

The Formwork Experts.

Shifting trolley DF

Art. n°: 586080000 | 1995 models onward

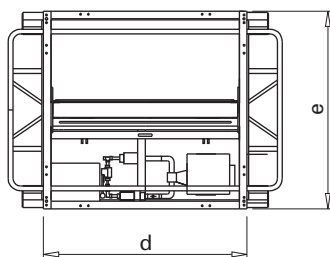
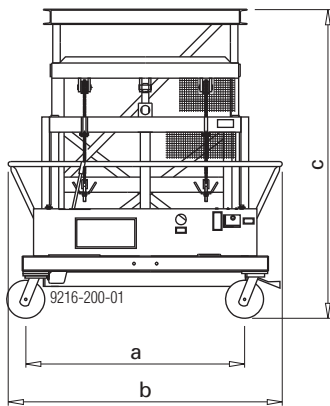
Original Operating Instructions

Please retain for future reference



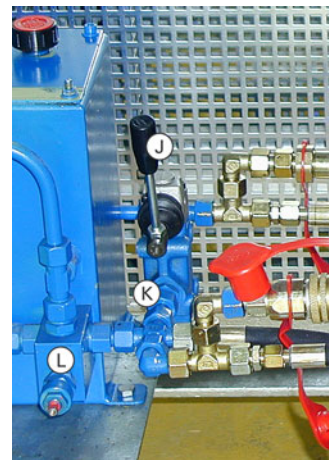
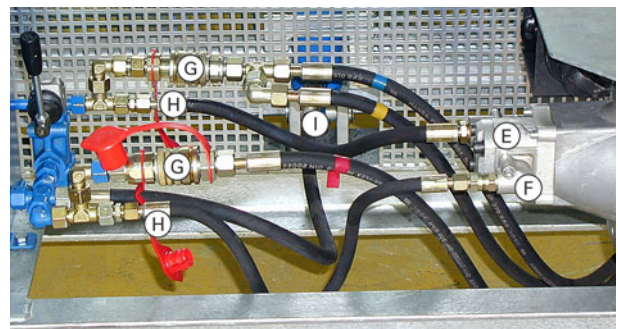
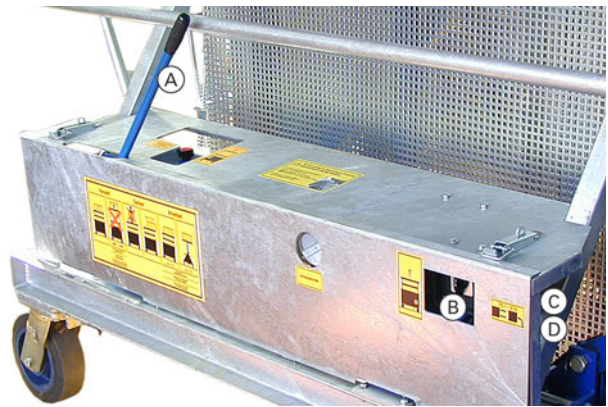
Product presentation

Shifting trolley DF
Art.n° 586080000



a ... 1440 mm
b ... 1804 mm
c ... 1540 mm to 3030 mm
d ... 1340 mm
e ... 1300 mm

Component overview



- A** Hand-pump lever
- B** "Lift" button
- C** Power supply
- D** 220 V/50 Hz electric motor
- E** Hydraulic pump
- F** Non-return valve
- G** Quick-acting coupling for attachable drive unit
- H** Quick-acting coupling for attachable drive unit
- I** Cylinder with isolation valve
- J** Manual lowering valve
- K** Flow control valve
- L** Overpressure valve

Data on rating plate

Designation: Shifting trolley DF
Art. n°: 586080000
Dead weight: 566.0 kg (1247.8 lbs)
Max. load: 1500 kg (3300 lbs)
Year of manufacture: see rating plate



Intended use

The Shifting trolley DF is a lifting accessory. It is used for lifting and repositioning Dokaflex and Dokamatic tables (intended use).



NOTICE

- Other use or use not in conformity with that stated above is non-intended use and requires the prior written approval of the Doka company!
- It is forbidden to lift other manufacturers' formwork with it.
- In order to ensure that the equipment has been properly assembled, it must be inspected by a competent person before being used.

Operator authorisation

The only persons allowed to operate the equipment are those who have been given sufficient instruction in how to use it, and who are familiar with all applicable operating manuals and regulations.
The client must obtain suitable evidence of the personnel's ability to operate and handle this vehicle.

Maintenance & inspection

- Repairs may only be carried out by the manufacturer!
- Doka accepts no liability for products that have been altered!

After taking delivery of the Shifting trolley DF

Damage in transit

The Shifting trolley DF is given thorough inspection and testing before being dispatched from the manufacturer's factory. In order to make sure that no damage has occurred in transit, the Shifting trolley DF should be inspected thoroughly as soon as it is delivered. Any damage must be reported to the sender in writing. Until this notice of defect has been dealt with, the Shifting trolley DF may not be put into service.

Warranty conditions

The warranty shall lapse in the event of overloading or other improper use of the equipment.

Before starting up at a new site

- Lubricate with grease via the lubricating nipples provided.
 - on the guide mechanisms, 2x on the inside and 2x on the outside
 - on the swivel casters (roller bearings and live ring)
- Lubricate the load chain and the deflection pulleys with lubricating grease.

Once a year, when lubricating the chain, inspect it carefully for any signs of alteration and damage.

Before every use

- ▶ Check for any signs of damage or visible deformation.



Any deformed and damaged parts must be immediately replaced by an expert. For safety reasons, only genuine OEM spares may be used.

- Crack-free and notch-free welds.
- No deformation.
- Rating plate must be in place and clearly legible

At regular intervals

- Inspection of lifting accessories must be performed at regular intervals by an **expert** in conformity with **national statutory provisions**. Unless otherwise stipulated, such inspection must be carried out **at least once a year**.

Cleaning & maintenance

Clean the Shifting trolley DF whenever it has been made dirty, paying particular attention to:

- the hydraulic system
- the moving parts of the guide mechanisms
- the bearing surfaces of the supporting frame
- the swivel casters

Hydraulic system

Venting

Whenever the oil has been changed, or after repairs, the whole system can be bled via a bleeder screw on the cylinder.

Safety precautions

Depending on the version in question, the pressure limitation valve is pre-set to the maximum pressure of either 200 bar (grey hydraulic cylinder) or 250 bar (blue hydraulic cylinder).

The adjusting screw of the pressure limitation valve is clearly marked. It is forbidden to tamper with this valve in any way whatever.

The isolation valve is installed between the hydraulic hose and the hydraulic cylinder, and is set to a flow-rate of 20 l/min. It is forbidden to make any changes to this flow-rate.

Maintenance

Change the hydraulic oil every 2 years.

Low-temperature hydraulic oil: Aero Shell Fluid 4 or oil of equal quality.

Filling quantity of hydraulic oil: 6 l.



CAUTION

Hydraulic oil is harmful to the environment!

- ▶ For this reason, always properly seal any leaks immediately!
- ▶ Intercept any leaking hydraulic oil and dispose of it in accordance with the applicable regulations!

Lifting motor

Mounting the new lifting motor

The lifting motor is fastened onto the Shifting trolley DF with 2 hexagonal bolts M8x30 and hexagon nuts M8. Screw the hoses from the lifting motor onto the hydraulic lines of the Shifting trolley DF.

Putting the lifting motor into service

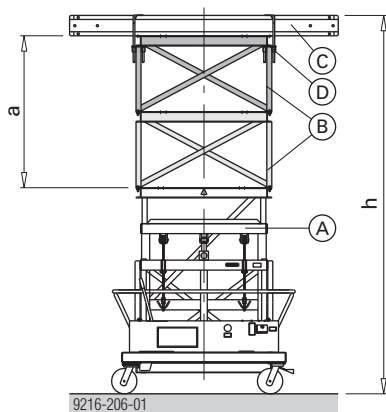
To prevent air penetrating into the hydraulic system after a new lifting motor has been connected, proceed as follows:

- Using the lever of the hand pump, extend the supporting frame as far as its final position
- Actuate the manual lowering valve of the Shifting trolley DF. After the supporting frame has been retracted 5 cm, switch on the electric motor as well, by pushing the button provided.
- After 30 seconds, release the manual lowering valve. The electric motor is now fully functional.

Storage

- Store lifting accessories in a dry and well ventilated place, protected from the weather and from all corrosive substances.

Height adjustment



a ... height Stacking frames

- A** Shifting trolley DF
- B** Stacking frame DF
- C** Distribution beams (Doka beams H20 2.65m)
- D** Brace stirrup 8



NOTICE

Points to remember with unsymmetrical tables:

"Central positioning" means "central" in terms of the load centre.

Take particular care with unsymmetrical tables (edge tables, tables with stop-ends).

without stacking frames

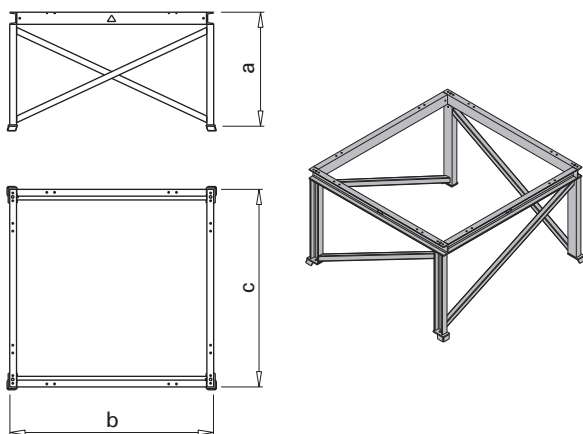
Height ranges incl. distribution beams

h min. [cm]	h max. [cm]
174.0	323.0

Max. load per Shifting trolley DF without stacking frames, where the load is applied centrally: 1500 kg

with Stacking frame DF

Art.n° 586079000



- a ... 750 mm
 - b ... 1340 mm
 - c ... 1300 mm
- Weight: 82 kg

Height ranges incl. distribution beams

Number of Stacking frames DF	h min. [cm]	h max. [cm]
1	249.0	398.0
2	324.0	473.0
3	399.0	548.0

Max. load per Shifting trolley DF with Stacking frame DF, where the load is applied centrally:

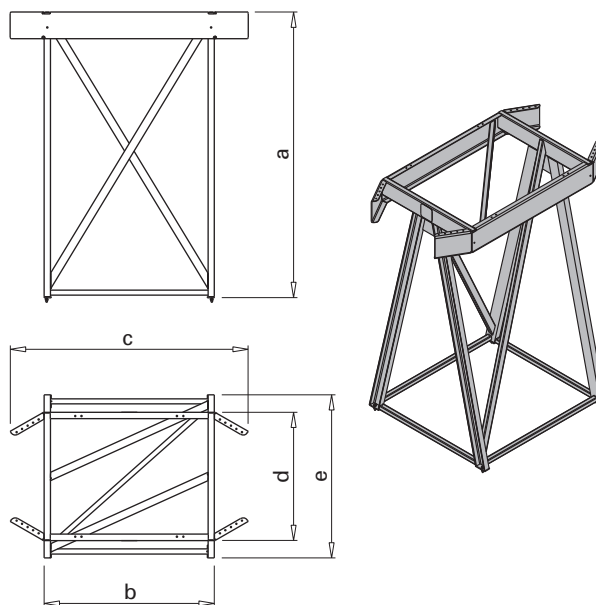
- with one Stacking frame DF: 1418 kg
- with two Stacking frames DF: 1336 kg
- with three Stacking frames DF: 1254 kg

Note:

If Stacking frames DF are used, these must each be bolted on using 4 hexagonal bolts M 12x40 (supplied with the stacking frame)

with Alu stacking frame DM 2.25m

Art.n° 586238000



- a ... 2250 mm
 - b ... 1340 mm
 - c ... 1873 mm
 - d ... 1010 mm
 - e ... 1285 mm
- Weight: 59.2 kg

Height ranges incl. distribution beams

h min. [cm]	h max. [cm]
399.0	548.0

Max. load per Shifting trolley DF with one Alu stacking frame DM 2.25m where the load is applied centrally: 1440 kg

Repositioning operation

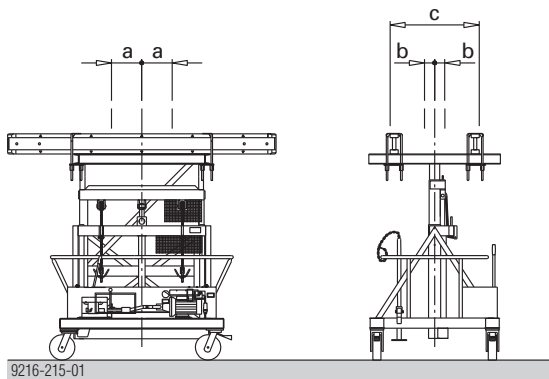
Positioning under the tableform

General

Depending on the size of the table and the situation on the site, the Shifting trolley DF is pushed under the table either from one end or one side of the table.

Maximum eccentric positioning at the load centre at full load: $a = \text{max. } 300 \text{ mm}$, $b = \text{max. } 100 \text{ mm}$.

Only shifting trolleys with distribution beams H20



9216-215-01

$c \dots \text{max. } 900 \text{ mm}$

Note:

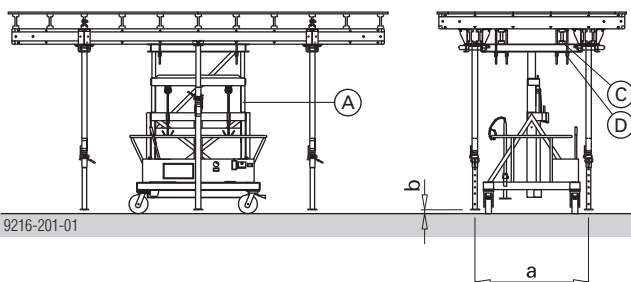
The supporting frames of the Shifting trolley DF and the Stacking frame DF come with centre markings (red arrows) to make it easier for them to be positioned centrally beneath the tables. "Central positioning" means "central" in terms of the centre of gravity. Care is needed with unsymmetrical tables (edge tables, tables with stop-ends).



CAUTION

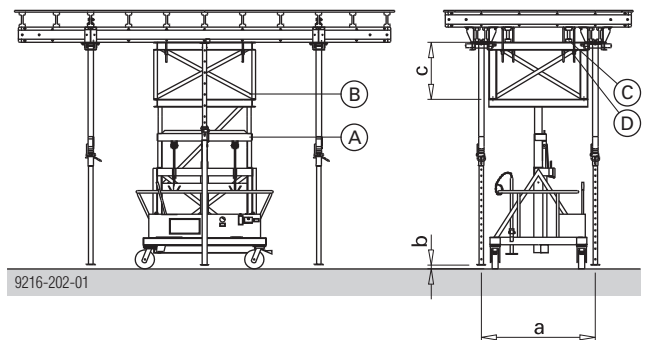
► Always insert the fastening clamps of floor props from the inside towards the outside, otherwise they will get in the way of the Shifting trolley when this is manoeuvred under the tables.

Without Stacking frame



9216-201-01

With Stacking frame



9216-202-01

$a \dots 1450 \text{ or } 1500 \text{ mm}$
 $b \dots \text{max. } 50 \text{ mm}$
 $c \dots 750 \text{ mm}$

- A** Shifting trolley DF
- B** Stacking frame DF
- C** Distribution beams (Doka beams H20 2.65m)
- D** Brace stirrup 8

How to fasten the distribution beams (Doka beams H20 2.65m) to the supporting frame or to the Stacking frame DF:

- Steplessly, using Brace stirrups 8 (four of which are supplied with the product)
- With packing plates and hexagonal bolts M8x60 (drilled holes provided in the supporting frame)



NOTICE

On Dokaflex and Dokamatic tables, you must always use distribution beams H20 with a minimum length of 2.65 m.

Exception: When using Dokamatic table frames 1.50m.

After positioning

First align all the swivel casters in the direction in which you will want to wheel the trolley out, and only then lift the table.

Shifting

The Shifting trolley DF is fitted with 4 heavy-duty swivel casters of $\varnothing 250$ mm. Two of these wheels are equipped with a fixing brake.



Follow the directions in the "Attachable drive unit DF" Operating Instructions!

Setting down and positioning the tableform

► Every time after you **shift / travel** the Shifting trolley DF, check:



- that the fastening clamps of the floor props are in the right position
- and that the floor props are firmly clamped in the Dokamatic swivel-heads.

Lifting and lowering (with/without load)

There are 2 ways of hydraulically lifting and lowering:

- with the hand-pump
- with the electric lifting motor

Before lifting, check that the positioning is correct.

Lifting manually

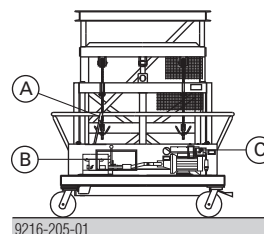
- Work the pump lever
 - Lifting speed: 1 cm per up-and-down stroke
 - Maximum lifting height: 150.0 cm
 - Overload protection provided by built-in pressure-limitation valve.

Lifting by motor

- Press the Start button
 - Electrical connection: 220 V/50 Hz
 - Lifting speed: 1 m/min
 - Maximum lifting height: 150.0 cm
 - Overload protection provided by built-in pressure-limitation valve.

Lower

- Open the lowering valve
 - Regulate the speed of lowering on the valve



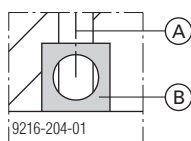
- A** Pump lever
- B** Lowering valve
- C** Pushbutton



NOTICE

Important points to remember when wheeling load-bearing towers:

- Only use the Shifting trolley DF for Dokaflex and Dokamatic tables.
- Ground clearance of the props max. 5 cm.
- Do not shift tables with the hydraulic mechanism extended too far (more than 5 cm).
- Travelling only permitted up to a gradient of 5 %.
 - Max. load-bearing capacity is 15 kN on a gradient of up to 3%
 - Max. load-bearing capacity is 9 kN on a gradient of up to 5%.
- The floor must be stable, firm and sufficiently smooth (e.g. concrete).
- **Particular care is needed with:**
 - Height offsets
 - Steps
 - Break-throughs
 - Strong wind
- Keep the travel route clean and free of any obstacles.
- Either bridge any openings in the floor with sufficiently strong planking/boards secured so that they cannot slip away to either side, or close off openings with sufficiently strong side railings!
- "Passenger transportation" is forbidden!
- Max. length of table 5 m. Extra-long tables must be travelled using 2 Shifting trolleys DF.
- It is forbidden to use any other mechanical assistance for the travelling operation!
Exception: Attachable drive unit DF
- Max. speed 4 km/h (walking pace)
- For longer breaks between operations, or when the Shifting trolley DF is permanently parked, it must NOT be carrying any form-work.
- After wheeling the Shifting trolley DF to its new position, fix it so that it cannot be moved accidentally. (apply the fixing brakes, wedge the wheels with chocks, etc.).
- It is forbidden to travel the Shifting trolley DF if any electric cables are still attached.
- Crane transport is only allowed using the lifting-bracket provided for this purpose (marked red).



- A** Crane suspension tackle (1-part)
- B** Lifting-bracket

Lining-and-levelling

With the Shifting trolley DF, Dokaflex and Dokamatic tables can be exactly positioned, and lined-and-lev-elled.

The positioning lever - supplied along with the trolley - is used for exactly aligning the heavy-duty swivel casters in the desired direction of travel.

- ▶ Insert the positioning lever into the basic frame as far as it will go.
- ▶ Push down the positioning lever.
This lifts the wheel slightly off the ground, making it easy to align the wheel in the desired direction of travel.
- ▶ Repeat this procedure on all 4 wheels.
- ▶ Then wheel the table exactly into position.
- ▶ Lift the tables up to the desired height and fine-adjust the floor props accordingly.

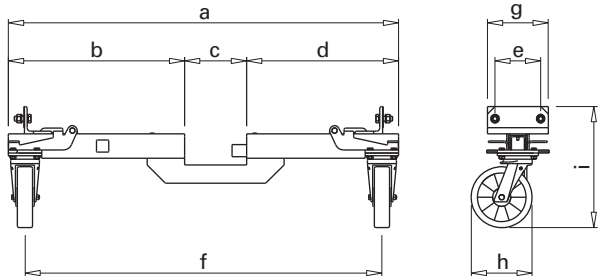
Extensions for Shifting trolley DF



NOTICE

At a table height of 5.80 to 7.30 m, the **Extensions for Shifting trolley DF** must be mounted on Shifting trolley DF and extended!

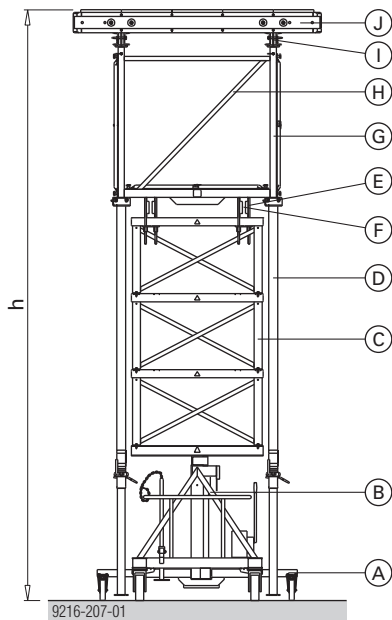
Art.n° 5860150000



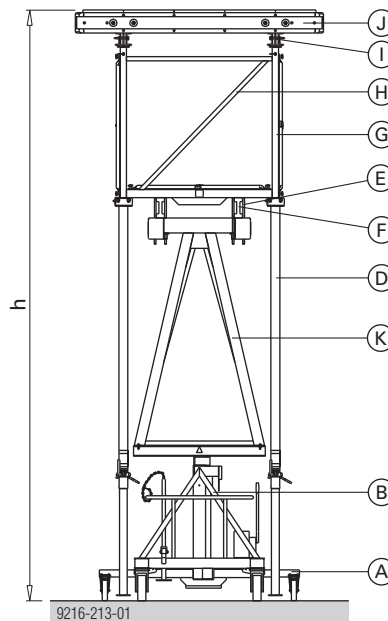
- a ... 1284 mm
- b ... 580 mm
- c ... 204 mm
- d ... 500 mm
- e ... 150 mm
- f ... 1174 mm to 1866 mm
- g ... 253 mm
- h ... 200 mm
- i ... 398 mm

Practical example

with Stacking frame DF



with Alu stacking frame DM 2.25m

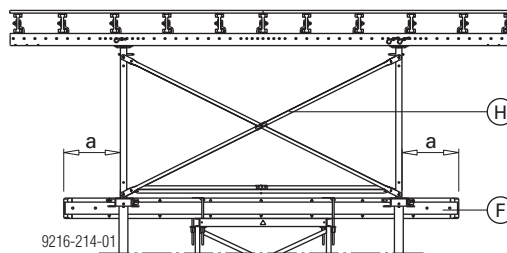


h ... 5.80 m to max. 7.30 m

- A** Extensions for Shifting trolley DF
- B** Shifting trolley DF
- C** Stacking frame DF
- D** Floor prop Eurex 20 550
- E** Brace stirrup 8
- F** Doka beam H20 (distribution beam)
- G** Dokamatic table frame 1.50m
- H** Diagonal cross 18,250
- I** Scaffold connection (complete)
- J** Dokamatic table 2.50x5.00m
- K** Alu stacking frame DM 2.25m

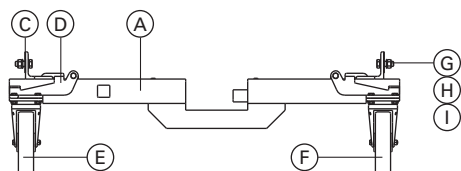


▶ When using Dokamatic table frames 1.50m, ensure that the H20 distribution beams are sufficiently long.



a ... min. 500 mm

Assembly



A Extensions for Shifting trolley DF

B Shifting trolley DF

C Distance plate

D Safety clip

E Extension 1 (complete)

F Extension 2 (complete) - short side

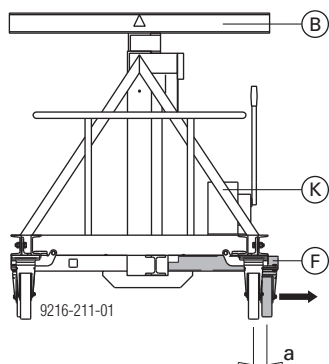
G Hexagonal bolt M16x45

H Hexagon nut M16

I Washer 17

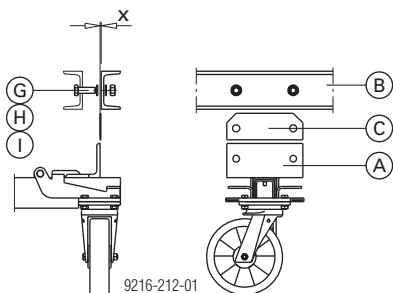
K Drive unit for Shifting trolley DF

- ▶ Fix the Shifting trolley DF so that it cannot be moved accidentally. (apply the fixing brakes, wedge the wheels with chocks, etc.).
- ▶ Push the "Extensions for Shifting trolley DF" (**A**) under the Shifting trolley DF.
- ▶ Extend the short "Extension" (**F**) by at least 50 mm.
- ▶ The short "Extension" (**F**) is on the same side as the drive unit (**K**).



a ... 50 mm

- ▶ Fasten with hexagonal bolts M16x45 (**G**), hexagon nuts M16 (**H**) and washers 17 (**I**).



x ... play

If there is too much play between the U-profiles of the Shifting trolley DF (**B**) and the "Extensions" (**A**), the distance plates (**C**) must also be screwed on.



All 4 screws must be firmly tightened.

Positioning under the tableform

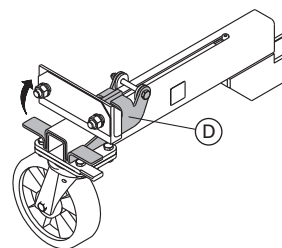


CAUTION

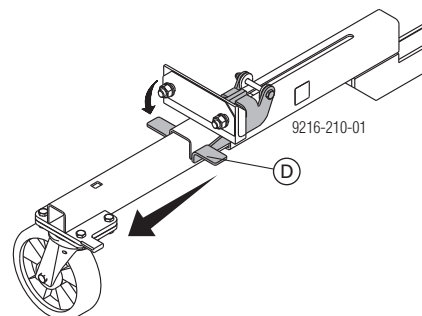
- ▶ Always insert the fastening clamps of floor props from the inside towards the outside, otherwise they will get in the way of the Shifting trolley when this is manoeuvred under the tables.
- ▶ The "Extensions" must be mounted to the Shifting trolley DF, with both extensions retracted (i.e. pushed in).
- ▶ Wheel the Shifting trolley DF under the Dokaflex or Dokamatic table, and position it.

Extending the "Extensions"

- ▶ Lift the Safety clip (**D**).



- ▶ Pull out the wheel as far as it will go. The Safety clip must snap into place.



Retracting the "Extensions"

- ▶ Lift the Safety clip (**D**).
- ▶ Push the wheel back in as far as it will go. The Safety clip must snap into place.

Troubleshooting

Load not being lifted

Possible causes:

- Load too heavy (> 1500 kg, including Stacking frame)
- Not enough hydraulic oil
- Mechanical guide mechanisms are damaged or are tending to get jammed
- Hydraulic pump is faulty
- Overpressure valve is wrongly adjusted or faulty
- Manual lowering valve is leaking (e.g. due to contaminated oil)

Load not being completely lifted

Possible cause:

- Not enough hydraulic oil

The load is being lowered of its own accord

Possible causes:

- Load too heavy (> 1500 kg, including Stacking frame)
- Hydraulic tubing is leaking
- Overpressure valve is wrongly adjusted or faulty
- Non-return valve on electrical hydraulic pump is leaking
- Manual lowering valve is leaking (e.g. due to contaminated oil)
- Hand-pump valves are leaking

The load cannot be lowered

Possible causes:

- Low ambient temperatures (hydraulic oil is too viscous)
- Flow control valve is blocked (e.g. due to contaminated oil)
- Manual lowering valve is defective
- Isolation valve is defective

The load is being lifted jerkily and/or "bounces"

Possible causes:

- Trapped air in the hydraulic tubing and/or the hydraulic cylinder
- Mechanical guide mechanisms are damaged or are tending to get jammed

The hydraulic lines of the Attachable drive unit DF cannot be connected or disconnected (quick-acting coupling)

Possible causes:

- High pressure in the hydraulic system of the Shifting trolley DF
- High pressure in the hydraulic system of the Attachable drive unit DF
- Residual soiling on coupling components
- Quick-acting coupling is faulty

Electrical hydraulic pump not pumping

First try out whether it is possible to use the pump in manual mode. If it is, then there are the following

Possible causes:


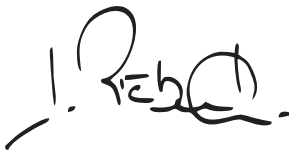

- Problems with the electric power supply
- Not enough hydraulic oil
- The ON button is faulty
- The electric motor is faulty (e.g. capacitor)
- Mechanical breakage (gear pump, coupling)
- Damaged pump seals

Hydraulic hand-pump is not functioning

Possible causes:

- Not enough hydraulic oil
- Breakage in the mechanical drive system (levers, articulated joints, pistons)
- Damaged or worn-out seals in the pump system
- Mechanical breakage (gear pump, coupling)
- Pump valves leaking

Declaration of conformity

 EC Declaration of Conformity pursuant to EC Directive 2006/42/EC.	
The manufacturer declares that by reason of its conception and design, the following product Shifting trolley DF, art. n° 586080000 conforms – in the version marketed by ourselves – to the pertinent fundamental health and safety stipulations of the relevant EC Directives.	
The following harmonised standards were applied: <ul style="list-style-type: none"> ▪ EN ISO 12100:2010 ▪ EN 349:1993+A1:2008 	
Person authorised to compile technical documentation (pursuant to European Directive on Machinery Annex II): Harald Ziebula Josef Umdasch Platz 1 A-3300 Amstetten	
Amstetten, 10/02/2020	Doka GmbH Josef Umdasch Platz 1 A-3300 Amstetten
 	
Harald Ziebula Managing Director	Dipl.-Ing. Peter Reisinger Authorised Officer, Head of Engineering