Beissbarth Easy 2-Cam

WHEEL ALIGNMENT USING ML 33, 34, 35
3D technology with 2 cameras – wheel alignment

ML 33
Compact version

ML 34
Version with trolley

Simple workshop installation
- Test-equipment in front of the vehicle
- No calibration at the initial installation
- Height adjustable camera beam
- Adjustable working heights
- For wheel alignment lifts and pits
- From small cars to utility vans
- Smart LEDs as adjustment aid
within just 3 minutes

ML 35
Version with trolley and autotracking

Electronic

Autotracking

Increased storage space thanks to separate trolley

Automatic detection of targets and height adjustment of the camera beam

Additional control display at the bottom
Precise and quick wheel alignment

Height adjustment of the camera beam:
between 600 and 2 400 mm for variable working heights (even on ground level)
ML 33: manually adjustable
ML 34: electronic at the push of a button
ML 35: automatic tracking of the targets

Exchangeable displays:
• Wall mount, post fitting or fixture on the trolley – as preferred
• Adjustment tasks made easy

ML 34, 35 trolley:
• More storage than with ML 33
• Increased mobility
• Data transfer via cable
• For PC and (optional) printer
• Attachment rack for clamps and targets

For all professionally levelled wheel alignments bays:
4-post lifts*, scissor lifts, inground lifts, workshop pits

<table>
<thead>
<tr>
<th>Admissible height deviation</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left to right</td>
<td>1 mm</td>
</tr>
<tr>
<td>Front to rear</td>
<td>2 mm</td>
</tr>
<tr>
<td>Transverse front left to rear right</td>
<td>2 mm</td>
</tr>
</tbody>
</table>

* note the clearances (see back page)
Measurement instructions via monitor or smart camera LEDs for:
- the alignment of the targets
- runout compensation
- steering lock

Small targets
- Space-saving design
- no mechanical spirit level (virtual alignment)
Easy 2-Cam software

Wheel alignment software
• Dell PC running on Windows 10
• User-friendly, intuitive interface
• Program-controlled measurement routines: standard, quick & random
• Comprehensive Autodata vehicle database with editor
• Camber indication in lifted condition eases the adjustment

Standard measurement parameters
• Total toe (front + rear axle) ±50°
• Individual toe (front + rear axle) ±25°
• Camber (front + rear axle) ±15°
• Setback (front + rear axle) ±9°
• Thrust line ±9°
• Caster ±22°
• Steering axis inclination ±22°
• Wheelbase 1 800 - 4 500 mm
• Track width 1 100 - 1 900 mm

Additional measurement parameters
• Rim diameter
• Side offset
• Axle spacing
• Longitudinal offset
• Difference: axle spacing
• Difference: track width

All measured values at a glance
For large and small wheelbases
Suitable for wheelbases between 1800 and 4500 mm.

Comprehensive Autodata vehicle database – with editor
Smart LED indicator system on the camera beam –

Alignment of the targets with virtual spirit levels on a TFT screen or via LED indicators on the camera beam. There is a LED line for each wheel with target (1–4).

Runout compensation routine
LEDs 1 and 3 indicate the processing progress, 2 and 4 the direction to push in. Left and right indicators are identical.

Notes on the steering lock routine
LEDs 1 and 3 indicate the processing progress, 2 and 4 the direction to steer in. Left and right indicators are identical.
as additional adjustment aid
## Scope of delivery and accessories

### ML 33, 34, 35 standard scope of delivery

<table>
<thead>
<tr>
<th>ML 33</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
</table>
| ML 33 | Post with camera beam  
RAL 5015 (blue)  
RAL 7040 (grey) | 1 692 000 026  
1 692 000 149 |
| Post tray with PC, mouse, keyboard (US) and standard accessories  
RAL 5015 (blue)  
RAL 7040 (grey) | 1 692 000 027  
1 692 000 150 |

<table>
<thead>
<tr>
<th>ML 34</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
</table>
| ML 34 | Post with camera beam  
RAL 5015 (blue)  
RAL 7040 (grey) | 1 692 000 028  
1 692 000 151 |
| Trolley with PC, mouse, keyboard (US) and standard accessories  
RAL 5015 (blue)  
RAL 7040 (grey) | 1 692 000 029  
1 692 000 152 |

<table>
<thead>
<tr>
<th>ML 35</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
</table>
| ML 35 | Post with camera beam  
RAL 5015 (blue)  
RAL 7040 (grey) | 1 692 000 030  
1 692 000 153 |
| Trolley with PC, mouse, keyboard (US), an extra 19” monitor and standard accessories  
RAL 5015 (blue)  
RAL 7040 (grey) | 1 692 000 031  
1 692 000 154 |

### Standard accessories included in scope of delivery

<table>
<thead>
<tr>
<th>Illustration</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="24” monitor" /></td>
<td>24” monitor</td>
<td>Upon request</td>
</tr>
<tr>
<td><img src="image2" alt="19” monitor" /></td>
<td>19” monitor (only for ML 35)</td>
<td>Upon request</td>
</tr>
<tr>
<td><img src="image3" alt="Target: front left" /></td>
<td>Target: front left</td>
<td>1 692 000 116</td>
</tr>
<tr>
<td><img src="image4" alt="Target: front right" /></td>
<td>Target: front right</td>
<td>1 692 000 117</td>
</tr>
<tr>
<td><img src="image5" alt="Target: rear left" /></td>
<td>Target: rear left</td>
<td>1 692 000 118</td>
</tr>
<tr>
<td><img src="image6" alt="Target: rear right" /></td>
<td>Target: rear right</td>
<td>1 692 000 119</td>
</tr>
</tbody>
</table>
| ![Turntable](image7) | Turntable 2 pieces already included  
(1 piece) | 1 692 000 122 |
| ![Filling bars for turntables](image8) | Filling bars for turntables  
(2 pieces) | 1 692 000 155 |
| ![Universal clamp](image9) | Universal clamp 13-25” 4 pieces (incl. standard car clamps) already included  
(1 piece) | 1 692 000 134 |
| ![Brake lock](image10) | Brake lock | 1 692 000 120 |
| ![Steering lock](image11) | Steering lock | 1 692 000 121 |
| ![Brake chocks](image12) | Brake chocks  
(2 pieces) | 1 692 000 156 |
(Optional) special accessories

**Printer**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Printer</td>
<td>Upon request</td>
</tr>
</tbody>
</table>

**Claws for the Universal clamp**

<table>
<thead>
<tr>
<th>Illustration</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard claw for Universal clamp for normal steel rims</td>
<td>1 692 000 135</td>
</tr>
<tr>
<td></td>
<td>(1 piece)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Special claw 1 for Universal clamp for standard alloy and alloy softline rims</td>
<td>1 692 000 138 1 692 000 142</td>
</tr>
<tr>
<td></td>
<td>(1 piece)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Special claw 2 for Universal clamp for standard alloy rims</td>
<td>1 692 000 136 1 692 000 140</td>
</tr>
<tr>
<td></td>
<td>(1 piece)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Special claw 3 for Universal clamp for alloy softline rims</td>
<td>1 692 000 137 1 692 000 141</td>
</tr>
<tr>
<td></td>
<td>(1 piece)</td>
<td></td>
</tr>
</tbody>
</table>

**Multi-Fit clamp**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Multi-Fit clamp 13-22&quot; 4 standard claws for Multi-Fit clamps already included</td>
<td>1 690 311 089 1 690 311 112</td>
</tr>
<tr>
<td></td>
<td>(1 piece)</td>
<td>(Set 4 pieces)</td>
</tr>
<tr>
<td></td>
<td>Extension to 28&quot; for Multi-Fit clamp</td>
<td>1 690 311 113</td>
</tr>
<tr>
<td></td>
<td>(4 pieces)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard claw for Multi-Fit clamp for normal steel rims</td>
<td>1 690 311 116</td>
</tr>
<tr>
<td></td>
<td>(4 pieces)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Special claw for Multi-Fit clamp for standard alloy and alloy softline rims</td>
<td>1 690 311 164</td>
</tr>
<tr>
<td></td>
<td>(4 pieces)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Truck claw for Multi-Fit clamp</td>
<td>1 690 311 115</td>
</tr>
<tr>
<td></td>
<td>(4 pieces)</td>
<td></td>
</tr>
</tbody>
</table>
Technical data

Area of application
Rim size 13” - 25”
Track width 1 100 - 1 900 mm
Wheelbase 1 800 - 4 500 mm
Clearance between post and turntable 1 800 - 2 400 mm
Clearance between left and right camera 2 240 mm

Power supply
Voltage 120 - 220 V
Frequency 50/60 Hz
Power 0.72 kW

Dimensions
Post height 2 600 mm
Length of camera beam 2 500 mm
Post weight 47 kg
Weight of camera beam 15 kg

Language versions
German, English, French, Italian, Spanish, Portuguese, Russian, Polish, Hungarian, Bulgarian, Turkish, Arabic, Chinese, Thai, Japanese, Korean.

To note with 4-post lifts:
In order to prevent the lift posts from interfering with the field of view of the camera, the following minimum clearances are to be observed:

<table>
<thead>
<tr>
<th>Clearance beam/turntable</th>
<th>Minimum clearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 800 mm</td>
<td>2 650 mm</td>
</tr>
<tr>
<td>2 100 mm</td>
<td>2 700 mm</td>
</tr>
<tr>
<td>2 400 mm</td>
<td>2 750 mm</td>
</tr>
</tbody>
</table>