20' AND 40' SEMI-AUTOMATIC SPREADERS

INSTRUCTIONS & MAINTENANCE MANUAL
INDEX

Page

EXPLANATION OF OPERATING SEQUENCE ............................. 6
ADVANTAGES, CONSEQUENCE ................................................... 12
SPARE PARTS 20’ ............................................................................... 13
SPARE PARTS 40’ ............................................................................... 17
OPTIONS ............................................................................................. 18
20' SEMI-AUTOMATIC SPREADER
MODEL: MK - 20
AVAILABLE WITH SWL
FROM 20 TO 50 TONS
40' SEMI-AUTOMATIC SPREADER
MODEL: MK - 40
AVAILABLE WITH SWL
FROM 35 TO 42 TONS
SEMI-AUTOMATIC SPREADER

EXPLANATION OF OPERATING SEQUENCE
SPREADER READY FOR PICK UP

The safety bolts (1) are in lower position, meaning the spreader mechanism is locked, cannot be activated and the twistlock cones are lined up in longitudinal, receiving position.

The crane picks up the spreader by means of lifting gear (i.e. wires with masterlinks). The wire with operating mechanism (5) is attached to the crane hook as well. The automatic mechanism controlling the triangle-lever (4) is still in locked position and thus the main spring is extended to its maximum elongation.

Now the crane transfers the spreader to the container that shall be lifted.
Keeping the lifting wires stretched, the spreader now lifts the spreader. A small gap (about 3 cm) will arise between the spreader and the container, causing the safety bolts to lower, thus locking the twistlocks in closed position. When lifting further, the container is picked up by these closed twistlocks and can be transferred to the desired position.

**OBSERVATION**

In case the lifting wires (3) would get slack again, after the twistlocks have closed, the sheave (6) would slide within the triangle (4) to the lowermost position. This would mean, that the crane would have to lift and to lower consequently two times the wires (3), in order to obtain, that the twistlock cones (2) would turn again into locking position (90°).

The position of the twistlocks can be observed on the indication plate on the operating rod.
The crane puts the container on its location. The moment the container is put down and the spreader is again resting on the container, the mechanism will unlock the twistlocks simultaneously in all four corners. The crane lowers the lifting wires (3), the sheave of the mechanism (6) slides down to its lowermost position. Consequently the crane lift the wires, rotating the triangle (4) and the four cones, lining them again in longitudinal (unlocked) position.

Now, the crane lifts the spreader, causing the safety bolts (1) to fall into their lower position, preventing that mechanism will be activated. Now the spreader is loose and can be transferred.
SETTING DOWN THE SPREADER

The spreader is put down on the ground (unless of course loading of containers would continue. The safety bolts are in lower position, the mechanism is locked, the cones are lined up longitudinally, the sheave (6) remains in lowermost position.
MANUAL MODE
OPERATING SEQUENCE

When operating in manual mode, the operating cable should not be attached to the crane hook. If manual mode is used to overcome an erroneous situation, the crane hook should be lowered sufficiently so the spring is not stretched.

The twistlocks (2) should be in longitudinally aligned position and the safety bolts (1) are in upwards position. The spreader is put down on the container.

By turning the operation handle (7) 90°, the four twistlocks (2) will simultaneously switch into locking position. Consequently, the crane will be able to lift the container.

NOTE: the direction in which to turn depends on which container end the operator is standing.

By turning the operation handle (7) 90° in opposite direction, the twistlocks (2) will align longitudinally and the crane will be able to lift just the spreader.
ADVANTAGES

The main advantage of this spreader is that it combines the weight of a manual spreader with the conveniences of an automatic spreader. It can be operated by the crane operator simply by moving the crane hook up and down. The simplicity of the mechanism makes it durable, reliable and secure.

CONSEQUENCE

A) The maintenance of the spreader is reduced to a minimum, Only regular greasing of the bearing points of the operating rods and the twistlocks (with grease nipples) is needed to ensure proper working.

B) The compact design makes it easy to stow and transport.

C) Finally the total weight is low, ensuring easy transport and limiting the ‘stolen’ crane capacity.
20' AND 40' SEMI-AUTOMATIC SPREADER

SPARE PARTS
Removable flaps

* Delivery time 2 months
** From stock, subject unsold

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<th>Weight</th>
<th>Strength:</th>
<th>Finish</th>
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<td>1060</td>
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<td>440</td>
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<td>280 33t</td>
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** SWL

SWL 220 25t
SWL 280 33t
SWL 300 35t

Weight (kN)

Painted

Finish

Material

20' Spreader

CONTAINER TECHNICS N.V.
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mailto: info@contech.be
www.containertechnics.com

Van Eerd. B
02/08/95

Wouters P
13/08/09

Reference no.

MK-20

Page 1

Page Mod. 1 e
WEIGHT:

Spreader: 1400 kg
Forklift pockets: 200 kg
Wires: 150 kg

1750 kg

Forklift pockets 220x110x8 mm

Wire D=38mm eye/timble SWL=18.5t

20' Spreader (for hatch cover lifting)

10/12/2008

Eddy Neelen

11/12/2008

Paul Zwysen

MK-20/50
*Delivery time 2 months
**From stock, subject unsold

Mod. Date Check Description
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d 03/03/10 WM height and width dimension added
c 21/09/09 EN General update, page numbers changed, modifications updated

Mod. Date Check Description
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d 1 03/03/10 WM height and width dimension added
c 21/09/09 EN General update, page numbers changed, modifications updated

Scale: 1:100

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40' spreader

Van Eeck. B 03/08/95
Wouters P 21/09/09
Reference no. MK-40
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<td>Nylstop nut</td>
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<td>SP-2AA25M1/5</td>
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<td>SP-2AA25C</td>
<td>Triangle lever</td>
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<td>SP-2AA25D/2</td>
<td>Wheel</td>
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<td>SP-2AA25D/6</td>
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<td>Manual operating key</td>
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<td>SP-2AA25R</td>
<td>Nut for twistlock cone</td>
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<tr>
<td>SP-2AA25TL</td>
<td>Long. transmission tube</td>
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<tr>
<td>SP-2AA25F</td>
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<td>SP-2AA25M2/13</td>
<td>Nylstop nut</td>
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<td>Screw</td>
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<td>Trans. transmission tube</td>
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<td>SP-2AA25K</td>
<td>Plug for safety bolt</td>
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<td>SP-2AA25M2/9</td>
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<td>SP-2AA25N</td>
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<td>SP-2AA25J</td>
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<tr>
<td>SP-2AA25G</td>
<td>Twistlock cone</td>
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</tbody>
</table>
35 SP-2AA25/12 4 Pin
34 SP-2AA25/10 4 Lifting bolt
33 SP-2AA25E/1 1 Operating rope
32 SP-2AA25E02 1 Main spring
31 SP-6S-M2 1 Ring
30 SP-2AA25P/1 2 Lifting rope assembly
29 SP-2AA25P/2 2 Main ring
20' AND 40' SEMI-AUTOMATIC SPREADER OPTIONS
Forklift pockets only for moving the spreader or empty containers. Max Capacity 9ton

Reinforcement plate 8mm four under each square pipe
## Detail of Lifting Eye

For 20' and 40' spreaders

### Diagram

- **Detail X**
  - Scale: 1:10
  - Part of the diagram shows a lifting eye with dimensions and annotations.

- **Section Y-Y**
  - Scale: 1:10
  - Shows a cross-sectional view of the lifting eye with dimensions A, B, C, D, and E.

### Table

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### Dimensions

- **A**: 155
- **B**: 30
- **C**: 95
- **D**: 85
- **E**: 50

### Weight and Strength

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<tr>
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<tr>
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### Keypoints

- **Check**: 13/08/09
- **Mod. Date**: 03/03/10
- **Finish**: Painted

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**Containter Technics N.V.**

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**20' Spreader**

**Drawn**: Van Eerd. B

**Check**: Wouters P

**Reference no.**: MK-20

Page 2

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**Mod.**: e
Light weight 20’ & 40’ semi or fully automatically operated container spreaders can be made available upon short notice including all necessary lifting gear, ready for operation.