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1. Description

The ASSA ABLOY DE6090MR Manual Restraint is a wheel restraint system that helps to prevent accidents and injuries at the loading bay. During the loading operation there is a risk that the trailer can roll away unintentionally from the dock due to the impact from the forklift truck traffic, a problem known as vehicle creep. Another ever-present danger is premature drive-off, when a truck leaves too early due to misunderstanding, incorrect instruction or a lack of communication with the driver. For both risks the ASSA ABLOY DE6090MR Manual Restraint is the ideal solution.

During the dock-in procedure the ASSA ABLOY DE6090MR Manual Restraint acts as a parking guide for the reversing truck. This reduces the possibility of damage to the truck, dock shelter, dock leveler or the building. The dock leveler control box is blocked until the rear wheel of the truck is detected and secured by the blocking arm. This interlocking function as well as the exterior traffic light system completes the whole safety package. The ergonomic design makes it possible to activate the restraint system by only one person with minimal forces.

The unique outstanding feature of the ASSA ABLOY DE6090MR Manual Restraint is an electro-magnetic locking device of the blocking arm. This is automatically activated during the loading operation and makes it impossible to remove the blocking arm too early.

1.1 Mode of operation

1) Ready for use condition.
   - Outside traffic light is green; the truck can reverse backwards to the loading bay.
   - Inside signal on control box is red, the loading operation cannot be started.
   - The dock leveler or the sectional door is blocked for use.

2) Activate the restraint system
   - When the truck is in place, the rear wheel of the trailer is blocked manually.
   - The operator moves the carriage along the rail to the right position to activate the blocking arm by a push forward movement.
   - Then the outside traffic light switches to red and the inside signal on the control box from red to green.
   - Now the dock leveler or the sectional door is released for use.
3) Loading operation
The sectional door can be opened, and the dock leveler can be connected to the truck. The blocking arm cannot be removed until the sectional door is closed or the dock leveler is back in parking position.

4) Release the restraint system
When the dock leveler is back to parking position and the door is closed, the release of the restraint system is done manually. When the restraint system is back to its parking position the outside traffic light switches to green. Now the truck can leave and the restraint system is ready for use for the next truck.

Attention:
Before activating the restraint system, the operator must be sure that the truck is correctly positioned against the buffers.
1.2 Overview

1.3 Traffic lights

1.4 Control Box

1) Signal green to indicate leveler or sectional door is released. The truck is docked and blocked, the loading operation can begin.

2) Signal red to indicate leveler or sectional is blocked and the truck is not in place.

3) Beeper, adjustable in noise level.

4) Key switch for service.

5) Signal red when the key switch for service is activated.
2. Dimensions

The optimal height of the blocking arm is about 400 to 450 mm above the ground in front of the docking station (the maximum height should be about 500 mm) in the yard. The ASSA ABLOY DE6090MR Manual Restraint is available in 3 sizes.

2.1 Dimensions H50

Suitable for installation on a level yard.

2.2 Dimensions H200

Suitable for installation on a yard with a concrete step of about 50 to 200 mm.
2.3 Dimensions H400

Suitable for installation on a yard with a concrete step of about 200 to 400 mm.
# 3. Technical Specifications

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>230V 1-phase</td>
</tr>
<tr>
<td>Power</td>
<td>10 Amps</td>
</tr>
<tr>
<td>Control</td>
<td>24V DC</td>
</tr>
<tr>
<td>Overall length, width and height</td>
<td>2030 mm x 750 x 750 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>180 kg</td>
</tr>
<tr>
<td>Wheel blockage height</td>
<td>Approx. 400 - 450 mm</td>
</tr>
<tr>
<td>Option</td>
<td></td>
</tr>
<tr>
<td>Wheel guides</td>
<td>Steel, 140 to 160 mm diameter or concrete</td>
</tr>
</tbody>
</table>
4. Service you can rely on

**Gold**

**The ultimate protection**
With full coverage, Gold Service enables you to plan and budget your expenses annually.
- Spare parts for emergency calls
- Labor and travel costs for emergency calls
- Replacement of components according to preventive maintenance schedule and to fulfill legislative and safety requirements

**Silver**

**Added advantages**
With cover for all service calls during business hours, Silver Service offers you peace of mind.
- Labor and travel costs for emergency calls
- Preventive maintenance

**Bronze**

**Scheduled Service**
With scheduled on site visits, Bronze Service means you know that your doors and docking systems will be regularly serviced and inspected.
- Preventive maintenance

**Included in all packages**

| 1-4 scheduled maintenance visits per year | 24/7 priority service hotline and fast response | Safety, compliance and quality control checks | Documentation reports provided on site |

**Expert service you can rely on**
A healthy business enjoys a steady flow of goods, services and people through its entrances every day. But heavy traffic puts entrances under pressure as every component works to keep them running.
ASSA ABLOY Entrance Systems offer the industry’s most complete, flexible service solutions. Because even something as robust and well-engineered as an ASSA ABLOY door or docking system needs to be serviced to stay in great working order.

**Pro-active care packages**
An ASSA ABLOY service agreement gives you service you can rely on. We have specialized local service technicians on call to take care of your service needs. Equipped with a wide range of spare parts and expertise, to keep your industrial doors and docking systems running.
With an ASSA ABLOY service agreement you can ensure reliable, safe and sustainable operations at every entrance under your agreement, including doors and docking systems, independent of brand.

**ASSA ABLOY e-maintenance™ (optional add-on)**
For an online overview of your entrance systems and history, add ASSA ABLOY e-maintenance™ to your service package for:
- Easy access to real-time data on all your doors
- Planning, order and service information
- Overview that helps you control lifecycle costs
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ASSA ABLOY Entrance Systems is a leading supplier of entrance automation solutions for the efficient flow of goods and people. Building on the long-term success of the Besam, Crawford, Albany and Megadoor brands, we offer our solutions under the ASSA ABLOY brand. Our products and services are dedicated to satisfying end-user needs for safe, secure, convenient and sustainable operations.

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