SCOPE OF DELIVERY

Oleo buffers are supplied with a standard finish suitable for dry conditions (finished Oleo Green primer). The standard finish is not suitable for wet, corrosive conditions. Special finished buffers are available on request.

INDICATION OF USE

Environmental temperature acceptable conditions in line with EN81-20 (0.4.16) Ambient Temperatures.

WARNING

The Oleo MLB elevator buffer is supplied containing compressed gas; the plunger is held in the fully compressed condition during transportation by means of a bolt, this should not be removed until the buffer is in its final installed position.
When handling MLB buffers ensure your regional health and safety laws are adhered to.

Use the Eye Bolt when lifting Oleo MLB 35-40 buffers, shown in Figure 1.

WARNING
DO NOT lift buffer with the striker or switch bracket shown in Figure 2. Avoid contact as this may cause damage.

Always confirm the weight of the buffer to be lifted and ensure that a suitable lifting method is used.
### MLB 35-40 Range

<table>
<thead>
<tr>
<th>Buffer Model</th>
<th>MLB 35</th>
<th>MLB 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without Oil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>kg</td>
<td>61.45</td>
<td>75.66</td>
</tr>
<tr>
<td>lbs</td>
<td>135.5</td>
<td>166.8</td>
</tr>
<tr>
<td>When Filled with Oil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>kg</td>
<td>78.61</td>
<td>97.66</td>
</tr>
<tr>
<td>lbs</td>
<td>173.3</td>
<td>215.3</td>
</tr>
</tbody>
</table>
Ensure the buffer has been secured into its installation position. Oleo recommends a bolt size M16 for fixing and all four fixing positions are used. Ensure this area at the base of the buffer, shown in Figure 3 is supported.

At this point the buffer is still compressed in its transportation state, now the buffer can be released by removing the transportation bolt. The following is the recommended removal procedure:

For a controlled release, lower the elevator car (or equivalent) onto the buffer leaving the eye bolt exposed. This mass must be at least equivalent to the minimum mass of the specified buffer.

Minimum mass of the buffer show in the table below:

<table>
<thead>
<tr>
<th>Buffer Model</th>
<th>MLB 35</th>
<th>MLB 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. Mass kg</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>lbs</td>
<td>1323</td>
<td>1323</td>
</tr>
</tbody>
</table>
DANGER
Now to release the plunger. DO NOT stand over the plunger when releasing.

To release the plunger, undo the eye bolt. See Figure 4.

Discard transportation eye bolt and spacer shown in Figure 4.

If used, remove the elevator car (or equivalent) and this will control the recoil of the buffer.

After periods of being held in the compressed state during transportation and storage, the plunger may require assistance to initially extend. This should be done using a rubber dead blow mallet to tap the underside of the buffer head (GREEN in Figure 4) at 90 degree intervals until the plunger extends.

Once fully extended and stroked the buffer will perform as designed.

Buffers are to be fitted vertically parallel to guide rail ±5mm.

Figure 4
The oil must conform to the specification on the buffer data plate –
ISOVG68: SG.88/90 at 15°C: hydraulic.
Pour Point: 18°C or lower. Viscosity index: 75 or higher

**CAUTION**
Take care when handling the oils.
Observe the oil manufacturers recommendations.

The oil volume guide can be found in table below:

<table>
<thead>
<tr>
<th>Buffer Model</th>
<th>MLB 35</th>
<th>MLB 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approximate Oil Volume</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Litres</td>
<td>19.5</td>
<td>25.0</td>
</tr>
<tr>
<td>US Gallons</td>
<td>5.15</td>
<td>6.60</td>
</tr>
</tbody>
</table>

**MINIMUM & MAXIMUM**
The oil level needs to be between the Minimum and Maximum marks indicated on the dipstick as shown in Figure 5 – See Section 8 for Oil Checking Procedure.
**NOTICE**

The buffer must be vertical and fully extended before filling with oil.

**CAUTION**

Take care when handling the oils. Observe the oil manufacturers recommendations.

1. Unscrew the air screw, remove from the buffer and keep safe. (GREEN in Figure 6).
2. Unscrew the dipstick, remove from the buffer and keep safe. (GREY in Figure 6).
3. Gradually fill the buffer with oil until the oil level is visible between the minimum and maximum levels on the dipstick (indicated on Figure 5).
4. Allow the buffer to stand for a minimum of 30 minutes.
5. Re-insert the dipstick **DO NOT** screw down.
6. Remove dipstick and inspect level. The oil level needs to be between the minimum and maximum marks indicated on the dipstick as shown in Figure 5.
7. Once oil level is correct replace air screw and securely fasten.
8. Once oil level is correct replace dipstick and securely fasten.

The oil must be within the correct operating range for the buffer to perform correctly.

If further oil is required after checking repeat steps 1-8.

**WARNING**

DO **NOT** overfill past the maximum dipstick mark.

If this occurs, then oil must be removed from the buffer.
The oil level must be correct and needs to be checked using the following procedure:

1. Unscrew the dipstick and remove from the buffer (GREY in Figure 6).
2. Wipe dipstick clean.
3. Re-insert the dipstick DO NOT screw down.
4. Remove dipstick and inspect level. The oil level needs to be between the maximum and minimum marks indicated on the dipstick as show in Figure 5.
5. Once oil level is correct replace dipstick and securely fasten.

The oil must be within the correct operating range for the buffer to perform correctly.

If further oil is required after checking refer to Oil Filling Procedure Section 7.

**WARNING**

DO NOT overfill past the maximum dipstick mark.
If this occurs, then oil must be removed from the buffer.
Oleo recommends the final 7 step process is followed prior to commissioning:

1. Ensure oil level is correct.
2. Ensure striker is vertically aligned to ±0.5mm.
3. Complete electrical connections to the limit switch.

**WARNING**
As a safety critical component, buffers should not be installed without a switch.

4. Compress the buffer at slow speed across the full working stroke then allow to recoil.
5. Allow the oil to settle for 30 minutes then recheck oil level – see Section 8.
6. Finally, impact the buffer at the full rated speed of the elevator.
7. Complete final checks of oil level and the buffer is at correct working height.

**NOTICE**
CHECK: The maximum overall height against table below +0/-9mm of the figure stated.

<table>
<thead>
<tr>
<th>Buffer Model</th>
<th>MLB 35</th>
<th>MLB 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extended Height</td>
<td></td>
<td></td>
</tr>
<tr>
<td>m</td>
<td>2.1079</td>
<td>2.6929</td>
</tr>
<tr>
<td>in</td>
<td>82.988</td>
<td>106.020</td>
</tr>
</tbody>
</table>

**NOTICE**
If the buffer has not returned to the fully extended position (determined by measuring overall height) contact Oleo International.
Oleo recommends the following be carried out every 12 months from installation:

1. Clean away debris and dirt from around the plunger and switch.
2. Check the oil level is correct.
3. Compress the buffer across its full working stroke.
4. After the compression, ensure the buffer has returned to its correct working height and visually check for any damage. See correct working height in table in Section 9.

Ensure regional jurisdictions and laws for maintenance are adhered to.
OLEO INTERNATIONAL
Grovelands
Longford Road
Exhall
Coventry
United Kingdom
CV7 9NE
E sales@oleo.co.uk
T +44 (0)24 7664 5555
F +44 (0)24 7664 5900
W oleo.co.uk

OLEO BUFFERS SHANGHAI
COMPANY LTD
Plant A15 Xinfei Garden
No.3802 Shengang Road
Songjiang
Shanghai
201612 China
E sales@oleo.cn
T +86 21 6776 0688
F +86 21 6776 0689
W oleo.cn

ALTERNATIVE LANGUAGE INSTALLATION INSTRUCTIONS

This Installation Guide can be found in the following languages;

<table>
<thead>
<tr>
<th>Language</th>
<th>Language</th>
<th>Language</th>
<th>Language</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Français</td>
<td>Deutsche</td>
<td>Español</td>
<td>Porigiese</td>
<td>中文</td>
</tr>
<tr>
<td>French</td>
<td>German</td>
<td>Spanish</td>
<td>Portuguese</td>
<td>Chinese</td>
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<tr>
<td>Brasileiro</td>
<td>Italiano</td>
<td>Русский</td>
<td>한국어</td>
<td>日本語</td>
</tr>
<tr>
<td>Brazilian</td>
<td>Italian</td>
<td>Russian</td>
<td>Korean</td>
<td></td>
</tr>
</tbody>
</table>

Please visit:
https://www.oleo.co.uk/downloads/elevator-installation-booklets

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