, the stroke of the module and its direction are obtained using a ball-operated stop mechanism and a locking screw. The 45° drilling of the immobilisation hole is carried out using a jig bush that is available.

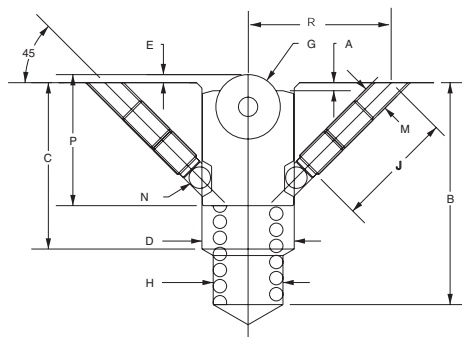
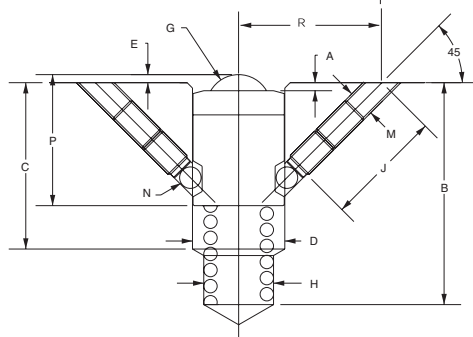
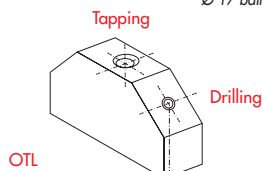
### TO ORDER

Quote the complete reference details of the cartridge.

E.g.: cartridge TBU 22

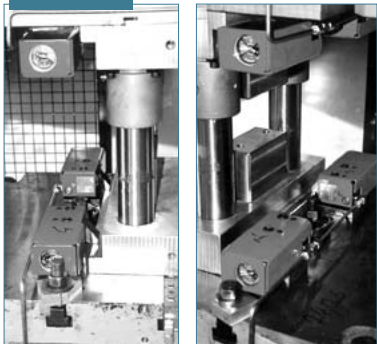
Ø 17 ball-operated module, force 40 daN (40 kg).

| Reference data |        |
|----------------|--------|
| D = 14,1       | OTL 14 |
| D = 17,2       | OTL 17 |
| D = 20,2       | OTL 20 |
| D = 26,2       | OTL 26 |



| MODELS     | A<br>mm | B<br>mm | C<br>mm | D<br>H11/mm | E<br>mm | F<br>daN | G<br>mm | H<br>mm | J<br>mm | M<br>mm | N<br>mm | P<br>mm | R<br>mm |
|------------|---------|---------|---------|-------------|---------|----------|---------|---------|---------|---------|---------|---------|---------|
| TBU/TRU 18 | 0,5     | 34,5    | 23      | 14,1        | 1       | 20       | 8       | 10      | 12      | M4      | 3       | 19      | 17,5    |
| TBU/TRU 22 | 1,5     | 41,4    | 31      | 17,2        | 1       | 40       | 12      | 13      | 22      | M5      | 4       | 27      | 26,7    |
| TBU/TRU 28 | 1,5     | 49,7    | 38      | 20,2        | 1       | 60       | 15      | 16      | 30      | M5      | 4       | 33,8    | 33,5    |
| TBU/TRU 36 | 1,5     | 55,1    | 47      | 26,2        | 1       | 100      | 18      | 16      | 40      | M6      | 5       | 43,5    | 44,1    |

**PATENTED**



**TOTAL CONTROL OF GAS SPRING ALLOWS ROTOBLOC TO APPLY THE NITROGEN CYLINDER TECHNIQUE TO AUTOMATIC PRESS CLAMPING**

**PRINCIPAL RISKS OR DISADVANTAGES OF STANDARD AUTOMATIC CLAMPING TECHNIQUES:**

**- Hydraulic clamping with single or dual-action circuit**

**- REMINDER:**

Whether they are of the single-action (high pressure) or dual action (average pressure) type, all traditional hydraulic solutions require a permanent hydraulic connection between the hydraulic generator and the clamps.

**- RISK OF HYDRAULIC HOSES BURSTING:**

Under pressure, hoses become hard, extremely rigid and suffer enormous fatigue, especially when they have to undergo variations in curvature.

E.g.: Connection between the frame (fixed) and the ram (mobile).

**- COMPLEXITY OF INSTALLATION:**

In order to obtain an adequate level of security, you need to create independent hydraulic circuits on each press and to continuously control the pressure on each circuit. This type of installation requires a hydraulic unit with a complex valve system.

**- HIGH LEVEL OF INVESTMENT:**

This is directly connected to the complexity of installation referred to above and to the performance levels of components.

**- SIGNIFICANT MAINTENANCE :**

In order to avoid any risk of accident, you need to control and replace the hydraulic hoses or other connecting items frequently.

**- Spring, spring washer, elastomer clamping etc. (and hydraulic unclamping)**

**- INADEQUATE PERFORMANCE LEVELS:**

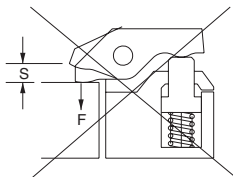
The compromise between force, stroke and bulk is never satisfactorily resolved.

**- CRITICAL VIBRATIONS:**

The coincidence of press vibration frequencies with the actual frequency of one of the above systems may cause the tool to move.

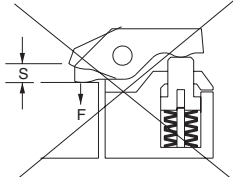


Spring clamping



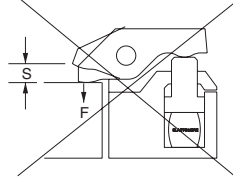
Stroke:  $S = \text{OK}$   
Force:  $F = \text{inadequate}$

Spring washer clamping



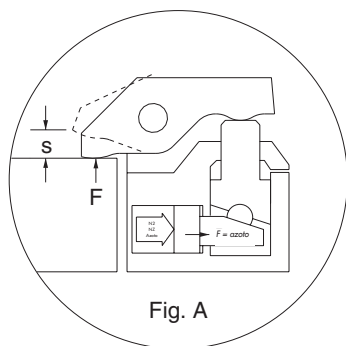
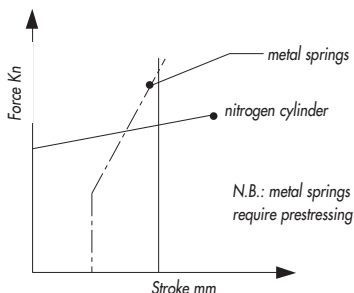
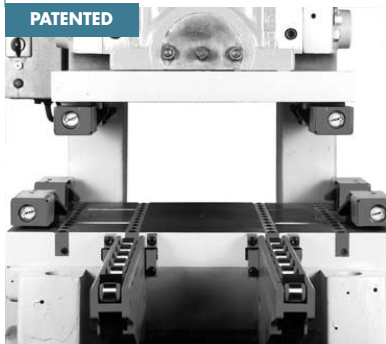
Stroke:  $S = \text{inadequate}$   
Force:  $F = \text{OK}$

Elastomer clamping



According to Shore hardness:  
 $S$ : if stroke OK, force inadequate  
 $F$ : if force OK, stroke inadequate

PATENTED



**WHY CHOOSE A SOLUTION WHERE THE CLAMPING ENERGY IS A NITROGEN CHARGE INTEGRATED INTO THE BODY OF THE CLAMP?**

#### INDEPENDENT CLAMPING = TOTAL SECURITY

As each clamp possesses its own clamping energy, the effectiveness of the tightening joint is solely and directly connected to the performance of each clamp, the reliability of the installation no longer depends upon complex external equipment such as hydraulic units or valve systems.

As for hydraulic hoses, there is very little demand for them as they are solely used for the unclamping function when the press is stopped.

#### COMPRESSED NITROGEN BEST BALANCE: FORCE + STROKE + BULK

#### REDUCED INVESTMENT

The lack of a large hydraulic unit, sophisticated hydraulic distribution, complex installation and costly and time-consuming commissioning brings a considerable reduction in investment levels.

The hydraulic pressure generator (a pneumo-hydraulic pump) is reduced to its simplest form.

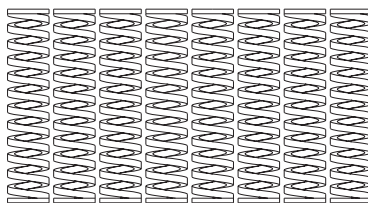
As it is only required in order to open clamps when the press is stopped, one hydraulic pressure generator may serve all the presses in the workshop.

#### REDUCED MAINTENANCE COSTS

Built using gas spring tightening and manufacturing techniques, the DYNABLOC clamp has an exceptional life expectancy (many millions of cycles).

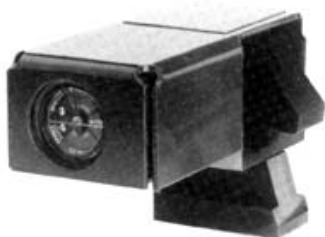
If it is dismantled accidentally, it is as simple to fill as a car tyre.

Nitrogen bottles are available at all specialist stores.



F = nitrogen

**PATENTED**



NHLC DYNABLOCKS are semi-autonomous gas clamps with hydraulic loosening. They are used for quick clamping of press tools... The independence of DYNABLOC gas clamping offers a higher level of security than traditional hydraulic techniques with a single or double action circuit.

**DESCRIPTION**

NHLC DYNABLOCKS are of the "normally closed" type upon hydraulic opening. As it is irreversible, a mechanism combining a sloping ramp and a lever provides a guarantee that the clamping force will be maintained whatever the frequency of the vibrations encountered (fig. A).

A graduated dial constantly displays the clamping force applied.

**ADVANTAGES**

- Autonomy:

The integrated clamping energy allows you to do without any permanent hydraulic connection.

- Bulk:

The lateral mounting of the power cylinder makes the clamp very small in the clamping direction, which maximises space for the tool on the plate (table or slide block).

- Lack of hydraulic unit:

Normally closed (nitrogen load), DYNABLOCKS only use hydraulic action upon opening. The generators are simple small single pumps without a sophisticated valve system.

E.g.: HPF 300, HPMS 300, HPDMD 300 pneumo-hydraulic generator etc.

**ASSEMBLY**

Initial DYNABLOC assembly may be carried out using straight T-bolts (TD) with special or standard sections complying with the DIN 650 standard (see dimensional table 2). Orientated T-bolts (TB), (TP) may also equip the body of DYNABLOCKS for special applications. In any case, the body of the clamp must sit completely on the table during clamping.

A standard or special additional wedge (C) may be added in any case to provide a special clamping height.

DYNABLOCKS may be screwed directly onto tables (T) for fixed placement.

N.B.: T-bolt assembly (carried out in the factory) or screw assembly onto a table is carried out using high coupling-resistance screws and a specified tightening procedure. Please see the technical notice concerned.

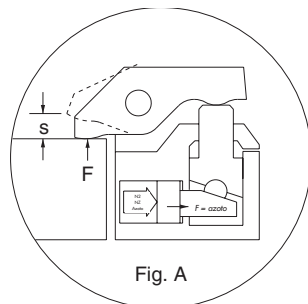
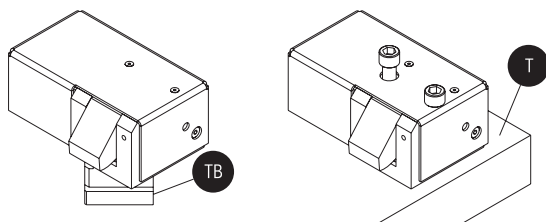
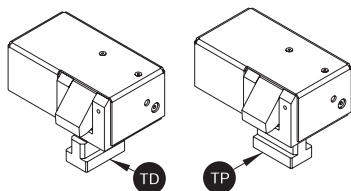
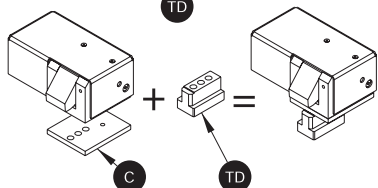
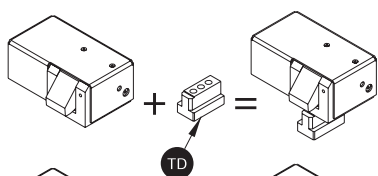
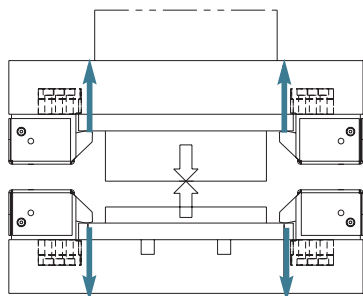


Fig. A

**PATENTED**



**DETERMINING OF CLAMPING FORCE : Mechanical press**

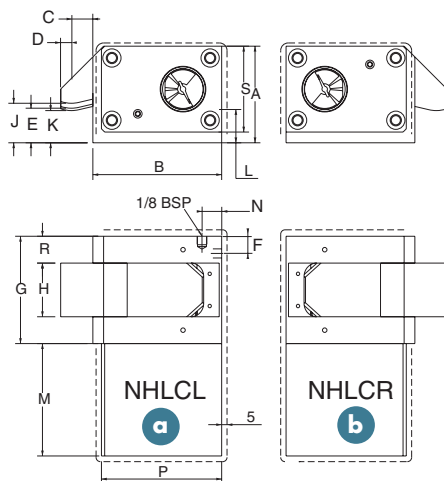
For pressing/drawing, the force necessary to clamp the tool is directly dependent upon a number of parameters, the principal ones being: rigidity of the frame, speed of the press, material worked on, stripping force, force distribution and tool mass. The irreversibility of the internal mechanism (fig. A) gives this type of clamp a very high resistance to loosening; this is why the clamping power option required is often much lower than that required with traditional hydraulic clamping. As a rule of thumb, for a total power installed figure take 12% to 15% of the power of the press distributed as follows: 8% to 10% on the slide block and around 4% to 6% on the table. To obtain the power of each DYNABLOC, divide the power calculated by the number of DYNABLOCS installed.

*E.g.:*

200-T. mechanical arch press = potential installation of 4 clamps on the slide block + 4 clamps on the table: Slide block: 200 T. x 0.08 = 16 T. or 4 x NHLC 40K dynablocs.

Table: 200 T. x 0.04 = 8 T. or 4 x NHLC 20K dynablocs.

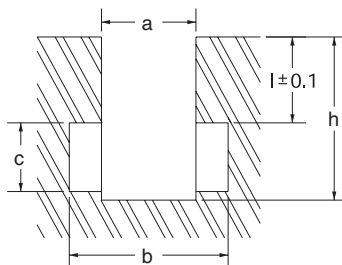
| TABLE 1<br>Specifications    |   | NHLC<br>20 K | NHLC<br>40 K | NHLC<br>60 K | NHLC<br>100 K |
|------------------------------|---|--------------|--------------|--------------|---------------|
| Height                       | A | 60           | 75           | 90           | 105           |
| Body lengths                 | B | 73           | 105          | 120          | 150           |
| Nominal support              | C | 15           | 17           | 20           | 22            |
| Joint tilt (axial)           | D | 7,5          | 7,5          | 10           | 10            |
| Nominal height               | E | 20           | 25           | 30           | 35            |
| Hydraulic port               | F | 16           | 16           | 16           | 16            |
| Body width                   | G | 70           | 80           | 100          | 120           |
| Joint width                  | H | 30           | 40           | 50           | 60            |
| Max. height                  | J | 22           | 28           | 33           | 39            |
| Min. height                  | K | 16           | 21           | 25           | 30            |
| Hydraulic port               | L | 22           | 29,5         | 31           | 35            |
| Tank length                  | M | 81           | 94           | 105          | 108           |
| Hydraulic port               | N | 11           | 16,5         | 18,5         | 24,5          |
| Tank width                   | P | 68           | 97           | 112          | 143           |
| Joint tilt (transversal)     | R | 20           | 20           | 25           | 30            |
| Tank height                  | S | 50           | 64           | 80           | 95            |
| Nominal force kg (DaN)       |   | 2000         | 4000         | 6000         | 10000         |
| Nom. clamping pressure (Bar) |   | 300          | 300          | 300          | 300           |
| Nominal temperature          |   | 20° C        | 20° C        | 20° C        | 20° C         |
| Min.                         |   | 10° C        | 10° C        | 10° C        | 10° C         |
| Max.                         |   | 50° C        | 50° C        | 50° C        | 50° C         |
| Oil vol. (cm <sup>3</sup> )  |   | 8,7          | 20,1         | 36,5         | 70,7          |



**a** = so-called "LEFT SIDE" model

**b** = so-called "RIGHT SIDE" model

| Table 2 - DIN 650 |    |    |    |    |
|-------------------|----|----|----|----|
| a                 | b  | c  | h  | l  |
| 18                | 30 | 12 | 30 | 18 |
| 22                | 37 | 16 | 38 | 22 |
| 28                | 46 | 20 | 48 | 28 |
| 36                | 56 | 25 | 61 | 36 |
| 24                | 42 | 18 | 42 | 24 |



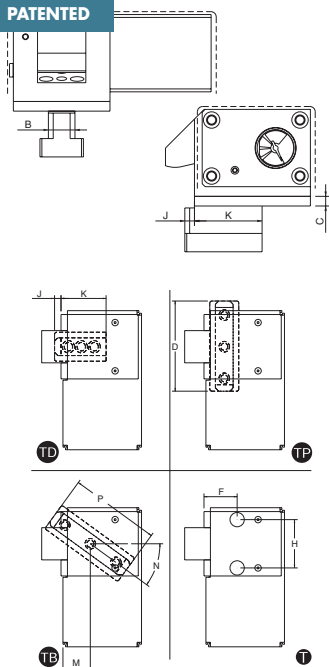
**PATENTED**


Table 3 shows the dimensions of standard T-bolts and assemblies for the different DYNABLOC models. Special T-bolts may be produced on demand.

**ORDER IDENTIFICATION**

Complete the following grid:

|   |   |   |   |   |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

Specify the references for your DYNABLOC order as defined below.

1. Choose "left side" or "right side" model (fig. B, p.44), see previous page.  
L: Left; R: Right.
2. Choose force according to needs (table 1)  
e.g.: DYNABLOC 20K (2000 kg tightening force)  
reference: 20K.
3. Choice of mode of attachment according to slot or requirements (tables 2 and 3)  
e.g.: Straight T-bolt arbor for slot a = 22 under  
DIN 650 standard - ref.: TD 22.
4. Addition of standard 10-mm. thick wedge  
reference: C 10 (if required).
5. In the case of a special T-bolt for slot a = 10, l = 18, c = 15, b = 29  
reference: TS a20 = L18 - c15 - b29.

General example: DYNABLOC NHLCR 20 K TD 22 C10

N.B.: the "l" dimension must be given to an accuracy of  $\pm 0.1$  mm.

The SHS supports on which the DYNABLOCKS can be rested are recommended for the temporary positioning of the latter when changing a tool. See the SHS supports page to make an appropriate choice from among these supports.

| TABLE 3<br>Version           | Clamps | D   | E  | F    | H  | J  | K  | M  | N  | P   | R   | Slots a |    |    |    | Wedge<br>C |
|------------------------------|--------|-----|----|------|----|----|----|----|----|-----|-----|---------|----|----|----|------------|
|                              |        |     |    |      |    |    |    |    |    |     |     | 18      | 22 | 28 | 36 |            |
| TD T-bolt                    | 20 K   |     |    |      |    | 10 | 60 |    |    |     |     | X       | X  | X  |    | X          |
|                              | 40 K   |     |    |      |    | 10 | 70 |    |    |     |     |         | X  | X  |    | X          |
|                              | 60 K   |     |    |      |    | 10 | 80 |    |    |     |     |         | X  | X  | X  | X          |
|                              | 100 K  |     |    |      |    | 10 | 95 |    |    |     |     |         |    | X  | X  | X          |
| TP T-bolt                    | 20 K   | 90  | 14 |      |    |    |    |    |    |     |     | X       | X  | X  |    | X          |
|                              | 40 K   | 100 | 14 |      |    |    |    |    |    |     |     |         | X  | X  |    | X          |
|                              | 60 K   | 120 | 18 |      |    |    |    |    |    |     |     |         | X  | X  | X  | X          |
|                              | 100 K  | 140 | 18 |      |    |    |    |    |    |     |     |         |    | X  | X  | X          |
| TB T-bolt                    | 20 K   |     |    |      |    |    |    | 32 | 55 | 105 |     | X       | X  | X  |    | X          |
|                              | 40 K   |     |    |      |    |    |    | 39 | 50 | 118 |     |         | X  | X  |    | X          |
|                              | 60 K   |     |    |      |    |    |    | 45 | 54 | 138 |     |         | X  | X  | X  | X          |
|                              | 100 K  |     |    |      |    |    |    | 53 | 52 | 164 |     |         |    | X  | X  | X          |
| Attachment<br>on the table T | 20 K   |     |    | 30,5 | 50 |    |    |    |    |     | M10 |         |    |    |    | X          |
|                              | 40 K   |     |    | 47   | 60 |    |    |    |    |     | M12 |         |    |    |    | X          |
|                              | 60 K   |     |    | 51,5 | 75 |    |    |    |    |     | M14 |         |    |    |    | X          |
|                              | 100 K  |     |    | 65   | 90 |    |    |    |    |     | M18 |         |    |    |    | X          |

### HPF 300



### HPMS 300 - HPMD 300



#### APPLICATION

HPF and HPMS pressure generators are pneumatic-hydraulic power units that allow you to operate components that only require a low flow rate (Rotoballs or Transrollers).

#### DESCRIPTION

HPF and HPMS pressure generators are units with an anti-shock resin body forming a tank and containing a dynamic intensifier that transforms network supplied compressed air into hydraulic energy. The hydraulic action is of the single action type. The generators include a safety valve that limits hydraulic pressure so as to avoid overloading the sinks.

#### USE: HPF model

single foot pedal action operate the generator

- Position 1: generator feed oil until nominal pressure is reached

- Position 2 (no foot action) :

hydraulic circuit is closed, pressure keep on in rotoballs, generator is not operating

- Position 3 : oil return to generator, pressure is down

#### USE: HPMS/D model

The HPMS/D 300 pressure generator may power any of the following:

- A set of Dynablocs powered simultaneously by a single hydraulic circuit.

- Two sets of Dynablocs powered by two separate hydraulic circuits.

#### a - Powering a set of Dynablocs with simultaneous power supply

- Manual valve turned to meet the connected circuit.

- If you press control #1 the unit powers the sink up to the nominal pressure of the generator (c.f. next page).

- If you release control #1 (spring return) the pressure to the sink is maintained.

- To put the pressure to the sink in reverse you just need to reposition the manual switch to a central position (c.f. next page).

#### b - Powering two sets of Dynablocs that are powered separately

Same procedure as previous paragraph (a), but select pressurisation of the sink required (c.f. next page).

N.B.: Using a valve to select a circuit simultaneously puts the other circuit into reverse.

#### **A mounting deck is available as an accessory for the HPMS/D.**

The HPMS/D pneumatic-hydraulic generator may be mounted vertically.

#### TO ORDER

Quote the complete reference details of the pump.

E.g.: Pump HPF 300;

Pump HPMS 300;

Pump HPMD 300.

\* Pos. H = Horizontal position;

Pos. V = Vertical position.

| Specifications       | Unit  | HPF 300  | HPMS 300                  | HPMD 300                |
|----------------------|-------|----------|---------------------------|-------------------------|
| Air pressure         | bar   | 5        | 5                         | 5                       |
| Oil pressure         | bar   | 300      | 300                       | 300                     |
| Air connection       |       | BSPP     | 1/4 G                     | 1/4 G                   |
| Oil connection       |       | 3/8 BSPP | 1/4 G                     | 1/4 G                   |
| Vacuum capacity      | L/min | 0,8      | 1,4                       | 1,4                     |
| Tank volume L        | L     | 1,4      | * Pos. o:2,4 - Pos. v:2,1 | Pos. o:2,4 - Pos. v:2,1 |
| Hydraulic outlet No. |       | 1        | 1                         | 2                       |
| Mass                 | kg    | 5        | 5,7                       | 5,7                     |
| Length               | mm    | 295      | 404                       | 404                     |
| Width                | mm    | 145      | 209                       | 209                     |
| Height               | mm    | 170      | 233                       | 233                     |

| MODELS                        | FUNCTIONS                                                   | LABEL |
|-------------------------------|-------------------------------------------------------------|-------|
| BDS 300<br>BDS 300.1<br>100.1 |                                                             |       |
| • •                           | Hydraulic circuit for unclamping lower DYNABLOCS            | D     |
| • •                           | Hydraulic circuit for unclamping upper DYNABLOCS            | E     |
| • •                           | Hydraulic circuit for working Transrollers or Rotabilles    | H     |
| • •                           | Electric pressure gauge for press functioning authorisation | S     |

## DISTRIBUTION AND SAFETY BLOCKS

(accessory indispensable to "DYNABLOC SYSTEM")

### DEFINITION

BDS blocks etc. are distribution blocks specially designed for use of the DYNABLOC principle, with or without hydraulic movement segments.

Powered by hydraulic pressure generators, they allow you:

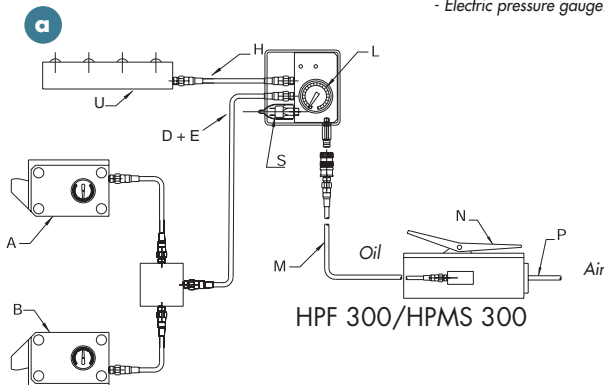
- to clamp or unclamp DYNABLOCS that are installed
- to operate Transrollers or Rotabilles
- to carry out both functions simultaneously

N.B. Depending upon the choice of distribution block, an electric pressure gauge controls the clamping circuit pressure and gives the authorisation of start to the press.

### DESCRIPTION

The distribution block is made from treated aluminium and, depending upon the model selected, it has the following equipment:

- Manometer to control hydraulic pressure (300 bar): Item L
- Electric pressure gauge: Item S.



HYDRAULIC CONNECTION DIAGRAM OF THE DIFFERENT COMPONENTS OF THE "DYNABLOC" CLAMPING SYSTEM

Ref. / Connections

A: Upper DYNABLOCS (slide block)

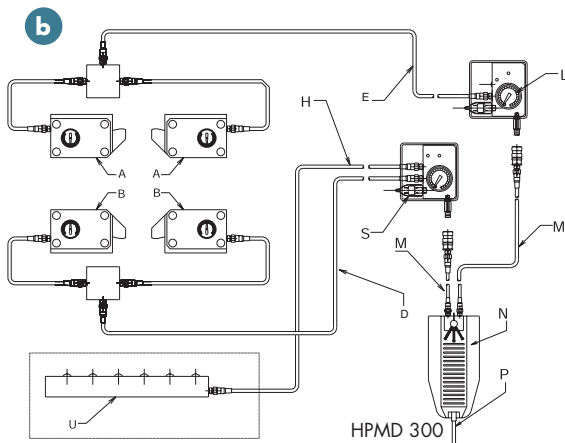
B: Lower DYNABLOCS (table)

U: Movement segments (Rotabilles or Transrollers)

N: Pneumo-hydraulic generator

P: Main Pneumatic supply (5 bars)

M: Hydraulic supply to block (300 bar)



### DISTRIBUTION AND SAFETY BLOCK

100 bar output  
300 bar output  
Safety pressure gauge



Hydraulic supply 300 bar maximum

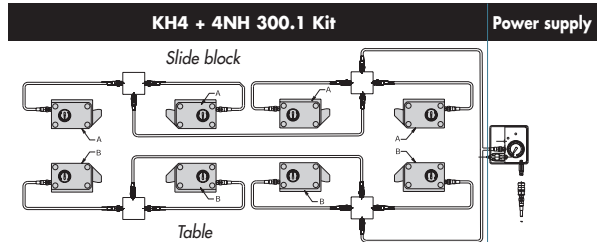
### NB

If ordering a hydraulic hose, the nozzles must be crimped in the factory. Specify the total length, L (including nozzles).

## DYNABLOC PIPING KITS

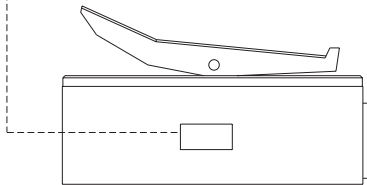
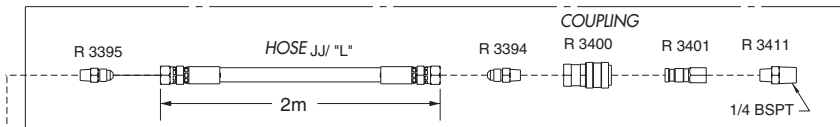
| Models          | Number of Dynablocs |
|-----------------|---------------------|
| KH2NH 300.1     | 2 Dynabloc          |
| KH2 + 2NH 300.1 | 4 Dynabloc          |
| KH4 + 4NH 300.1 | 8 Dynabloc          |
| KH6 + 6NH 300.1 | 12 Dynabloc         |

If rotobilles or transrollers, add a segment piping kit (c.f. page 31)



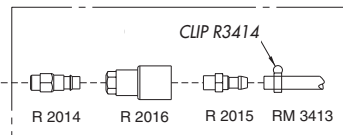
## GENERATOR PIPING KITS

KH1R 300.1 (1-2 m.) hydraulic connection kit



HPF 300/HPMS 300/HPMD 300  
Pneumo-hydraulic generator

Pneumatic connection

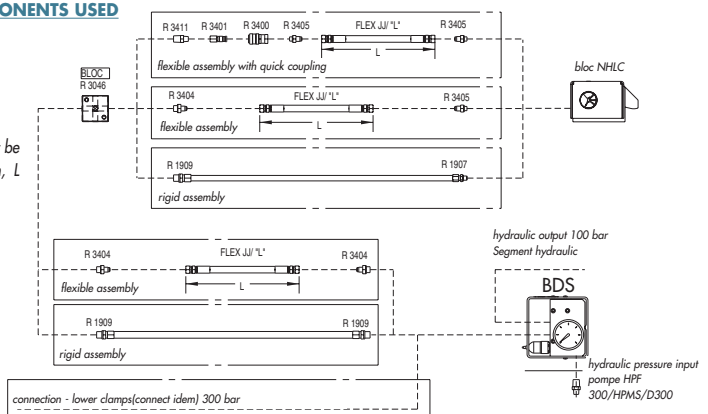


## STANDARD CONNECTIONS AND COMPONENTS USED

The R... references are from ROTOBLOC notices  
(to be copied for your orders)

### NB

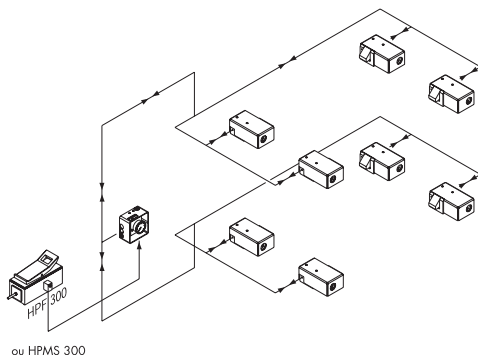
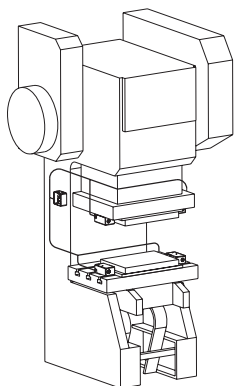
If ordering hydraulic flexible hoses, the nozzles must be  
crimped in the factory. Please specify total length, L  
(including nozzles).



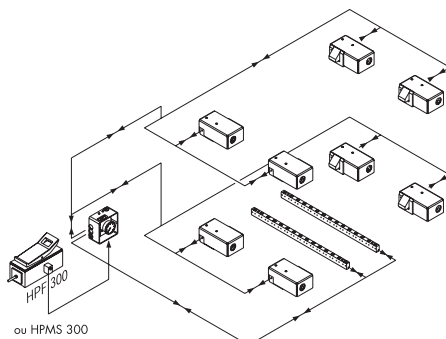
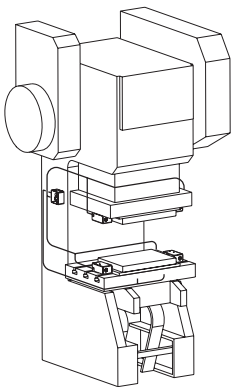
**AUTONOMOUS CLAMPING = THANKS TO DYNABLOC, ROTOBLOC IS OFFERING YOU A COMPLETE SOLUTION**

**DYNABLOC: STANDARD APPLICATIONS**

APPLICATION A : DYNABLOC SYSTEM WITHOUT HYDRAULIC SEGMENTS

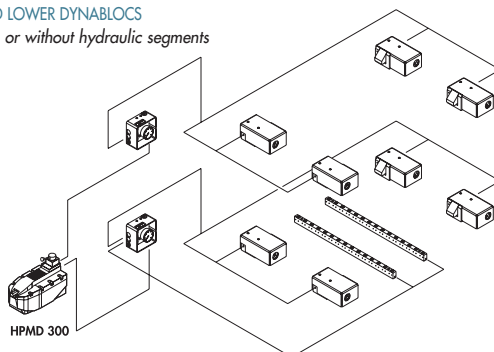
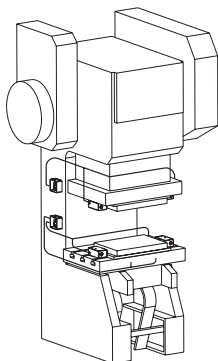


APPLICATION B : DYNABLOC SYSTEM WITH HYDRAULIC SEGMENTS



APPLICATION C : INDEPENDENT CONTROL OF UPPER AND LOWER DYNABLOCKS

with or without hydraulic segments



Dimensions and data subject to amendment

### APPLICATION

SHS clamp supports are used to hold clamps when they are removed from the table or slide block while changing the tool.

When the clamps become non-operational, they must be left resting in an appropriate position. SHS supports are designed to take clamps by their T-shaped bolts.

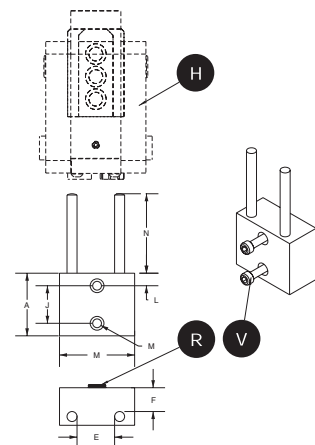
Easy to install and taking up little space, they can be placed in an accessible area without hindering any aspect of tool handling; the clamps thereby rest in a natural position and the hydraulic hoses are not constrained or placed under stress.

### ASSEMBLY

SHS supports are fixed to the frame of the machine with two screws (V). During installation, you should check that the space available (H) is sufficient for complete engagement of the body of the clamp. Depending upon the different thicknesses (I) of the T-bolts, you sometimes need to insert one or more washers under the support body.

### TO ORDER

The supports are defined by the width a of the slots to which the T-bolts of the clamps belong. E.g.: SHS 22 (Support for T-bolt where a = 22 DIN 650).

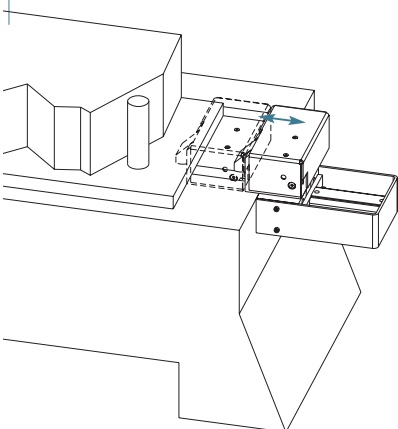


| DIN 650 |    |    |    |    |
|---------|----|----|----|----|
| a       | b  | c  | h  | l  |
| 18      | 30 | 12 | 30 | 18 |
| 22      | 37 | 16 | 38 | 22 |
| 28      | 46 | 20 | 48 | 28 |
| 36      | 56 | 25 | 61 | 36 |
| 24      | 42 | 18 | 42 | 24 |

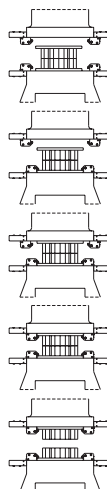
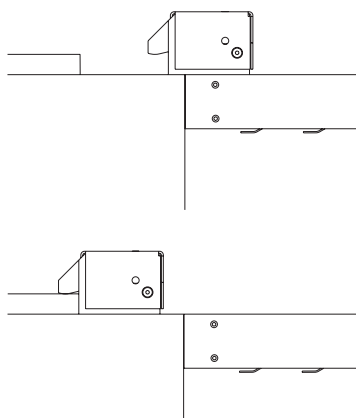
| MODELS | A  | B  | C  | E  | F  | J  | L  | M  | N  |
|--------|----|----|----|----|----|----|----|----|----|
| SHS 18 | 50 | 60 | 30 | 22 | 19 | 30 | 10 | M6 | 45 |
| SHS 22 | 50 | 60 | 30 | 26 | 19 | 30 | 10 | M6 | 45 |
| SHS 24 | 50 | 60 | 30 | 26 | 19 | 30 | 10 | M6 | 45 |
| SHS 28 | 50 | 60 | 30 | 30 | 19 | 30 | 10 | M6 | 45 |
| SHS 36 | 50 | 60 | 30 | 34 | 19 | 30 | 10 | M6 | 45 |

### OPTIONS : PNEUMATIC MOVEMENT

Dimensions and data subject to amendment



### TRPN



## APPLICATION

HLC BRIDABLOCS are hydraulically operated clamps mainly used for quick clamping of press tools.

The hydraulic clamping of BRIDABLOCS offers security through the constant and regular pattern of the clamping forces.

## DESCRIPTION

BRIDABLOCS are single-action intensifier lever-operated clamps with spring return. The elements of the clamp are made from high quality burnished treated steel. Its very small dimensions allow it to be used in applications where there is little space available.

A large-dimensioned piston controls the tightening lever at a pressure of 250 bars for the nominal force of the clamp.

The specific spherical connections between the tightening lever and the piston allow you to obtain high strokes. The end-of-stroke stop (A)\* of the tightening lever is visible in its end positions. This unusual construction allows the operator to ensure that the tool is clamped with complete safety between these two end positions.

## ASSEMBLY

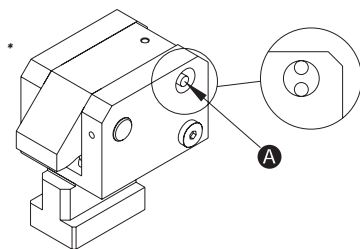
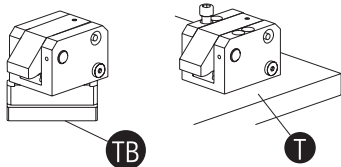
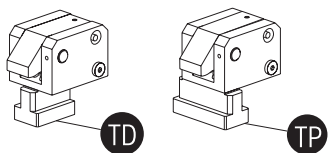
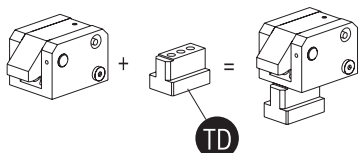
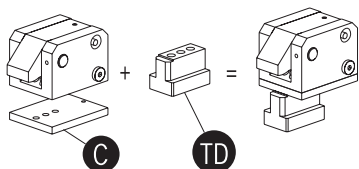
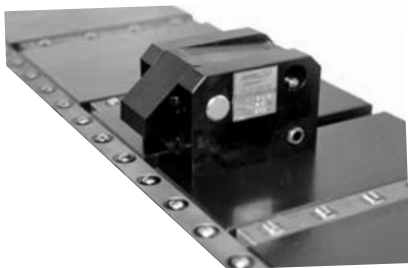
Initial BRIDABLOC assembly may be carried out using straight T-bolts (TD) with special or standard sections complying with the DIN 650 standard (see dimensional table 2). Directed T-bolts (TB), (TP) may also equip the body of BRIDABLOCS for special applications. Under all circumstances, the body of the clamp must be placed completely on the table during clamping.

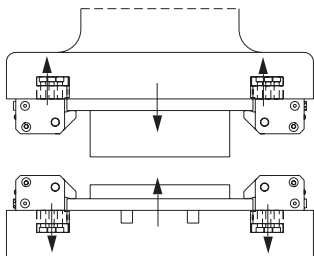
A standard or special additional wedge (C) may be added in all cases to provide a particular clamping height.

BRIDABLOCS may be screwed directly onto tables (T) for fixed placement with a hydraulic main supply integrated into the table as an option.

N.B.: T-bolt assembly (carried out in the factory) or screw assembly onto a table is carried out using high coupling-resistance screws and a specified tightening procedure. Please see the technical notice concerned.

The use of HLC HYDRAULIC BRIDABLOCS involves a continuous line connection to an outside generator that provides constant pressure. The connection may be joint or individual. Please see the HYDRAULIC PRESSURE GENERATOR Type HP1E heading for the choice as well as the appropriate BRIDABLOC connection.





### CLAMPING FORCE

For pressing/drawing, the force necessary to clamp the tool is directly dependent upon a number of parameters, the principal ones being: rigidity of the frame, speed of the press, material worked on, stripping force, force distribution and tool mass. Its theoretical evaluation is relatively difficult. Practical measures may be adopted on-site with the assistance of appropriate sensors.

As a rule of thumb, an approximate evaluation may be made by assuming total clamping power to be 12% to 18% of the nominal capacity of the press (4% to 8% on the table and around 8% to 10% on the slide block). This force will then be divided by the total number of clamps.

E.g.: 160-T. arch press: 4 clamps on the slide block + 4 clamps on the table.

### SLIDE BLOCK:

$F = 160,000 \times 0.10 = 16,000 \text{ kg}$ ;  $4 = 4,000 \text{ daN}$ .

Equivalent to 4 HLC 40K clamps.

### TABLE:

$F = 160,000 \times 0.5 = 8,000 \text{ kg}$ ;  $4 = 2000 \text{ daN}$

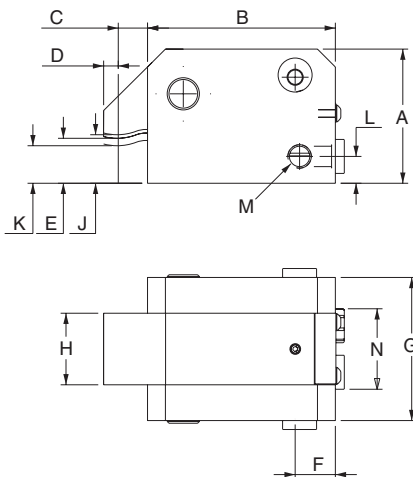
Equivalent to 4 HLC 20K clamps.

If the stripping forces are very high, add them onto the force,  $F$ , directly.

### NB:

Pressing and forming generally involves major dynamic components that subject their environment to severe cycles of fatigue. Constant monitoring and maintenance of mechanical and hydraulic equipment (hoses) is advisable so as to avoid any risk of an accident.

| TABLE 1<br>Specifications     |   | HLC<br>20 K | HLC<br>40 K | HLC<br>60 K | HLC<br>100 K |
|-------------------------------|---|-------------|-------------|-------------|--------------|
| Force kg (daN)                |   | 2000        | 4000        | 6000        | 10000        |
| Pressure (Bar)                |   | 250         | 250         | 250         | 250          |
| Oil volume (cm <sup>3</sup> ) |   | 4           | 7           | 11          | 18           |
| Body height                   | A | 60          | 75          | 90          | 105          |
| Body lengths                  | B | 90          | 105         | 120         | 150          |
| Nominal support               | C | 15          | 17          | 20          | 22           |
| Joint tilt                    | D | 7,5         | 7,5         | 10          | 10           |
| Nominal height                | E | 20          | 25          | 30          | 35           |
| Hydraulic port                | F | 20          | 20          | 20          | 25           |
| Body width                    | G | 60          | 80          | 100         | 120          |
| Joint width                   | H | 30          | 40          | 50          | 60           |
| Max. height                   | J | 22          | 28          | 33          | 38           |
| Min. height                   | K | 16          | 21          | 25          | 30           |
| Hydraulic port                | L | 13          | 15          | 15          | 17           |
| Hydraulic port                | M | 1/4 BSPP    | 1/4 BSPP    | 1/4 BSPP    | 1/4 BSPP     |
| Hydraulic port                | N | 24          | 26          | 30          | 40           |
| Mass (kg)                     |   | 2,2         | 4,6         | 7,9         | 12,5         |



| TABLE 2 - DIN 650 |    |    |    |    |
|-------------------|----|----|----|----|
| a                 | b  | c  | h  | l  |
| 18                | 30 | 12 | 30 | 18 |
| 22                | 37 | 16 | 38 | 22 |
| 28                | 46 | 20 | 48 | 28 |
| 36                | 56 | 25 | 61 | 36 |
| 24                | 42 | 18 | 42 | 24 |

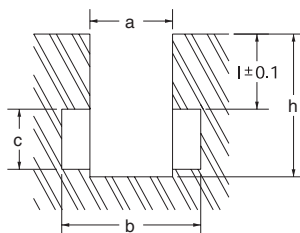


Table 3 shows the dimensions of standard T-bolts and assemblies for the different BRIDABLOC models. Special T-bolts may be produced on demand.

### ORDER IDENTIFICATION

Complete the following grid:

1 2 3 4 5

Specify the references for your BRIDABLOC order as defined below.

1 - Choose force according to needs (table 1)

E.g.: BRIDABLOC 20K (2000 kg tightening force)

Reference: 20K.

2 - Choice of mode of attachment according to slot or requirements (tables 2 and 3)

E.g.: Straight/upright T-bolt for slot a = 22 under DIN 650 standard

Reference: TD 22.

3 - Addition of standard 10-mm. thick wedge

Reference: C 10 (if required).

4 - In the case of a special T-bolt, indicate the a, l, c and b dimensions of the slot:

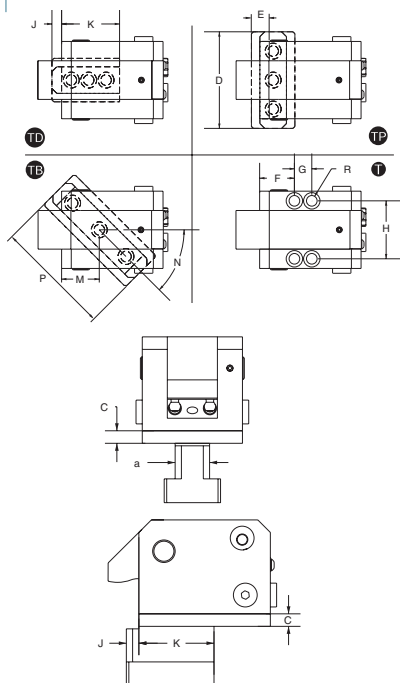
E.g.: a = 20, l = 18, c = 15, b = 29

Reference: TS a20 - L18 - c15 - b29.

General example: BRIDABLOC HLC 20 K TD 22 C10

N.B.: the "l" dimension must be given to an accuracy of  $\pm 0.1$  mm.

The SHS supports used to rest the BRIDABLOCKS are recommended for temporary BRIDABLOC positioning while changing the tool. See the SHS supports page to make an appropriate choice from among these supports.



| TABLE 1<br>Version           | Clamp | D   | E  | F  | G  | H  | J  | K  | M  | N  | P   | R   | Key a |    |    |    | Wedge<br>C |
|------------------------------|-------|-----|----|----|----|----|----|----|----|----|-----|-----|-------|----|----|----|------------|
|                              |       |     |    |    |    |    |    |    |    |    |     |     | 18    | 22 | 28 | 36 |            |
| TD T-bolt                    | 20 K  |     |    |    |    |    | 10 | 60 |    |    |     |     | X     | X  | X  |    | X          |
|                              | 40 K  |     |    |    |    |    | 10 | 70 |    |    |     |     |       | X  | X  |    | X          |
|                              | 60 K  |     |    |    |    |    | 10 | 80 |    |    |     |     |       | X  | X  | X  | X          |
|                              | 100 K |     |    |    |    |    | 10 | 95 |    |    |     |     |       |    | X  | X  | X          |
| TP T-bolt                    | 20 K  | 80  | 14 |    |    |    |    |    |    |    |     |     | X     | X  | X  |    | X          |
|                              | 40 K  | 100 | 14 |    |    |    |    |    |    |    |     |     |       | X  | X  |    | X          |
|                              | 60 K  | 120 | 18 |    |    |    |    |    |    |    |     |     |       | X  | X  | X  | X          |
|                              | 100 K | 140 | 18 |    |    |    |    |    |    |    |     |     |       |    | X  | X  | X          |
| TB T-bolt                    | 20 K  |     |    |    |    |    |    |    | 32 | 55 | 90  |     | X     | X  | X  |    | X          |
|                              | 40 K  |     |    |    |    |    |    |    | 39 | 50 | 118 |     |       | X  | X  |    | X          |
|                              | 60 K  |     |    |    |    |    |    |    | 45 | 54 | 138 |     |       | X  | X  | X  | X          |
|                              | 100 K |     |    |    |    |    |    |    | 53 | 52 | 164 |     |       |    | X  | X  | X          |
| Attachment<br>on the table T | 20 K  |     |    | 31 | 15 | 50 |    |    |    |    |     | M8  |       |    |    |    | X          |
|                              | 40 K  |     |    | 36 | 18 | 60 |    |    |    |    |     | M10 |       |    |    |    | X          |
|                              | 60 K  |     |    | 38 | 20 | 75 |    |    |    |    |     | M12 |       |    |    |    | X          |
|                              | 100 K |     |    | 49 | 24 | 90 |    |    |    |    |     | M14 |       |    |    |    | X          |

Dimensions and data subject to amendment

### APPLICATION

SHS clamp supports are used to hold clamps when they are removed from the table or slide block during a tool change.

When the clamps become non-operational, they must be left resting in an appropriate position. SHS supports are designed to take clamps by their T-shaped bolts.

Easily installed and taking up little space, they can be placed in an accessible location without hindering any aspect of tool handling; the clamps thereby rest in a natural position and the hydraulic hoses are not constrained or placed under stress.

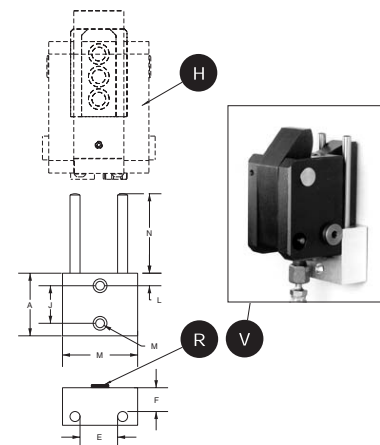
### ASSEMBLY

SHS supports are attached to the frame of the machine with two screws (V). During installation, you should check that the space available (H) is sufficient for complete engagement of the body of the clamp. Depending upon the different thicknesses (I) of the T-bolts, you sometimes need to insert one or more washers under the support body.

### ORDERING

The supports are defined by the "a" width of the slots to which the T-bolts of the clamps belong.

E.g.: SHS 22 (Support for T-bolt where a = 22 DIN 650).

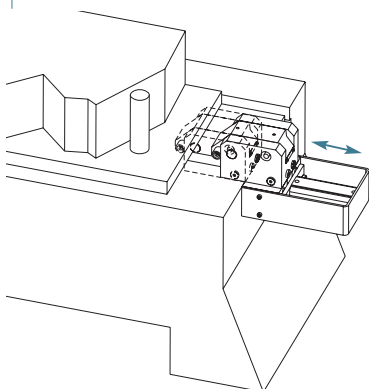


| DIN 650 |    |    |    |    |
|---------|----|----|----|----|
| a       | b  | c  | h  | l  |
| 18      | 30 | 12 | 30 | 18 |
| 22      | 37 | 16 | 38 | 22 |
| 28      | 46 | 20 | 48 | 28 |
| 36      | 56 | 25 | 61 | 36 |
| 24      | 42 | 18 | 42 | 24 |

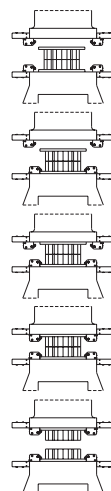
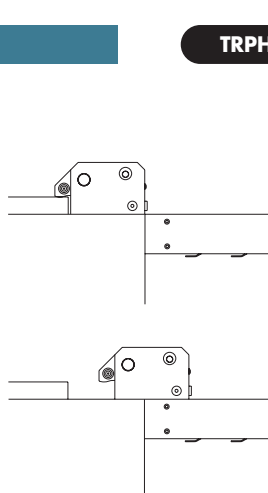
| MODELS | A  | B  | C  | E  | F  | J  | L  | M  | N  |
|--------|----|----|----|----|----|----|----|----|----|
| SHS 18 | 50 | 60 | 30 | 22 | 19 | 30 | 10 | M6 | 45 |
| SHS 22 | 50 | 60 | 30 | 26 | 19 | 30 | 10 | M6 | 45 |
| SHS 24 | 50 | 60 | 30 | 26 | 19 | 30 | 10 | M6 | 45 |
| SHS 28 | 50 | 60 | 30 | 30 | 19 | 30 | 10 | M6 | 45 |
| SHS 36 | 50 | 60 | 30 | 34 | 19 | 30 | 10 | M6 | 45 |

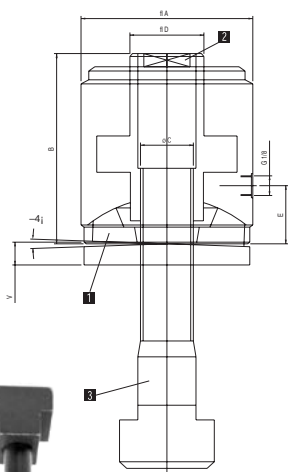
### OPTIONS : PNEUMATIC MOVEMENT

Dimensions and data subject to amendment



### TRPH





### NUT COMPRISING A HYDRAULIC HOLLOW PISTON ROD CYLINDER

- Single action hydraulic power supply
- Spring return

- 1 - Magnetic semi-spherical washer
  - 2 - Double-sided end for adjustment of clamping height
  - 3 - Forged locking device or stud + T-bolt assembly (not provided) may be supplied as accessories.
- Tell us the clamping height and the dimensions of the T-shaped slot.

### APPLICATION

Tool or mould clamping with sole plates supplied with "open buttonholes" on press tables and slide blocks equipped with T-shaped slots.

### DESCRIPTION

Hydraulic hollow piston rod cylinder with spring return. The "rod side" hydraulic power supply of the piston has the effect of exercising traction force on the tie rod, which makes the base of the cylinder resting against the sole plate to clamp.

### ADVANTAGES

- Tools can occupy the entire area of the table;
- The clamping height can be adjusted through the piston rotation;
- The semi-spherical supporting washer allows disparities of  $\pm 4^\circ$  with parallel;
- Economical solution that does not require any specific adaptation.

### NOTE

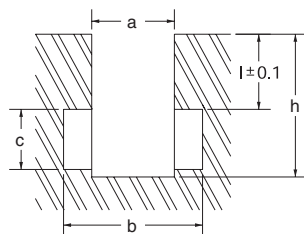
DIN 787 locking devices or stud + T-bolt assemblies are not part of the equipment supplied.

Please see the "HYDRAULIC PRESSURE GENERATOR Type HP1E" heading for the choice of the most suitable type of hydraulic unit.

| Models    | SPECIFICATIONS   |            |            |                         |                        |                                  |
|-----------|------------------|------------|------------|-------------------------|------------------------|----------------------------------|
|           | Lifting force at |            | Stroke Vmm | Section Cm <sup>2</sup> | Volume Cm <sup>3</sup> | For tie rod DIN 787 12.9 quality |
|           | 250 bar kN       | 350 bar kN |            |                         |                        |                                  |
| HTB 28 K  | 28,5             | 39,8       | 6          | 11,38                   | 7                      | M 16                             |
| HTB 44 K  | 44               | 61,6       | 6          | 17,60                   | 11                     | M 20                             |
| HTB 72 K  | 72,2             | 101        | 6          | 28,86                   | 17                     | M 24                             |
| HTB 102 K | 102              | 102        | 6          | 40,80                   | 24                     | M 30                             |

**Max. pressure admissible: 400 bar**

| Models    | Dimension in mm |    |      |    |    |
|-----------|-----------------|----|------|----|----|
|           | A               | B  | C    | D  | E  |
| HTB 28 K  | 55              | 66 | M 16 | 24 | 20 |
| HTB 44 K  | 65              | 72 | M 20 | 28 | 22 |
| HTB 72 K  | 85              | 82 | M 24 | 35 | 23 |
| HTB 102 K | 100             | 92 | M 30 | 45 | 25 |



Dimensions and data subject to amendment

### APPLICATION

SHS clamp supports are used to hold clamps when they are removed from the table or slide block during a tool change.

When the clamps become non-operational, they must be left resting in an appropriate position. SHS supports are designed to take clamps by their T-shaped arbors.

Easily installed and taking up little space, they can be placed in an accessible location without hindering any aspect of tool handling; the clamps thereby rest in a natural position and the hydraulic hoses are not constrained or placed under stress.

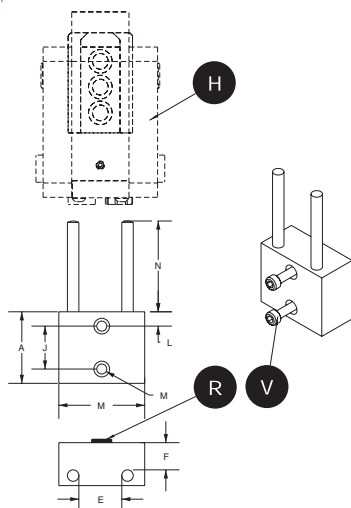
### ASSEMBLY

SHS supports are attached to the frame of the machine with two screws (V). During installation, you should check that the space available (H) is sufficient for complete engagement of the body of the clamp. Depending upon the different thicknesses (I) of the T-bolts, you sometimes need to insert one or more washers under the support body.

### ORDERING

The supports are defined by the "a" width of the slots to which the T-bolts of the clamps belong.

E.g.: SHS 22 (Support for T-bolt where a = 22 DIN 650)

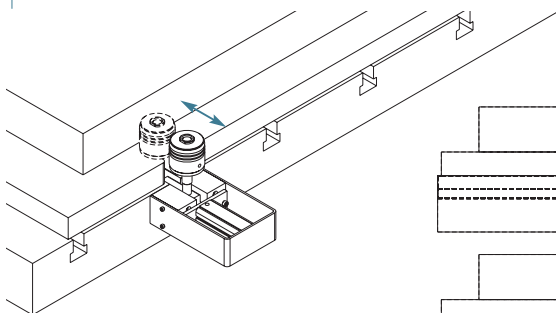


| DIN 650 |    |    |    |    |
|---------|----|----|----|----|
| a       | b  | c  | h  | l  |
| 18      | 30 | 12 | 30 | 18 |
| 22      | 37 | 16 | 38 | 22 |
| 28      | 46 | 20 | 48 | 28 |
| 36      | 56 | 25 | 61 | 36 |
| 24      | 42 | 18 | 42 | 24 |

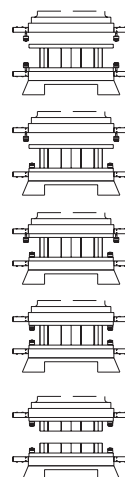
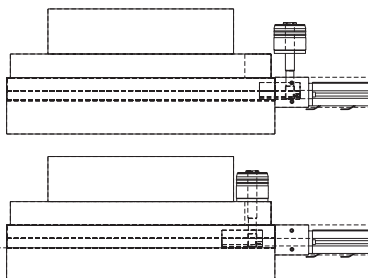
| MODELS | A  | B  | C  | E  | F  | J  | L  | M  | N  |
|--------|----|----|----|----|----|----|----|----|----|
| SHS 18 | 50 | 60 | 30 | 22 | 19 | 30 | 10 | M6 | 45 |
| SHS 22 | 50 | 60 | 30 | 26 | 19 | 30 | 10 | M6 | 45 |
| SHS 24 | 50 | 60 | 30 | 26 | 19 | 30 | 10 | M6 | 45 |
| SHS 28 | 50 | 60 | 30 | 30 | 19 | 30 | 10 | M6 | 45 |
| SHS 36 | 50 | 60 | 30 | 34 | 19 | 30 | 10 | M6 | 45 |

### OPTIONS : PNEUMATIC MOVEMENT

Dimensions and data subject to amendment



### TRPE



## APPLICATION

HP1E pressure generators are pneumo-hydraulic power units that essentially allow you to control the clamping and translation of tools. They are compact and are easy to install on any kind of press.

## DESCRIPTION

HP1E pressure generators are electrically controlled.

The generator comprises an integrated electrical cabinet ready for connection to the main supply. A separate control box connected to the cabinet allows you to control all hydraulic functions remotely. Lighting switches placed on the control box ensure proper use of these functions.

(Press) production site emergency stop electrical terminals are available in the cabinet in case of incidents coming from the generator.

The pump is of the balanced-pressure pneumo-hydraulic type. It is powered from the compressed air network. The output hydraulic pressure is directly proportional to the air pressure set at the intake control valve.

When working, if the preset service pressure is reached, the pump locks into standby position through the balance of internal pressures. Its cycle will automatically respond to any hydraulic stress. Working and resting changeovers relate solely to the actual internal functioning of the pump.

Distribution is ensured with the assistance of poppet valves that ensure the clamping circuits are air tight. All the distribution and the pressure relief valve are flaccid on the bored unit.

Additional safety pressure switches may be added onto clamping lines in order to increase security. The oil tank made from translucent material allows you a good view of its level.

## SPECIFICATIONS AND DIMENSIONS

The table above shows the standard hydraulic configuration of HP1E generators. An average pressure of 250 bars and a low pressure of 100 bars are available. Other service pressures are also available on request. A distribution set may comprise one or two service pressures (average pressure and low pressure stage). Additional pressure stages may also be examined.

The type of distribution may be single or double action depending upon the sinks. One distribution set may constitute several single or double action circuits.

## TO ORDER

To order a generator, complete the identification grid above. E.g.: Pressure generator HP1E 250.252P / 100.1S. Electrically-controlled generator: 1 250-bar average pressure stage, single action circuits with 2 additional line pressure switches, 1 100-bar low pressure stage with 1 single action circuit.

**N.B.** See page with examples of hydraulic circuits for different connections. Consult us if you need to.

| MODELS                | 1 service pressure |              | 2 service pressure |              |                  |              |
|-----------------------|--------------------|--------------|--------------------|--------------|------------------|--------------|
|                       | Pressure (bar)     | Circuit S-D* | Pressure 1 (bar)   | Circuit S-D* | Pressure 2 (bar) | Circuit S-D* |
| HP1E 100.1S           | 100                | 1S           |                    |              |                  |              |
| HP1E 250.1S           | 250                | 1S           |                    |              |                  |              |
| HP1E 250.2S           | 250                | 2S           |                    |              |                  |              |
| HP1E 250.3S           | 250                | 3S           |                    |              |                  |              |
| HP1E 250.4S           | 250                | 4S           |                    |              |                  |              |
| HP1E 100.1D           | 100                | 1D           |                    |              |                  |              |
| HP1E 100.2D           | 100                | 2D           |                    |              |                  |              |
| HP1E 100.1S.2D        | 100                | 1S-2D        |                    |              |                  |              |
| HP1E 250.1S 100.1S    |                    |              | 250                | 1S           | 100              | 1S           |
| HP1E 250.2S 100.1S    |                    |              | 250                | 2S           | 100              | 1S           |
| HP1E 250.3S 100.1S    |                    |              | 250                | 3S           | 100              | 1S           |
| HP1E 250.4S 100.1S    |                    |              | 250                | 4S           | 100              | 1S           |
| HP1E 250.1S 100.1D    |                    |              | 250                | 1S           | 100              | 1D           |
| HP1E 250.1S 100.1D.1S |                    |              | 250                | 1S           | 100              | 1D-1S        |
| HP1E 250.2S 100.1D.1S |                    |              | 250                | 2S           | 100              | 1D-1S        |

S = simple effect - D = dual effect

## Specifications

|                                 |      |        |
|---------------------------------|------|--------|
| Air pressure                    | Bar  | 3      |
| PO Flow                         | L/mm | 0,8    |
| Tank capacity                   | L    | 5      |
| Working capacity                | L    | 4,2    |
| Main Electrical power supply    | U    | 220    |
| Circuit electrical power supply | U    | 24     |
| Average pressure                | Bar  | 250    |
| Low pressure                    | Bar  | 100    |
| Connection                      |      | – BSPP |



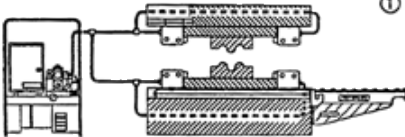
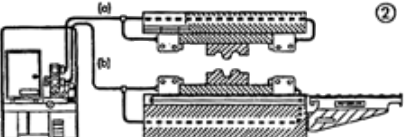
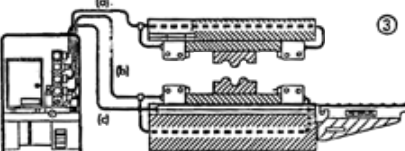
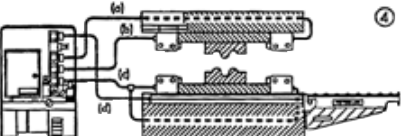
Dimensions and data subject to amendment

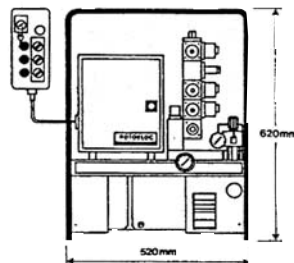
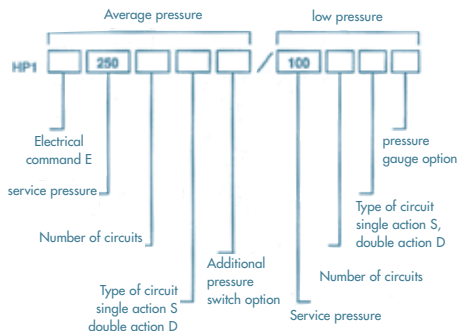
### ORDERING

To order a generator, complete the identification grid below (marked in green).

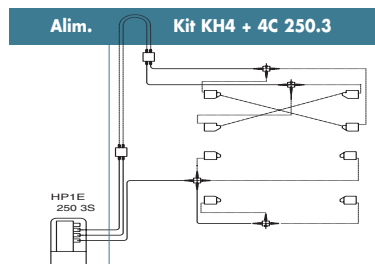
E.g.: Pressure generator HP1E 250.2S2P / 100.1S. Electrically-controlled generator: 1 250-bar average pressure stage, single action circuits with 2 additional line pressure switches, 1 100-bar low pressure stage with 1 single action circuit.

N.B. See page with examples of hydraulic circuits for different connections.

| H.P. MODEL           | PRINCIPLE                                                                          | NUMBER AND TYPE OF CIRCUITS | SINKS SUPPLIED                                                                                                                                              |
|----------------------|------------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HP1E 250 1S          |   | 1 single-action circuit     | 4 HLC clamps<br>250-bar slide block<br><br>4 HLC clamps<br>250-bar press table                                                                              |
| HP1E 250 2S          |   | 2 single-action circuits    | (a) 4 HLC clamps<br>250-bar slide block<br><br>(b) 4 HLC clamps<br>250-bar press table                                                                      |
| HP1E 250 2S / 100 1S |   | 3 single-action circuits    | (a) 4 HLC clamps<br>250-bar slide block<br>(b) 4 HLC clamps<br>250-bar press table<br>(c) 2 100-bar transrollers                                            |
| HP1E 250 3S / 100 1S |  | 4 single-action circuits    | (a) 2 HLC clamps<br>250-bar slide block<br>(b) 2 HLC clamps<br>250-bar press table<br>(c) 4 HLC clamps<br>250-bar press table<br>(d) 2 100-bar transrollers |



| Generators  | Piping kits: models                      |              |              |
|-------------|------------------------------------------|--------------|--------------|
|             | Number of single-action clamps connected |              |              |
|             | 2 + 2                                    | 4 + 4        | 6 + 6        |
| HP1E 250.1S | KH2+2C 250.1                             | KH4+4C 250.1 | KH6+6C 250.1 |
| HP1E 250.2S | KH2+2C 250.2                             | KH4+4C 250.2 | KH6+6C 250.2 |
| HP1E 250.3S |                                          | KH4+4C 250.3 | KH6+6C 250.3 |
| HP1E 250.4S |                                          | KH4+4C 250.4 | KH6+6C 250.4 |



If rotobilles or transrollers, add a segment piping kit (c.f. page 31).

## STANDARD COMPONENTS AND CONNECTIONS USED

### Pneumo-hydraulic generator: HP1E range

|          | RIGID ASSEMBLY |              | FLEXIBLE ASSEMBLY |          |
|----------|----------------|--------------|-------------------|----------|
|          | BSPP Parallel  | BSPT Conical | 37fl JIC          | 37fl JIC |
| 1/4 BSPP |                |              |                   | R 3403   |
| 1/4 BSPT |                |              |                   | R 3397   |
| 1/4 BSPT |                |              |                   | R 3395   |
| 1/4 BSPP |                |              |                   | R 3404   |
| 1/4 BSPT |                |              |                   | R 1923   |
| 1/4 BSPP |                |              |                   | R 1909   |
| 1/4 BSPT |                |              |                   | R 3423   |

### Hydraulic clamp

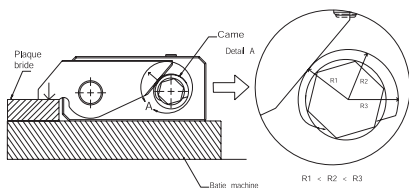
|          | RIGID ASSEMBLY |              | FLEXIBLE ASSEMBLY |          |
|----------|----------------|--------------|-------------------|----------|
|          | BSPP Parallel  | BSPT Conical | 37fl JIC          | 37fl JIC |
| 1/4 BSPP |                |              |                   | R 3403   |
| 1/4 BSPT |                |              |                   | R 3397   |
| 1/4 BSPT |                |              |                   | R 3395   |
| 1/4 BSPP |                |              |                   | R 3404   |
| 1/4 BSPT |                |              |                   | R 1923   |
| 1/4 BSPP |                |              |                   | R 1909   |
| 1/4 BSPT |                |              |                   | R 3423   |
| 1/4 BSPT |                |              |                   | R 3417   |
| 1/8 BSPT |                |              |                   | R 3396   |
| 1/8 BSPT |                |              |                   | R 3394   |

\* assembly flexible with quick connection

The R.... references are ROTOBLOC notices (to be copied for your orders).

### Note

If ordering hydraulic hoses, the nozzles must be crimped in the factory.  
Specify the total length, L (including nozzles)



### AUTO-TIGHTENING

The mechanical principle behind CA-type clamps involves a lever operated by an unloosenable cam. When that cam is turned in an anti-clockwise direction, the point F moves in relation to the scale of the eccentricity of the cam ( $r1 < r2 < r3$ ). The clamping force at C causes the lever to respond and this pulls the cam in a tightening direction.

Consequently, the greater the rotation of the cam, the greater the clamping force and the greater the response of the lever vis-à-vis the cam as it pulls it ever more in the tightening direction.

### CLAMPING FORCE

T-shaped key tightening allows you to obtain an 80 to 100 Nm tightening coupling without excessive force, and thus, a clamping force of 12 to 25 kN.

The clamping force obtained with CA clamps is generally greater than a conventional clamping system, which is, for example, 6.8 to 7.2 kN for a screw/nut system.

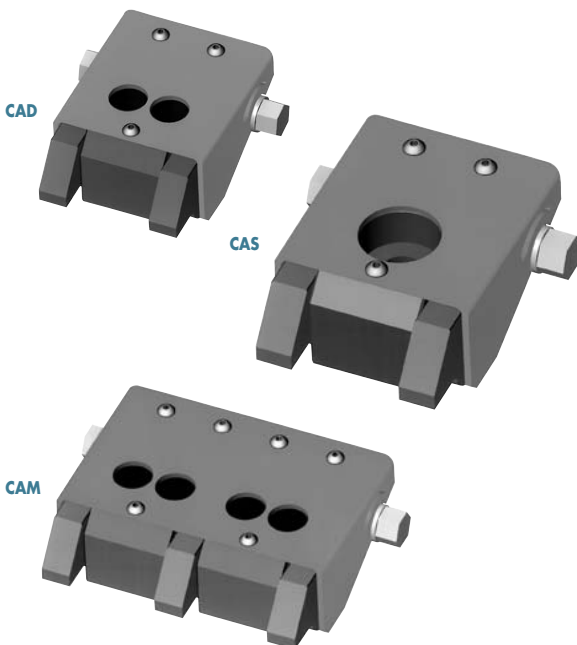
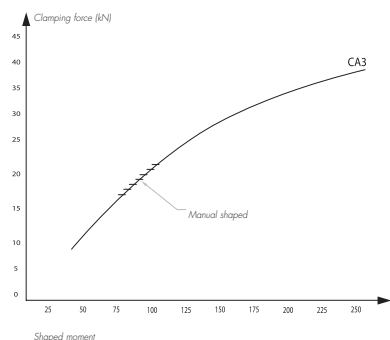
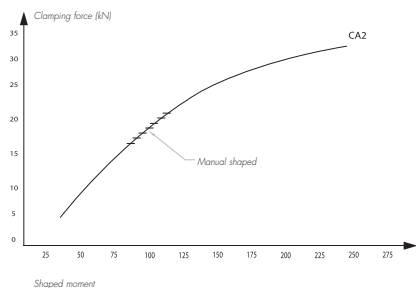
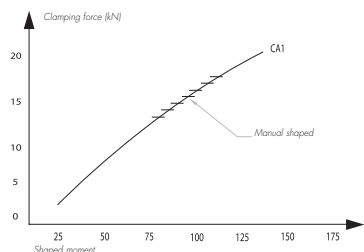
### APPLICATION

CA mechanical clamps were specially designed to resolve very tricky problems involving the clamping of tools on presses and obviously they can be mounted on any machining equipment: drilling machines, screwing machines, turning lathes, milling machines, machining centres etc.

### COMMENTS

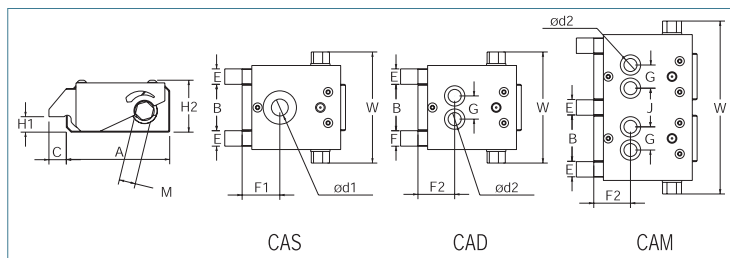
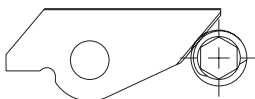
The basic CA-type model has 2 or 3 clamping jaws in order to avoid any risk of the part that is to be clamped pivoting.

Only the CAS model is supplied with a locking pin that can be used so that it adapts itself to the T-shaped slot or attachment type selected.



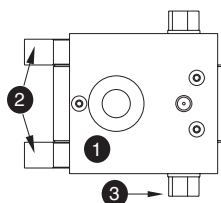
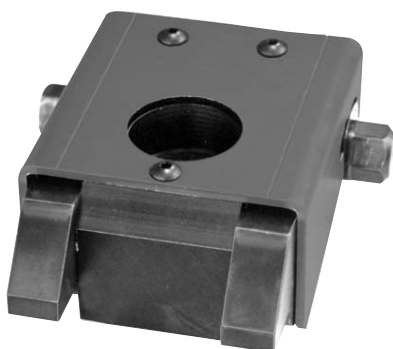
- Ease of use
- Security \ P-Rapidity
- Rigidity

**Max. force 2.5 tons.**

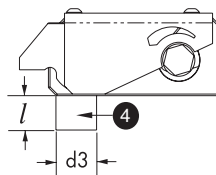


| MODELS         | Mechanical clamps - specifications |    |    |       |      |    |    |    |    |    |      |      |     |    | Clamping force |    |    |           |
|----------------|------------------------------------|----|----|-------|------|----|----|----|----|----|------|------|-----|----|----------------|----|----|-----------|
|                | A                                  | B  | H1 | H2    | C    | E  | F1 | F2 | G  | J  | ø d1 | ø d2 | W   | M  | kN             | d3 | l  | Weight Kg |
| <b>S CAS-0</b> | 71                                 | 32 | 16 | 37,2  | 10,5 | 11 | 30 | -  | -  | -  | 12,5 | -    | 85  | 12 | 16             | 6  | -  | 0,850     |
| <b>CAS-1</b>   | 88                                 | 38 | 16 | 41,75 | 13,5 | 13 | 37 | -  | -  | -  | 17,5 | -    | 99  | 14 | 18             | 6  | -  | 1,400     |
| <b>CAS-2</b>   | 107                                | 48 | 16 | 53,75 | 18   | 16 | 39 | -  | -  | -  | 17,5 | -    | 115 | 17 | 20             | 20 | 17 | 2,800     |
| <b>CAS-3</b>   | 120                                | 56 | 22 | 58,75 | 23   | 20 | 47 | -  | -  | -  | 19   | -    | 137 | 19 | 24             | 25 | 17 | 4,200     |
| <b>D CAD-2</b> | 107                                | 48 | 16 | 53,75 | 18   | 16 | -  | 38 | 24 | -  | -    | 13   | 115 | 17 | 20             | -  | -  | 2,800     |
| <b>CAD-3</b>   | 120                                | 56 | 22 | 58,75 | 23   | 20 | -  | 45 | 28 | -  | -    | 15   | 137 | 19 | 24             | -  | -  | 4,200     |
| <b>M CAM-1</b> | 88                                 | 38 | 16 | 41,75 | 13,5 | 13 | 37 | -  | -  | 51 | 17,5 | -    | 150 | 14 | 18             | -  | -  | 2,500     |
| <b>CAM-2</b>   | 107                                | 48 | 16 | 53,75 | 18   | 16 | -  | 38 | 24 | 40 | -    | 13   | 179 | 17 | 20             | -  | -  | 4,000     |
| <b>CAM-3</b>   | 120                                | 56 | 22 | 58,75 | 23   | 20 | -  | 45 | 28 | 48 | -    | 15   | 213 | 19 | 24             | -  | -  | 7,500     |

\* With operating torque = 100Nm



- 1 - Body
- 2 - Jaws
- 3 - Camshaft
- 4 - Locking pin (CAS)



## SLIDING ASSEMBLIES IN T-SHAPED SLOTS

### COMMENT

The third letter in the commercial reference figure, S, D or M refers to the number of counterbored holes (for CHC screw) machined into the clamp. The type of potential assembly depends upon this number of holes

CAS: 1 counterbored hole (+ 1 locking pin)

CAD: 2 counterbored holes

CAM: 4 counterbored holes

### LONGITUDINAL SLIDING ASSEMBLY

In the pressing or plastic moulding industry, there is no doubt that this is the most interesting assembly type as it can be adapted to all tools whatever their dimensions and only the clamp height has to be standardised. Cam rotation causes the following simultaneous effects:

- Longitudinal immobilisation of the clamp
- Clamping of the sole plate

Use of the CAS model is, in any case, suitable for this type of assembly; you need to combine it with a machined assembly: T-bolt + shim (monobloc, if possible) adapted to the height to be clamped and to the dimensions of the T-shaped slots.

**PRICE ON REQUEST:** please notify us of the dimensions required (see sketch alongside).

### Note

The short stroke of the clamping jaws (around 2 mm.) only allows for very low disparities in height tolerance (thickness of sole plate + position of slot in relation to attachment plate).

### TRANSVERSE SLIDING ASSEMBLY

This case occurs only rarely as it requires sole plate dimensions compatible with the position of the T-shaped slots on the table. Nevertheless, it can be found in transfer tools (see sketch alongside).

For this type of assembly all three models (CAS, CAD and CAM) are suitable.

Here again, you need to manufacture a T-bolt + shim to match the T-shaped slot and the height to be clamped (ask for our advice).

### Note

**Tightening spanner:** for access reasons, it is sometimes preferable to use a socket wring spanner or a ring spanner for tightening.

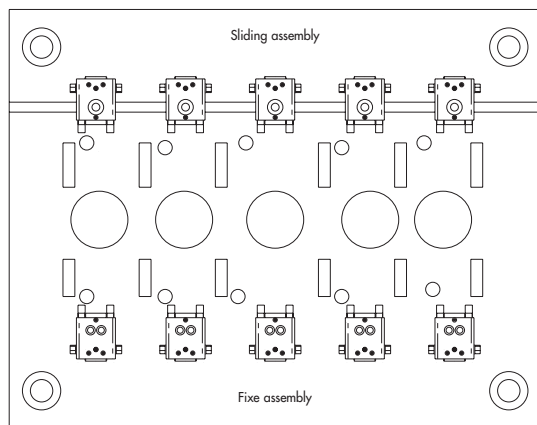
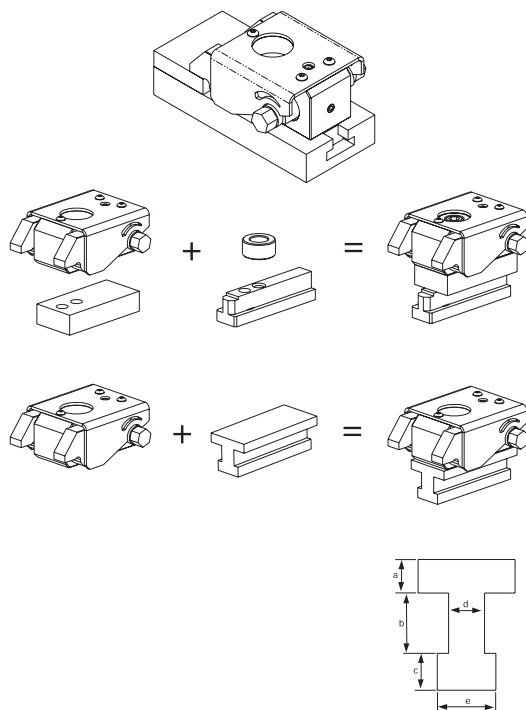


fig. A

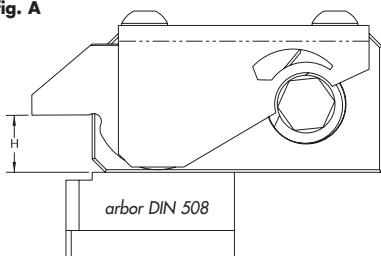


fig. B

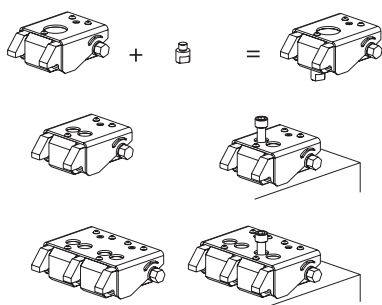
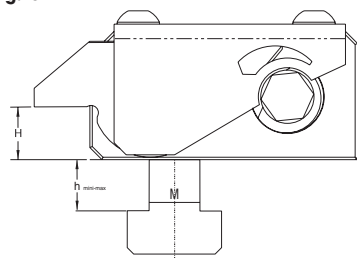
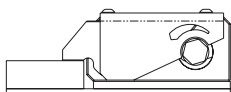


fig. C



### CORRECT

The outline of the handling cam makes it essential that you keep to the clamping height.



### INCORRECT



## FIXED ASSEMBLIES: SUMMARY AND RECOMMENDATIONS

### FIXED ASSEMBLY WITH LONGITUDINAL T-SHAPED SLOTS: Fig. A

Only the CAS model is suitable.

DIN 508 or DIN 508R T-bolts are sufficient for use as stops in the T-shaped slots.

The locking pin, which can be modified, prevents the rotation of the clamp.

### FIXED ASSEMBLY ON A SMOOTH TABLE: Fig. B

All 3 models can be assembled so you only need to machine screwed holes corresponding to the dimensions of the holes that are in the clamps.

### FIXED ASSEMBLY WITH TRANSVERSE T-SHAPED SLOTS: Fig. C

All 3 models can be assembled.

Equipment with T-bolt and shim: idem longitudinal T-shaped slots.

### SUMMARY

c.f. table below

### RECOMMENDATIONS

Clamping height to respect

Hexagonal spanner manoeuvre: mind the tightening coupling.

| ASSEMBLY TYPES                         | CAS    | CAD    | CAM    | Additional wedge if required |
|----------------------------------------|--------|--------|--------|------------------------------|
| Longitudinal sliding in T-shaped slots | X<br>X |        |        | X                            |
| Transverse sliding in T-shaped slots   |        | X<br>X | X<br>X | X                            |
| Fixed in longitudinal T-shaped slots   | X<br>X |        |        | X                            |
| Fixed in transverse T-shaped slots     |        | X<br>X | X<br>X | X                            |
| Fixed on smooth table                  | X<br>X | X<br>X | X<br>X | X                            |

### LESS THAN A MINUTE TO CHANGE THE PRODUCTION

With reduction in series, tooling changes and settings often take longer than production itself. In order to sort out this problem, we have developed a new tool design that allows you to make a production change in less than a minute. This new design is based upon the principle of the block itself, which is common to an entire family of parts. Production changes consist simply in changing "active parts": die holders and punch holders.

### CHANGE MECHANISM

A BLOCMATIC comprises a column and plain or ball bearing guide bush unit and a pair of grinded plates with a punch holder attached to the top and a die holder attached to the bottom.

The BLOCMATIC replaces standard pressing tools and there is no need to change it when you change production. The BLOCMATIC remains continuously mounted on the press.

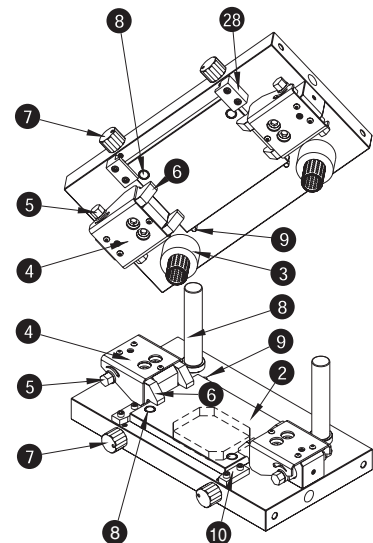
The interchangeable grinded plates (onto which the die holder assemblies are mounted) are installed between the clamps of the upper and lower sole plates of the BLOCMATIC system.

The grinded plates are clamped by means of mechanical clamps and a single rotation of the camshafts.

The die holders and punch holders are aligned to an accuracy of 0.02 mm. by means of retractable cotter pins operated via rotary knobs on the front face.

Thus, with the BLOCMATIC system, it is possible to change punch and die assemblies without disassembling the block. No adjustment or location work is required and dies and punches may be changed in less than a minute with a repeatability of 0.02 mm.

Standard grinded plates are available in the dimensions of the RLPP series. If necessary, the alignment of a punch with a die may be checked and adjusted on an RLPS series presetting bench.

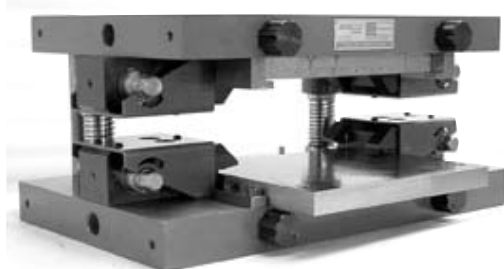


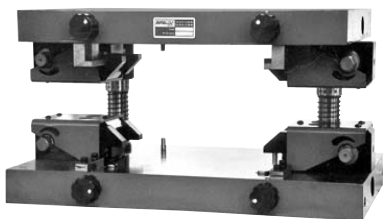
#### UPPER PART

- 1 - Punch holder slide block support
- 2 - Upper part of press tool (punch holder sliding block)
- 3 - Guide bushing with ball cage
- 4 - Clamping mechanism
- 5 - Clamping cam
- 6 - Clamp
- 7 - Control knobs for alignment cotter pins
- 8 - Alignment cotter pin
- 9 - Stop
- 10 - Positioning guide

#### LOWER PART

- 1 - Sole plate support
- 2 - die holder sole plate
- 3 - Guide column
- 4 - Clamping mechanism
- 5 - Clamping cam
- 6 - Clamp
- 7 - Control knobs for alignment cotter pins
- 8 - Alignment cotter pin
- 9 - Stop
- 10 - Positioning guide





Blocmatic RLP3

### RLP STANDARD BLOCKS

*This is the most popular model*

- 1 single post
- 2 rear offset standard or ball bearing columns
- Plates positioned using detachable cotter pins
- Quick mechanical clamping of RLPP plates

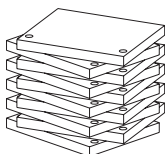
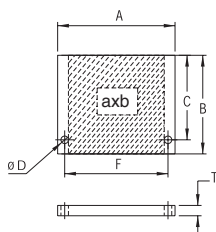
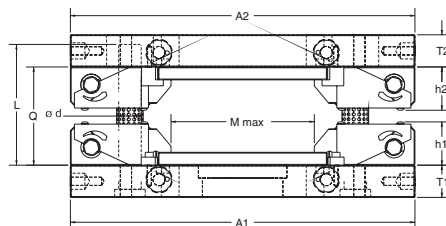
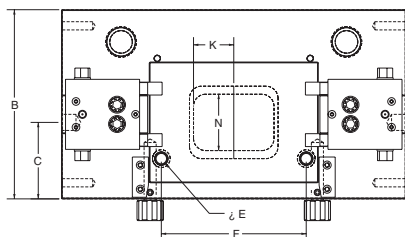
### APPLICATIONS

on off tools, progressive tools, transfers etc.

ASSEMBLY NOTES: on all 5 to 150-ton presses

- longer columns available on request
- combined RLP2/3, RLP 3/4 block available on request
- adapted guide equipment allows you to work by "EXPOSED/DISLODGED"
- the bottom dead centre of the press must be reached between Qmin and Qmax.

| Models<br>N° | BLOCMATIC dimensions<br>mm |     |     |     |                      |              |    |    |    |    |     |     |     | Columns    |     | Cassettes<br>height |        | Weight |
|--------------|----------------------------|-----|-----|-----|----------------------|--------------|----|----|----|----|-----|-----|-----|------------|-----|---------------------|--------|--------|
|              | A1                         | A2  | B   | C   | $\sigma E \pm 0.005$ | F $\pm 0.01$ | T1 | T2 | h1 | h2 | M   | K   | N   | $\sigma d$ | L   | Q max               | Q min. | kg     |
| RLP-1        | 330                        | 286 | 180 | 55  | 14                   | 120          | 35 | 35 | 42 | 42 | 123 | 40  | 50  | 32         | 180 | 115                 | 84     | 38     |
| RLP-2        | 428                        | 365 | 235 | 95  | 16                   | 180          | 40 | 40 | 54 | 54 | 180 | 50  | 70  | 32         | 200 | 120                 | 110    | 67     |
| RLP-3        | 494                        | 450 | 290 | 125 | 16                   | 220          | 45 | 40 | 59 | 59 | 214 | 75  | 110 | 32         | 220 | 130                 | 120    | 113    |
| RLP-4        | 594                        | 546 | 390 | 170 | 16                   | 320          | 60 | 45 | 59 | 59 | 315 | 110 | 160 | 50         | 250 | 145                 | 120    | 227    |
| RLP-5        | 694                        | 700 | 450 | 180 | 25                   | 375          | 65 | 55 | 59 | 59 | 404 | 135 | 160 | 50         | 280 | 175                 | 120    | 370    |

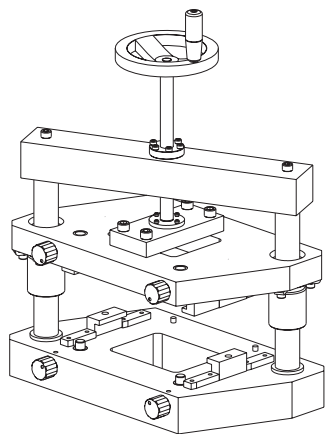


### RLPP STANDARD GRINDED PLATES : S 55 C carbon steel.

Standard RLPP grinded plates are designed for use on mounting blocks and presetting benches with corresponding numbers. The control of die-punch alignment is carried out on the RLPS presetting bench.

When you change tooling, you only have to remove the previous plates from the mounting unit and to insert the new plates. That takes no more than a minute. No adjustment is required. After clamping, the plates are positioned with a repeatability tolerance of 0.02 mm. Aside from saving time assembling tooling on standard RLPP plates considerably reduces tooling costs compared to conventional solutions.

| Models<br>N° | Dimensions (mm) |     |     |     |    |                | Working area<br>axb | For assembly on |                  |
|--------------|-----------------|-----|-----|-----|----|----------------|---------------------|-----------------|------------------|
|              | A               | B   | C   | F   | T  | $\sigma D(H7)$ |                     | Mounting block  | Presetting bench |
| RLPP-1       | 150             | 100 | 82  | 120 | 16 | 14             | 123x100             | RLP-1           | RLPS-21          |
| RLPP-2       | 210             | 150 | 120 | 180 | 16 | 16             | 174x150             | RLP-2           | RLPS-22          |
| RLPP-3       | 250             | 210 | 180 | 220 | 22 | 16             | 204x210             | RLP-3           | RLPS-23          |
| RLPP-4       | 350             | 300 | 270 | 320 | 22 | 16             | 304x300             | RLP-4           | RLPS-34          |
| RLPP-5       | 450             | 315 | 270 | 370 | 30 | 25             | 395x315             | RLP-5           | RLPS-35          |

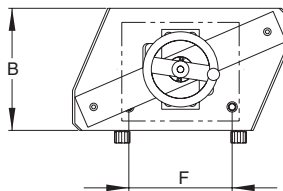
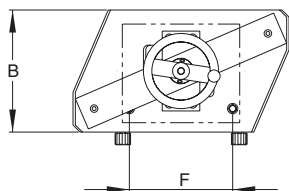
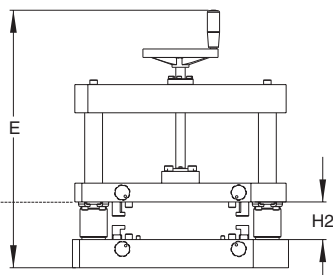
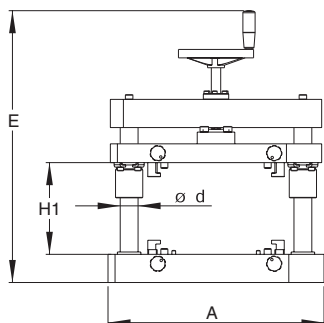


### POSITIONING OF PRESETTING BENCH

The presetting bench is designed to allow quick and accurate control of the tools on plates with a rigorous alignment of punches with dies.

As this equipment is independent from the press, it eliminates breaks in production.

| Models<br>N° | No. of columns | Dimensions |     |     |    | Weight |     |     |           |
|--------------|----------------|------------|-----|-----|----|--------|-----|-----|-----------|
|              |                | A          | B   | E   | d  | H1     | H2  | H3  | Peso (kg) |
| RLPS-21      | 2              | 320        | 200 | 455 | 28 | 130    | 77  | 53  | 51        |
| RLPS-22      | 2              | 390        | 195 | 550 | 32 | 180    | 85  | 95  | 41        |
| RLPS-23      | 2              | 460        | 260 | 540 | 38 | 205    | 105 | 100 | 61        |
| RLPS-34      | 3              | 570        | 420 | 645 | 45 | 300    | 120 | 180 | 158       |
| RLPS-35      | 3              | 645        | 425 | 680 | 45 | 320    | 130 | 190 | 230       |





#### ADVANTAGES: RLP Master-tool block

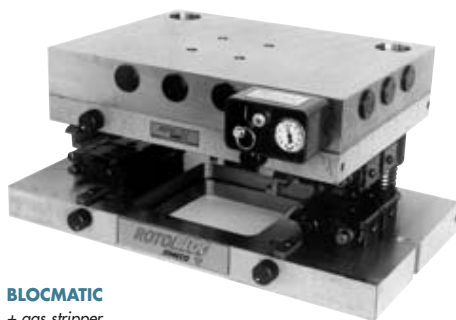
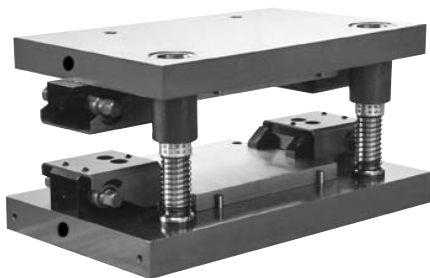
- 0.02 mm.: repeatability and accuracy of positioning of the 2 semi-cassettes
- Production change in less than a minute
- Very short production time for a new part: just the 2 semi-cassettes to manufacture.
- Economies: the "blocmatic" assembly involves just a single investment.  
It forms an integral part of the press for a whole range of parts.
- Interchangeable: Cassettes can be used by 2 "Blocmatics" with the same capacity on 2 different sites.

#### STORAGE :

*The space required to store RLPP plates is just a third of that required for conventional tools.*

#### BLOCMATIC

RLP series

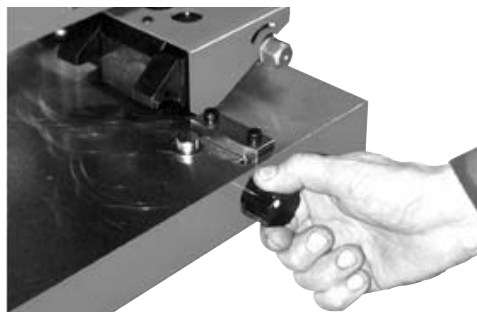


#### BLOCMATIC

+ gas stripper

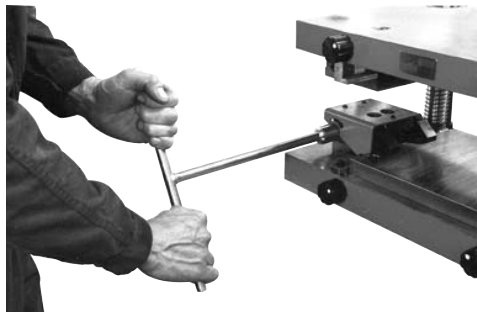
#### 1 - INDEXING

*Indexing + clamping = 1 minute*



#### 2 - CLAMPING

*of die-holders and punch-holders*



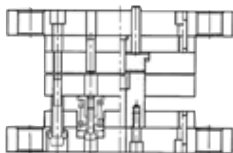


### CAD DESIGN OF "CASSETTES" AND "BLOCMATICS"

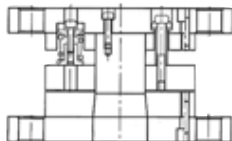
Rapidly introduce "BLOCMATIC" standards into your CAD  
Using these basic items, you will design and manufacture your pressing tools as quickly as possible and at the lowest possible cost.

### EXAMPLE below

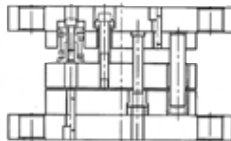
4 standard tools produced using CAD  
BLOCMATIC RLP



1) "Swiss" tool



2) "Cross run"  
Pressing tool



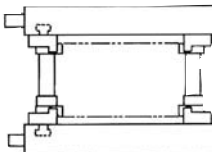
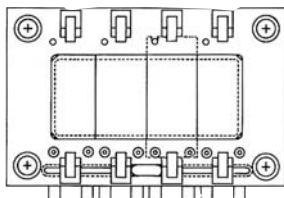
3) Punching tool



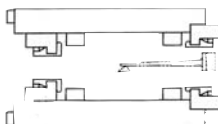
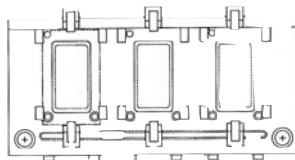
4) "Parisian" tool

### EXAMPLE: Successive post tools

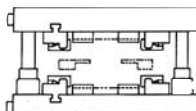
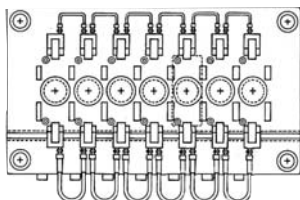
#### 1) "progressive tool" successive post tool



#### 2) Transfer tool for MONOBAR TRANSFER



#### 3) Transfer tool for TWO-BAR TRANSFER



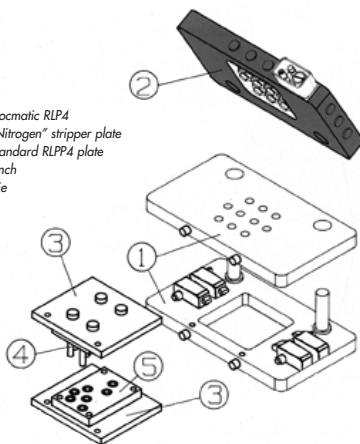
### BLOCMATIC + "NITROGEN PLATE"

#### Application: printed circuit punching

Combining a Blocmatic RLP4 and a nitrogen stripper plate permanently mounted on the press allows you to considerably reduce tooling costs:

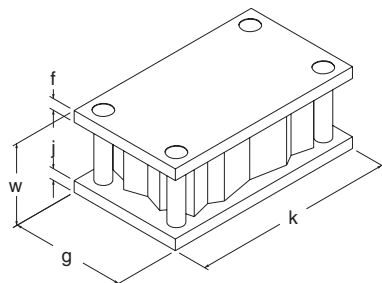
You just have to make the punch/die assembly attached to standard RLPP4 plates for each new printed circuit.  
(labels 3 + 4 + 5).

- 1 - Blocmatic RLP4
- 2 - "Nitrogen" stripper plate
- 3 - Standard RLPP4 plate
- 4 - Punch
- 5 - Die

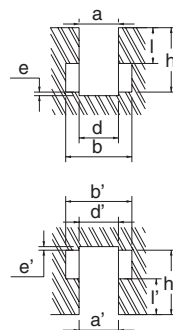


|         |  |     |  |
|---------|--|-----|--|
| Company |  |     |  |
| Address |  |     |  |
| Tel.    |  | Fax |  |
| Email   |  |     |  |
| Contact |  |     |  |

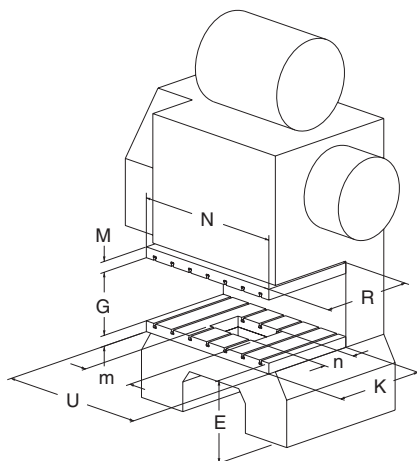
| Tool | Maximum                   | Minimum |     |
|------|---------------------------|---------|-----|
|      | G                         |         |     |
|      | K                         |         |     |
|      | W                         |         |     |
|      | J                         |         |     |
|      | F                         |         |     |
|      | Weight 1/2 upper tool     |         |     |
|      | Weight 1/2 lower tool     |         |     |
|      | Total tool weight         |         |     |
|      | Funct. Temperature        |         |     |
|      | Lower sole plate material |         | HRC |



| Slot | table           |               | Slide block     |               |
|------|-----------------|---------------|-----------------|---------------|
|      | a               |               | a'              |               |
|      | b               |               | b'              |               |
|      | c               |               | c'              |               |
|      | d               |               | d'              |               |
|      | e               |               | e'              |               |
|      | h               |               | h'              |               |
|      | l               |               | l'              |               |
|      | number of slots | Right to left | number of slots | Right to left |
|      |                 | Front rear    |                 | Front rear    |



|       |                      |                                      |                                 |                                   |
|-------|----------------------|--------------------------------------|---------------------------------|-----------------------------------|
| press | Press type           | Cross shaft <input type="checkbox"/> | Arcade <input type="checkbox"/> | Transfer <input type="checkbox"/> |
|       | model                |                                      | power                           |                                   |
|       | Speed                | min.                                 | max                             | corrente                          |
|       | Stroke               | min.                                 | max.                            | corrente                          |
|       | Ambient temperature: |                                      |                                 |                                   |
|       | Table                |                                      | Slide block                     |                                   |
|       | U                    |                                      | N                               |                                   |
|       | K                    |                                      | R                               |                                   |
|       | G                    |                                      | M                               |                                   |
|       | E                    |                                      |                                 |                                   |
|       | If opening present   |                                      |                                 |                                   |
|       | m                    |                                      |                                 |                                   |
|       | n                    |                                      |                                 |                                   |





TL 200M

TL 200E

**MANUAL TROLLEY, MANUAL OR ELECTRIC LIFTING**

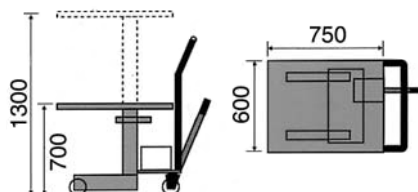
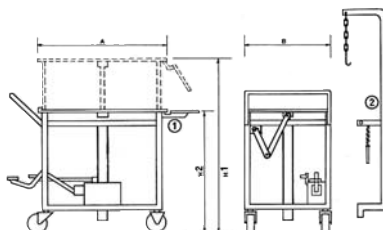
- Capacity: 200 kg.
- Lifting height: 1450 mm. with platform  
1750 mm. with jib arm
- Dimensions:  
Plate: 380 x 390 mm.  
Arm: length 200 mm.
- Weight: TL200M: 68 kg.  
TL200E: 83 kg. (without battery)
- Battery: 12 V.50 Ah

**MANUAL LIFTING TABLE: 500 kg.**

| MODEL   | A X B   | H1   | H2  | Load (KG) | Weight (Kg) |
|---------|---------|------|-----|-----------|-------------|
| CS 22/5 | 750x500 | 1110 | 670 | 500       | 95          |

**ACCESSORIES:**

- Extension shelf
- 1.2 T. opening jib arm

**MANUAL LIFTING TABLE: 1200 kg.**

- Capacity: 1200 kg.
- Weight: 160 kg.

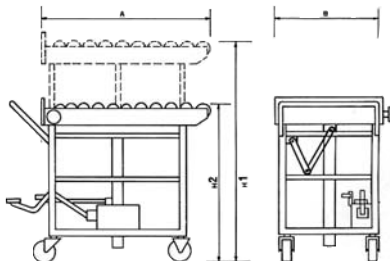
Load from 500 to 1000 kg.

**MANUAL LIFTING TABLE: 500 kg**

| MODEL    | A X B   | H1   | H2  | Load (KG) | Weight (Kg) |
|----------|---------|------|-----|-----------|-------------|
| CS 22/5R | 800x520 | 1200 | 760 | 500       | 150         |

**SECURITY:**

- Roller immobilisation mechanism
- Detachable front stop

**MANUAL LIFTING TABLE: 1000 kg**

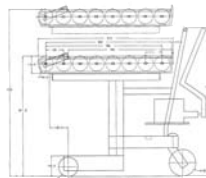
| MODEL      | Capacity kg | Height mm mini | Height mm maxi | Useful length mm | Useful plate width mm |
|------------|-------------|----------------|----------------|------------------|-----------------------|
| MULTIUSO R | 1000        | 810            | 1430           | 785              | 510                   |

**OPTION:**

- Detachable or fixed side bars
- Other plate dimensions (on request)

**SECURITY:**

- Roller immobilisation mechanism
- Detachable front stop.

**HANDLING EQUIPMENT EQUIPPED WITH TOOL SUPPORT TRAY**

We manufacture tool support tray with balls blanking holes (patented)

**SECURITY:** During transport, the balls are brought down within the plate and the tool rests on the structure of the latter. **TOOL LOADING:** manual when the balls are up.



X Table: 1000 kg

MANUBLOC MPH stacking truck: 1000 kg.

Load a tool in less than a minute.

**There is no doubt that the MAH-type MANUBLOC is the SIMPLEST and most COMPLETE system.**

It allows you to take a tool (up to 10 T.) from a storage rack (see CANTIBLOC range), to transport it and to position it on the press bed.

All these operations, carried out perfectly safely in LESS than 2 MINUTES, are completed by only one OPERATOR who remains continuously at the control unit of the system.

#### SPECIFIC CHARACTERISTICS

- ROLL LIFTERS: retractable rollers with heavy cage and combined needle rollers. They are up while the tool is loaded onto the press, but are down while you transport the tool, which thereby rests on the structure of the forks.
- QUICK BLOC: very simple, hydraulically-operated "push/pull" system. Its synchronous double articulation hydraulic scissors principle allows its free end to remain completely rigid in space.
- The coupling with twin bayonet fitting principle allows the tool to be coupled or uncoupled automatically as a background task during the rack stacking phase (International patent).

#### ACCESSORIES

##### - CBH: LEVELLING HOOKS / STOPS

In order to transfer the tool in complete security, it is vital to temporarily attach the MANUBLOC to the press; CBH hooks fulfil this function.

##### - VPLA: LATERAL POSITIONING

These are V-shaped metal parts that are to be attached to the press or in front of each rack module.

##### - CH30: HOOKS

Parts designed to be attached to the lower sole plate of each tool: they allow the "Quickbloc" push/pull system to be coupled / uncoupled.

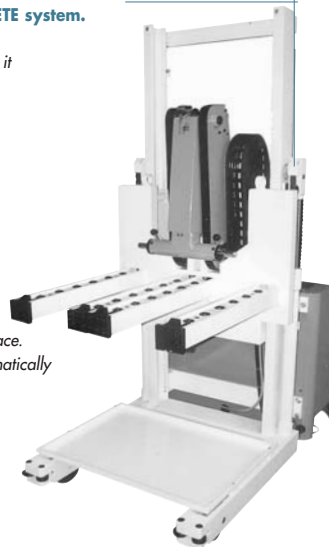
#### NOTE:

Unloading is carried out in the reverse order to loading

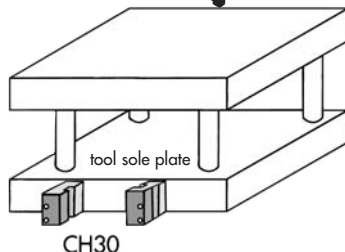
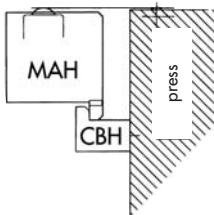
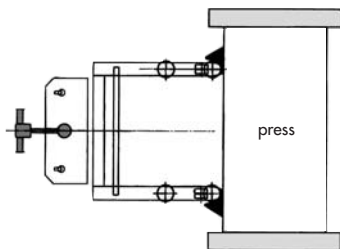
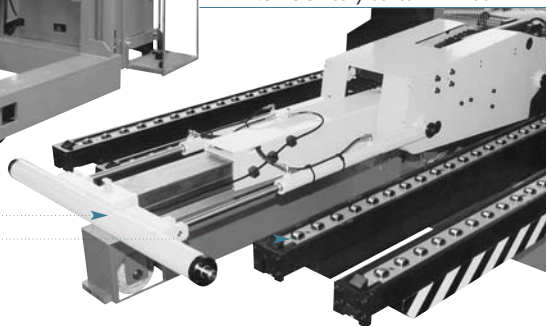
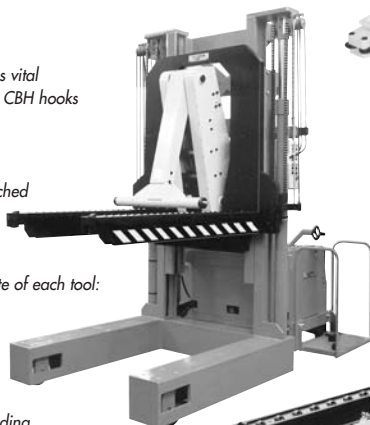
Patented "QUICKBLOC" arm.

ROLL-LIFTER

MANUBLOC MAH 20



MANUBLOC Heavy Series MAH 100



Load a tool in less than a minute

| M.A.H                                                               | TOOLS                |                    |                    | QUICK BLOC<br>AMR   |                             | MAT.                         |                             |          | OPTIONS         |        |          |
|---------------------------------------------------------------------|----------------------|--------------------|--------------------|---------------------|-----------------------------|------------------------------|-----------------------------|----------|-----------------|--------|----------|
|                                                                     |                      |                    |                    |                     |                             | ELD                          | ELM                         | DUP      |                 |        |          |
| MODELS                                                              | Max<br>weight<br>kg. | Max<br>depth<br>mm | Max<br>width<br>mm | AMR<br>stroke<br>mm | Force daN<br>AMR<br>min/max | lifting<br>min/max<br>Direct | height<br>min/max<br>Rigged | Duplex   | AMRH<br>min/max | BID    | DAF      |
| MAH 10 AMR - 24 V                                                   | 1000                 | 600                | 1000               | 800                 | 450/1100                    | -                            | 100/1600                    | 100/3000 | option          |        |          |
| MAH.20 AMR - 24 V                                                   | 2000                 | 600/800            | 1250               | 800/1000            | 450/1100                    | -                            | 100/1600                    | 100/3000 | option          |        |          |
| MAH 30 AMR - 24 V                                                   | 3000                 | 800/1000           | 1250               | 1000/1250           | 450/1100                    | -                            | 100/1600                    | 100/3000 | option          | option | option   |
| MAH 40 AMR - 24 V                                                   | 4000                 | 1000/1250          | 1600               | 1250/1500           | 900/2100                    | -                            | 150/1600                    | 150/3000 | option          | option | option   |
| Includes: 24-volt batteries & 300 Ah & 220-volts mono 30-Ah charger |                      |                    |                    |                     |                             |                              |                             |          |                 |        |          |
| MAH 60 AMR - DAF - 48 V                                             | 6000                 | 1250               | 2000               | 1500                | 900/2100                    | 300/1500                     | 300/1800                    | 300/3000 | option          | option | standard |
| MAH 80 AMR - DAF - 48 V                                             | 8000                 | 1250/1500          | 2500               | 1500/1800           | 1200/2800                   | 350/1500                     | 350/1800                    | 350/2500 | option          | option | standard |
| MAH 100 AMR - DAF - 48 V                                            | 10000                | 1250/1500          | 2800               | 1500/1800           | 1200/3500                   | 400/1500                     | 400/1800                    | 400/2500 | option          | option | standard |
| Includes: 48-volt batteries & 225 Ah & 220-volts mono 30-Ah charger |                      |                    |                    |                     |                             |                              |                             |          |                 |        |          |

**OPTION :** supplied on request    **STANDARD :** included in the machine

#### OPTION (all models)

##### AMR/H: HYDRAULIC COUPLING / UNCOUPLING

Entry or exit of coupling bayonet fittings is controlled directly using a lever located on the control unit of the equipment.

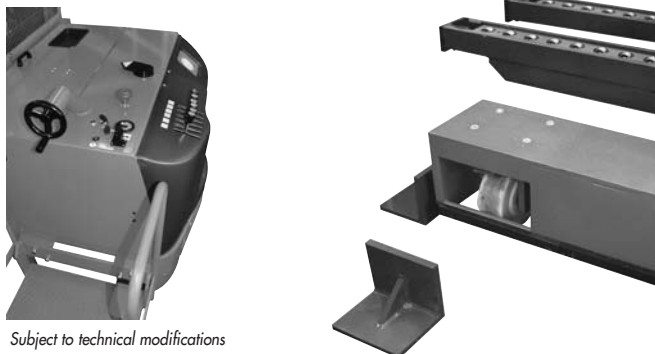


#### MANUBLOC Heavy Series – 6-T, 8-T and 10-T models

#### PARTICULAR CHARACTERISTICS (standard)

1. On-board driver (travels standing up)
2. DAF – fixed post assisted steering
3. Bidirectional (crab movement): BID
4. Electronic control of accurate positioning.

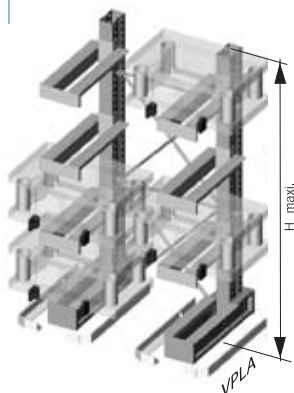
**OVERALL SYSTEM :** The MANUBLOC MAH and its "QUICK BLOC" is the crucial element of the SYSTEM encompassing the advance layout of tools, presses and storage racks. Reducing tool changeover times to the minimum requires an overall view of this SYSTEM.



Subject to technical modifications

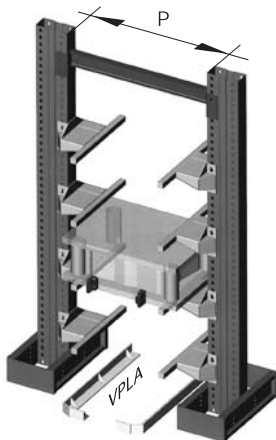


Organise your space and store equipment in complete safety



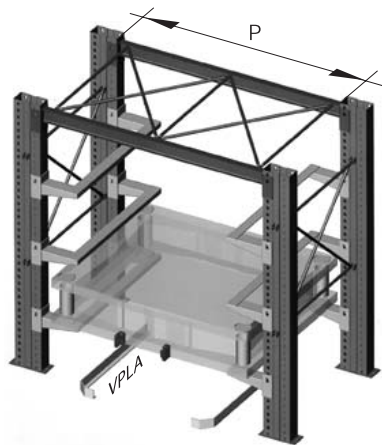
### MINI CANTIBLOC

with 2 columns, max. tool weight = 3000 kg  
Min. number of columns = 2



### CANTIBLOC

with 2 columns  
Max. tool weight = 6000 kg



### MAXI CANTIBLOC

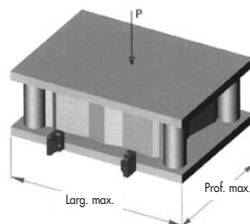
with 4 columns  
Max. tool weight = 10,000 kg

### PARTICULAR CHARACTERISTICS:

- Lack of rails and crossbeams often allows for an additional storage level
- Lack of columns on front face: good visibility & easy access
- Height adjustment of different levels
- Holding tray: on request

### NOTES:

- Compatible with MANUBLOC MAH
- Ground guides = VPLA: accurate MANUBLOC positioning
- DF = double-face version: replace letters SF with DF

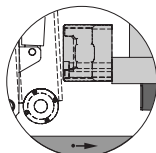
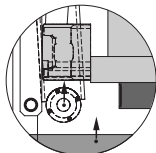
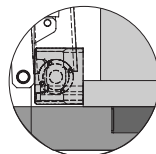
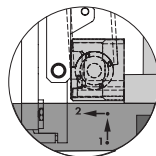
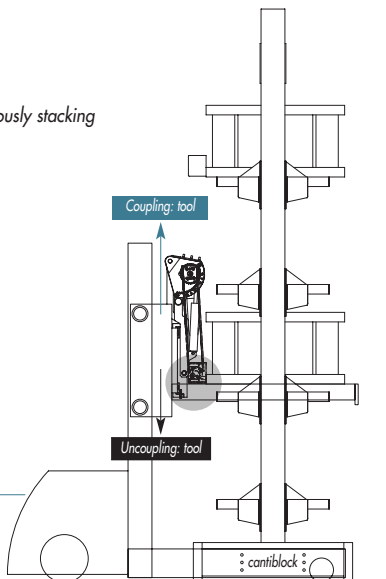
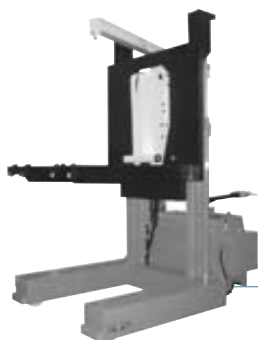


| RANGE                                                  | TOOL <small>*(when ordering, specify max. &amp; min. width)</small> |              |              | RACK                         |                   |                  |
|--------------------------------------------------------|---------------------------------------------------------------------|--------------|--------------|------------------------------|-------------------|------------------|
|                                                        | max kg                                                              | Max depth mm | Max width mm | P : distance between column  | H : Max height mm | Number of levels |
| <b>Mini CANTIBLOC (single face)</b><br>MN-CA-SF-30-070 | 3000                                                                | 700          | 1200         | -                            | 3000              | 4+1= 5           |
| <b>CANTIBLOC (single face)</b>                         |                                                                     |              |              |                              |                   |                  |
| CA-SF 30-060                                           | 3000                                                                | 600          | ≈ 3000 *     | = Maximum tool width +150 mm | 3000              | ≈ 5              |
| SA-SF 30-080                                           | 3000                                                                | 800          |              |                              |                   |                  |
| CA-SF 30-100                                           | 3000                                                                | 1000         |              |                              |                   |                  |
| CA-SF 40-080                                           | 4000                                                                | 800          |              |                              |                   |                  |
| CA-SF 40-100                                           | 4000                                                                | 1000         |              |                              |                   |                  |
| CA-SF 40-125                                           | 4000                                                                | 1250         |              |                              |                   |                  |
| CA-SF 60-100                                           | 6000                                                                | 1000         |              |                              |                   |                  |
| CA-SF 60-125                                           | 6000                                                                | 1250         |              |                              |                   |                  |
| <b>MAXI CANTIBLOC (single face)</b>                    |                                                                     |              |              |                              |                   |                  |
| MA-CA-SF 60-100                                        | 6000                                                                | 1000         | ≈ 3500 *     | = Maximum tool width +200 mm | 3000              | ≈ 4              |
| MA-SA-SF 60-125                                        | 6000                                                                | 1250         |              |                              | 3000              | ≈ 4              |
| MA-CA-SF 80-125                                        | 8000                                                                | 1250         |              |                              | 2500              | ≈ 3              |
| MA-CA-SF 80-150                                        | 8000                                                                | 1500         |              |                              | 2500              | ≈ 3              |
| MA-CA-SF 100-125                                       | 10000                                                               | 1250         |              |                              | 2500              | ≈ 3              |
| MA-CA-SF 100-150                                       | 10000                                                               | 1500         |              |                              | 2500              | ≈ 3              |

The "QUICKBLOC" push/pull arm and its tool connection system have been internationally patented

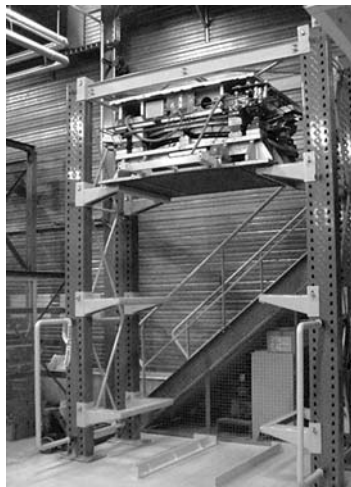
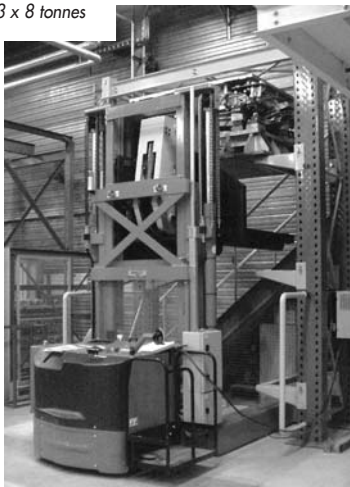
This highly innovative system allows one to obtain:

- very high thrust (or traction) force
- accurate positioning of the tool on the press bed
- coupling/uncoupling of tool directly and simultaneously stacking into the "cantibloc" rack.

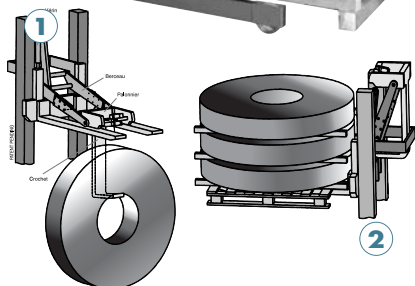


## MANUBLOC + CANTIBLOC + (press equipment) = HIGH PERFORMANCE

Maxi Cantibloc 3 x 8 tonnes



Load a coil in less than a minute.



#### A - MANUCOIL Documentation on request

The MANUCOIL is a handling equipment allowing you to:  
Grasp coils (vertical axis) from pallets (or deal).  
Turn those coils around and load them onto horizontal decoilers.

All these operations are carried out from the control unit of the equipment **WITHOUT ANY MANUAL INTERVENTION AT THE LEVEL OF THE COIL.**

#### RANGE

It allows you to lift coils of up to 4-T, with a maximum weight of up to 550 mm. and a maximum external Ø of around 1500 mm.

It allows you to load coils onto a mandrel (horizontal axis) up to 800 mm. in width.

#### B - QUICK COIL

A very simple mechanism, the originality of the equipment is that:

In the lowered position (1) it consolidates the "CÉ" grip with the forks; thus, the coil "is rigid" in space throughout all handling.

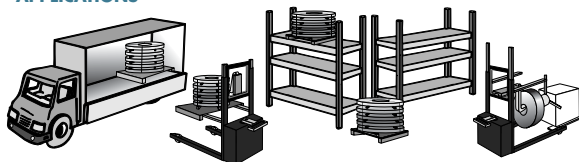
In the raised position (2) it disappears within the shaft; the equipment resumes its initial function as a general stacking truck for pallets, containers etc.

A simple hydraulic valve (manual controls on the control unit) allows you to switch instantly from position (1) to position (2).

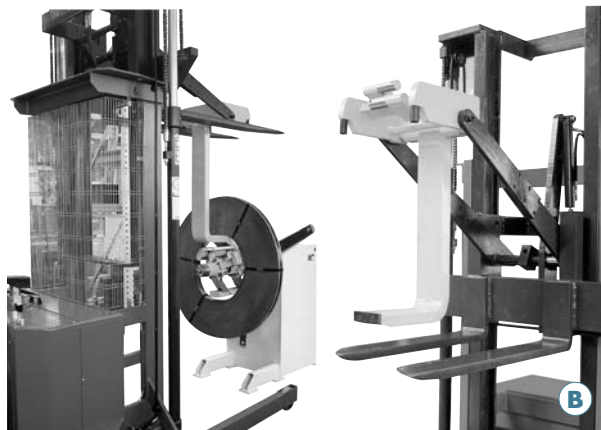
#### NOTES

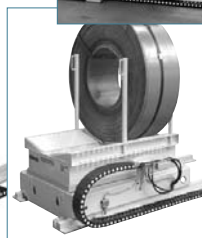
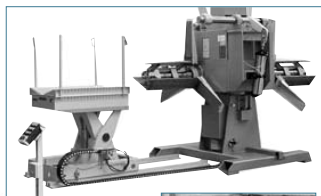
- The forged forks are standard and compatible with all European pallets. The QUICK COIL "CÉ", which is also forged, is built in dimensions such as will allow it to "slip" between the segments of the mandrel of the decoiler (3 or 4-jaw spindle).
- For QUICK- COIL adaptable for a stacking truck already in service, please ask us for guidance.

#### APPLICATIONS



#### THREE MACHINES IN ONE: STACKING TRUCK + TURNOVER UNIT + LOADER





### LOADING & UNLOADING COIL CARS FOR HIGH CAPACITY DECOILERS

#### LOW-LOADING CONSTRUCTION

- Allows you to load decoilers with low standing mandrel
- No civil engineering

#### HIGH LIFTING STROKE

- Loading of coils with very high diameters
- Unloading of coils that have been almost used up (without adjustment)

#### SECURITY

- Peripheral anti-crush bumper
- Peripheral anti-shearing frame

#### SPECIFICATIONS

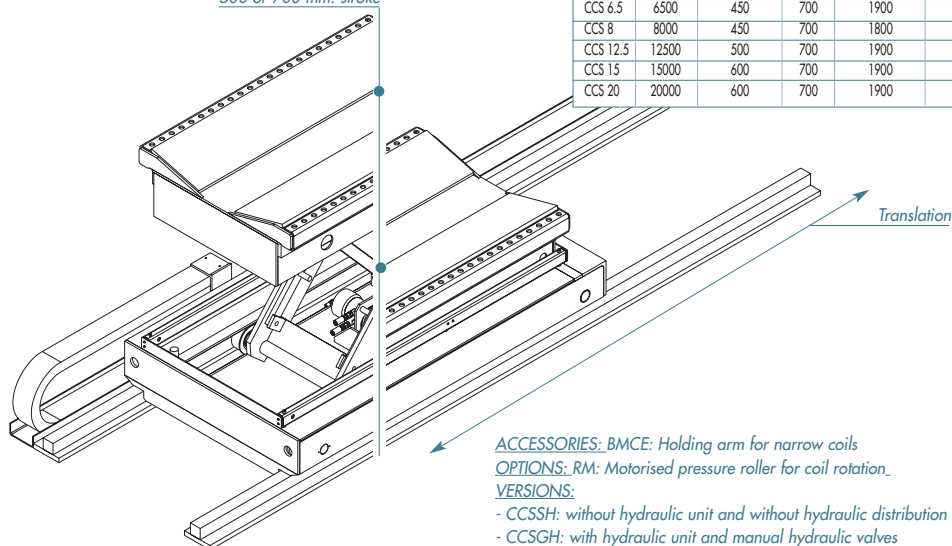
- Hydraulic lifting speed:  $V = 0.6 - 1.1 \text{ m/mn.}$
- Hydraulic translation speed:  $V = 5 \text{ m/mn.}$

- Lifting stroke = 500 or 700 mm.

- Altitude at bottom dead centre = 420-500-600 mm.

| Model    | Max. load (kg) | Altitude of BDC (mm) | Stroke (mm) | ext. Ø of coils Max. (mm) | Max. width of coils (mm) |
|----------|----------------|----------------------|-------------|---------------------------|--------------------------|
| CCS 3    | 3000           | 450                  | 500         | 1500                      | 1500                     |
| CCS 4.5  | 4500           | 450                  | 500         | 1500                      | 1500                     |
| CCS 6.5  | 6500           | 450                  | 700         | 1900                      | 1800                     |
| CCS 8    | 8000           | 450                  | 700         | 1800                      | 1800                     |
| CCS 12.5 | 12500          | 500                  | 700         | 1900                      | 2000                     |
| CCS 15   | 15000          | 600                  | 700         | 1900                      | 2000                     |
| CCS 20   | 20000          | 600                  | 700         | 1900                      | 2000                     |

500 or 700-mm. stroke



ACCESSORIES: BMCE: Holding arm for narrow coils

OPTIONS: RM: Motorised pressure roller for coil rotation.

#### VERSIONS:

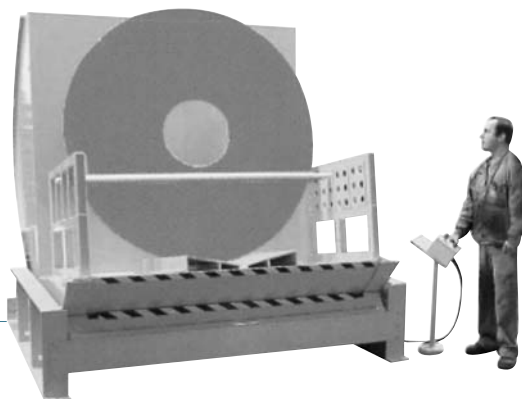
- CCSSH: without hydraulic unit and without hydraulic distribution
- CCSGH: with hydraulic unit and manual hydraulic valves

#### LENGTHS:

- Ground guide rails
  - Cable chains:
- } to be defined according to set-up

Rotate material in complete safety

VCP

**ROTOBLOC-PSP**  
GRUPE  
**DIMECO**
**OPTION**

VCV : Continuous speed variation

SSL : "V"-shaped gripper system with lateral security

SDL : "V"-shaped gripper system with double lateral security and safety bar



| MODEL        | Max. load<br>(kg) | Max. coil Ø<br>(mm) | Max. coil<br>height (mm) |
|--------------|-------------------|---------------------|--------------------------|
| VCP 20-12-14 | 2000              | 1200                | 1400                     |
| VCP 30-12-14 | 3000              | 1200                | 1400                     |
| VCP 45-12-14 | 4500              | 1500                | 1400                     |
| VCP 30-15-14 | 3000              | 1500                | 1400                     |
| VCP 45-15-14 | 4500              | 1500                | 1400                     |
| VCP 60-15-14 | 6000              | 1500                | 1400                     |
| VCP 45-19-14 | 4500              | 1900                | 1400                     |
| VCP 60-19-14 | 6000              | 1900                | 1400                     |
| VCP 80-18-14 | 8000              | 1900                | 1400                     |

OTHER CAPACITIES = Consult us.



**CCS : Coilcar** - capacity: 6.5 tonnes  
 Series assembly

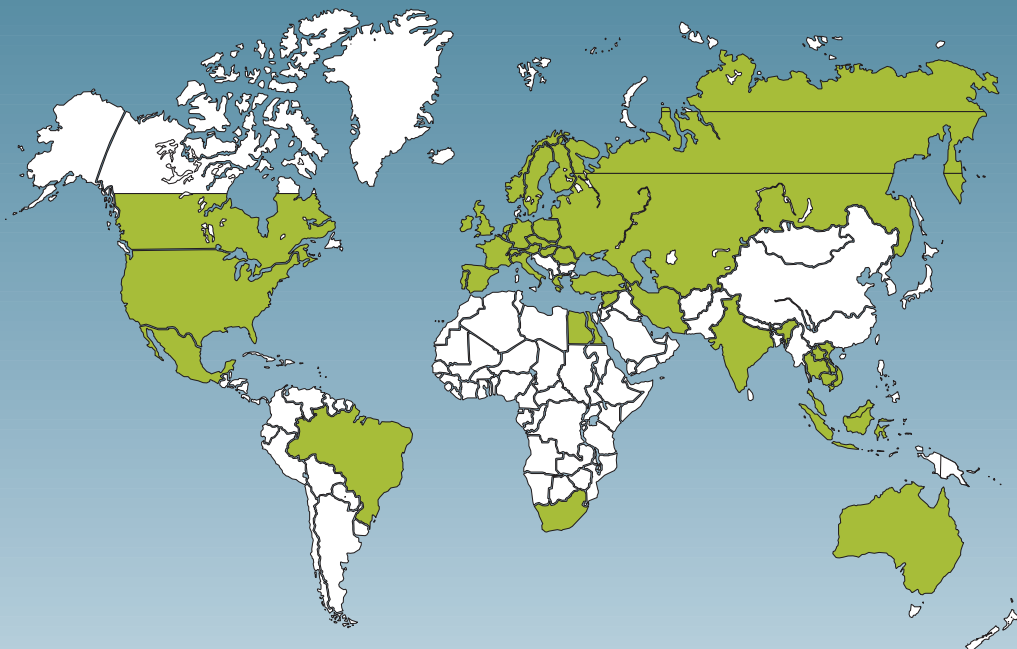


**MAH Heavy Series Range:** from 6 to 10 tonnes  
 SERIES ASSEMBLY OF TOOL HANDLING EQUIPMENT



## A GLOBAL PRESENCE

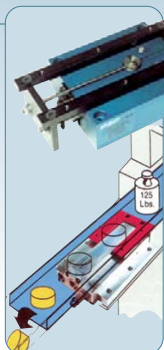
In all the industrialised countries, there is at least one person who speaks your language and knows our technologies.  
To find your contact, please log to our website <http://www.rotobloc-psp.com/contact.php?rub=agentsInter>



## PROGRAM



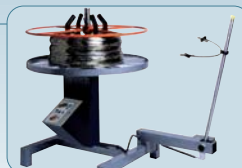
**Electronic unit**  
control



**Friction**  
Transport'air



**Transfert unit**  
NC control



**Wire decoiler**  
Wire feeder



**Multimatic**  
Tool transfert



**ROTOBLOC-PSP**  
GROUPE  
**DIMECO**

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[www.rotobloc-psp.com](http://www.rotobloc-psp.com)

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