

# Product datasheet

Dock equipment

ASSA ABLOY DE6090AR Automatic Restraint Auto Block

**ASSA ABLOY**

ASSA ABLOY Entrance Systems

The global leader in  
door opening solutions



# Copyright and Disclaimer Notice

Although the contents of this publication have been compiled with the greatest possible care, ASSA ABLOY Entrance Systems cannot accept liability for any damage that might arise from errors or omissions in this publication. We also reserve the right to make appropriate technical modifications/replacements without prior notice.

No rights can be derived from the contents of this document.

Color guides: Color differences may occur due to different printing and publication methods.

ASSA ABLOY, Besam, Crawford, Albany and Megadoor, as words and logos, are examples of trademarks owned by ASSA ABLOY Entrance Systems or companies within the ASSA ABLOY Group.

Copyright © ASSA ABLOY Entrance Systems AB 2006-2016.

No part of this publication may be copied or published by means of scanning, printing, photocopying, microfilm or any other process whatsoever without prior permission in writing by ASSA ABLOY Entrance Systems.

All rights reserved.

# Contents

Copyright and Disclaimer Notice .....	2
Contents .....	3
1. Description .....	4
1.1 Mode of operation .....	4
1.2 Overview .....	6
1.3 Control Box .....	6
2. Truck Specifications .....	7
2.1 Dimensions of suitable trucks .....	7
2.2 Dimensions of suitable wheels .....	7
2.3 Unsuitable trucks .....	7
3. Technical Specifications .....	8
4. Service .....	10
Index .....	11

# 1. Description

The ASSA ABLOY DE6090AR Automatic Restraint Auto Block is a hydraulic 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 DE6090AR Automatic Restraint Auto Block is the ideal solution. During the dock-in procedure the ASSA ABLOY DE6090AR Automatic Restraint Auto Block 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. When the truck is in the right position at the dock, the hydraulic wheel restraint system is activated by an impulse push button on the control box, which is located inside the building. The rear wheel is detected and secured automatically by the restraining arm. The outstanding feature of the ASSA ABLOY DE6090AR Automatic Restraint Auto Block is the constant restraining force from the hydraulic system that provides a reliable and safe restraint function during the loading operations.

## 1.1 Mode of operation



**1. Ready for use condition**  
Outside traffic light is green; the truck can reverse backwards to the loading bay.  
The loading operation cannot be started. The sectional door or the dock leveler is blocked for use.



**2. Activate the restraint system**  
When the truck is in place, the restraint system is activated by an impulse push button on the control box. When activated the outside traffic light switches from green to flashing red to indicate the movement of the restraint system.  
When the detection arm contacts the rear truck wheel, the blocking arm extends and blocks the truck with pressure towards the building. Then the outside traffic light switches to red and the inside indication lamp on the control box turns green. The sectional door or the dock leveler is released for use.

**3. Loading operation**  
Now the loading operation can begin. The sectional door can be opened, and the dock leveler can be connected to the truck.



#### 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 activated by an impulse push button on the control box. When activated the outside traffic light switches from red to flashing red to indicate the movement of the restraint system. 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.

#### Remark:

If the restraint system is activated without a vehicle in place, it will automatically move back to its parking position.



## 1.2 Overview



Blocking arm

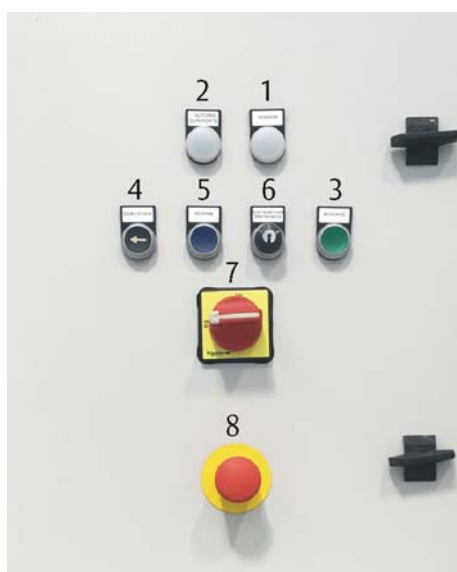


Detection arm



Outside traffic light

## 1.3 Control Box

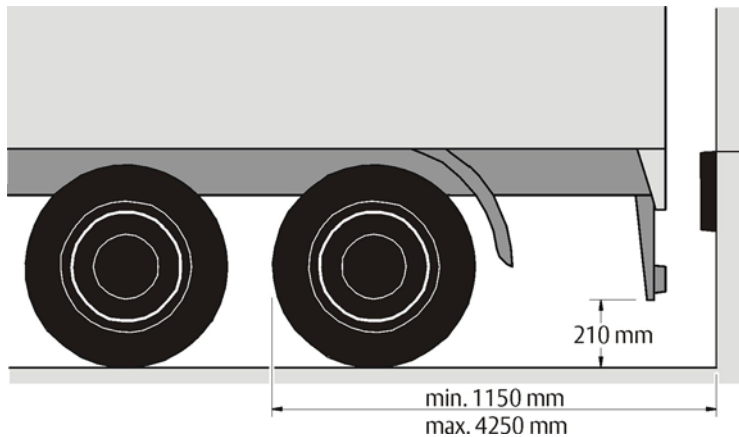


- 1) Signal white to indicate power ON.
- 2) Signal green to indicate leveler or sectional door is released (the truck is docked and blocked).
- 3) Push button to activate the restraint system to move forward and block the truck. The push button lamp is green when the restraint system is ready for use or when the optional truck detection sensor is activated.
- 4) Push button to release the restraint system to move back to the parking position.
- 5) Push button to RESET the restraint system. Signal blue to indicate an error in the system or when emergency push button has been activated.
- 6) Key switch for maintenance and for override of the interlocking function.
- 7) Mains Switch.
- 8) Emergency stop push button.

## 2. Truck Specifications

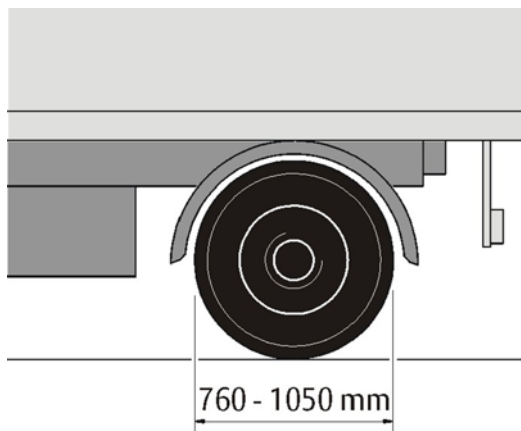
The ASSA ABLOY DE6090AR Automatic Restraint Auto Block can be used for a large proportion of vehicles. Trailers with one axle, two axles or three axles, as well as most smaller vehicles down to 3,5 ton.

### 2.1 Dimensions of suitable trucks

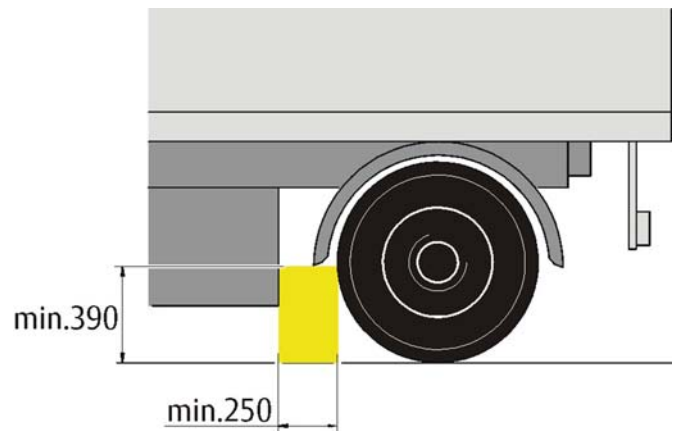


### 2.2 Dimensions of suitable wheels

Dimensions of suitable wheels  
Diameter between 760 and 1050 mm



Free space in front of the wheel  
(for the blocking arm)



### 2.3 Unsuitable trucks



## 3. Technical Specifications

### Electric

Power supply	380 V Tri+Terre
Power	7 Amps
Control	24 V DC
MOELLER automaton	EASY 721-DC-TC
Stabilized power supply	24 V DC protected (fuses not needed)
Withdrawable relays	YES – Facilitates maintenance
Cabling with connectors	YES – Facilitates maintenance
Door position sensor	YES (serial) – Reflex Sick sensor (interlocking ED 6059)
Dock position sensor	YES (serial) – Reflex Sick sensor (interlocking ED 6059)
"NO" contact motorized door blockage	YES (serial) – Feedback to terminal block (interlocking ED 6059)
"NO" contact hydraulic dock blockage	YES (serial) – Feedback to terminal block (interlocking ED 6059)
Blocking arm position sensor	Inductive sensor with control indicator light NBN8-12GM50-E2-V1
Wheel detection sensor	Inductive sensor with control indicator light NBN8-12GM50-E2-V1
Automatic safety lighting	YES (serial) – 2 LED lights 4 W with adjustable dusk light
Signalization LED lights	YES (serial) – Red and green
Interior indicator light LED signalization	YES (serial)
Beeper alarm	YES (serial)
Maintenance contact key	YES (serial) with control indicator light
Summer/winter function	YES (serial)
Automatic return function (if there is no vehicle)	YES (serial) – Avoids wrong maneuvers from blocking the dock
Releasing security in case the vehicle is not braked	YES (serial) – Very important if the dock is on a slant

The inductive sensors only work in attendance of a metallic mass, so they are insensitive to other materials, including snow, rain, etc. (protection rating IP 65)

### Hydraulic

Hydraulic unit	Motor 1.1 Kw TX 905-1500 rpm 220/380 Tri, adjusted at 60 bars
Hydraulic pump	9,8 cc MHYDE 3434 tank 12 liters
Solenoid valves and coils with control indicator LED lights	2 solenoid valves NG6 VNK 4 coils 24 Volts DC 2 anti-reverse steered in A-B 22S6-50 NG6 VNK
Plugs	Sets in 3/8
Hoses	SAE 100 3/8 service pressure 330 bars
Oil	HM46 SAE 20



Dimensions

Overall length, width, and height of the restraint system	4500 mm x 750 mm x 500 mm
Weight	800 kg
Wheel blockage height	390/400 mm

Options

Dimensional wheel detection	Controls the blockers output according to the wheel's diameter
Wheel guides	Steel, 140 to 160 mm and concrete (recommended)
CONFORMITY	CE – Compliant to the electrical and machine standard. Manufacturer's CE plate

# 4. Service

## Preventive Maintenance Program and Modernization Services

As your entrances are part of your business flow, there's every reason to keep them working well. ASSA ABLOY Entrance Systems offers you a maintenance and modernization expertise to rely on. Our Maintenance Programs and Modernization Services are backed by a extensive expertise for all types of industrial door and docking systems, independent of brand. At your disposal is a team of dedicated expert technicians, proven through decades of maintenance, service and satisfied customers.

### Preventive Maintenance Programs

Minimizing lost time, lost energy and unexpected hassle is our team's constant objective. Our service organization can support you 24/7 in maintaining all industrial door and docking systems, independent of brand. If you want to be one step ahead of break-downs, explore our portfolio of Pro-Active Care plans. Naturally, we also offer entrance upgrades to suit your specific wishes and business needs.

### Pro-Active Care - Maintenance plans to fit your business

Regular maintenance can extend the lifetime of your equipment and help prevent unexpected problems. Our technician arrives on-site equipped with the knowledge and tools to service all automatic entrances, independent of brand.

- **Pro-Active Bronze**

The base on which all Pro-Active Plans are built provides the security of knowing that your equipment is regularly inspected and certified for safety, as well as performing optimally. It includes a number of planned on-site visits depending on your needs. Any unplanned service calls required during the term of the contract (including labor, travel and parts) are billed at special Pro-Active Care prices.

- **Pro-Active Silver**

This plan provides all the benefits of Pro-Active Bronze with the added advantage of labor and travel being included for service calls during regular business hours. The only additional charge would be for any parts that may be needed throughout the term of the contract.

- **Pro-Active Gold**

This plan provides the ultimate protection for your automatic entrance investment. It includes all the benefits of Pro-Active Silver, plus replacement of any parts required during an unplanned repair or planned maintenance visit. Pro-Active Gold is an excellent way to budget your automatic door expenses annually.

- **Pro-Active Tailor-Flex**

Our most flexible maintenance and service offering. The Pro-Active Care plan is designed by you, our customer. The plan allows you to balance your maintenance expenses against your real-world budget and presents the option to add or delete a number of maintenance elements to suit your budget goals, while meeting your overall performance and safety needs.

### Modernization

Your entrances are a long-term investment, from which you always want the best. Products develop over time, so do regulations and your business. Let us help you increase energy savings and meet today's standards. We provide advice and modernization kits for outdated installations, ensuring your investment meet requirements and performs optimally for many more years to come.

Re-Active Service		Pro-Active Care				
		Pro-Active Bronze	Pro-Active Silver	Pro-Active Gold	Pro-Active Tailor Flex	
		○	○	○	●	Other customized requests such as Response Time, Performance InfoPack and Advanced User Training
		○	○	●	○	Replacement of worn parts according to preventive Consumable Exchange Program
		○	○	●	○	Replacement of spare parts on breakdowns
		○	●	●	○	Travel and labor for additional call-out visits
		●	●	●	●	Preventive maintenance visits 1-4 times per year
		●	●	●	●	Travel and labor for preventive maintenance visits
		●	●	●	●	Response time and priority on call-outs <24h
		●	●	●	●	Preventive planned maintenance that meets the most demanding standards in the market
	●	●	●	●	●	Safety and quality checks according to applicable regulations and norms. Documentation of test results provided
●	●	●	●	●	●	Documentation of equipment status, assessment and service provided, all generated on site
●	●	●	●	●	●	Highly trained professional technicians with extensive knowledge, state-of-the-art tools and the right spare parts*
●	●	●	●	●	●	Dedicated Professional Customer Care Hotline
Corrective	SafetyCheck	Pro-Active Bronze	Pro-Active Silver	Pro-Active Gold	Pro-Active Tailor Flex	

● = Included as standard  
 ○ = Available at special prices  
 \* Well-stocked service vehicles with genuine and new spare parts

# Index

## C

Control Box .....	6
Copyright and Disclaimer Notice .....	2

## D

Description .....	4
Dimensions of suitable trucks .....	7
Dimensions of suitable wheels .....	7

## M

Mode of operation .....	4
-------------------------	---

## O

Overview .....	6
----------------	---

## S

Service .....	10
---------------	----

## T

Technical Specifications .....	8
Truck Specifications .....	7

## U

Unsuitable trucks .....	7
-------------------------	---

ASSA ABLOY Entrance Systems is a leading supplier of entrance automation solutions for efficient flow of goods and people. With our globally recognized product brands Besam, Crawford, Albany and Megadoor, we offer products and services dedicated to satisfying end-user needs for safe, secure, convenient and sustainable operations.  
ASSA ABLOY Entrance Systems is a division within ASSA ABLOY.

**ASSA ABLOY**

[assaabloyentrance.com](http://assaabloyentrance.com)

Q3.0 - 2016



ASSA ABLOY Entrance Systems

[assaabloyentrance.com](http://assaabloyentrance.com)