Product datasheet Dock leveler ASSA ABLOY DL6030C

ASSA ABLOY

ASSA ABLOY Entrance Systems

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Technical facts

Features

Sizes - leveler height	800, 900, 930 m	m
Sizes - nominal length*	3000, 3500, 400	00 mm
Sizes - nominal width	2000 mm	
Vertical working range	Above dock: Below dock:	0 - 660 mm 0 - 650 mm
Platform tear plate	8 mm (8/10)	
Surface treatment	Standard: Option:	RAL 5010 RAL 3002 RAL 6005 RAL 9005 Hot dip galvanised
Control unit	Leveler control Door control Shelter control Fault & service ir	ndicator

^{*} Other sizes are available on request

Performance

Load capacity	6 tonnes (60kN) / 2 tonnes (20kN)
Max. point load	6,5 N / mm² (8 mm tear plate)
Motor hydraulic unit	1,5kW
Mains supply	400V 3-phase, 230V 3-phase
Control unit protection class	IP55
Allowable oil types	ASSA ABLOY standard hydraulic oil (-20°C - +60°C) ASSA ABLOY low temperature hydraulic oil (-30°C - +60°C) ASSA ABLOY bio hydraulic oil (-20°C - +60°C)
Magnetic valves	24V/DC 18W S1
Surface treatment paint class 1	80μm Corrosive Category C2 M acc. DIN EN ISO 12944-2
Surface treatment paint class 3	160μm Corrosive Category C3 M acc. DIN EN ISO 12944-2
Surface treatment galvanised	Hot dip galvanised 80μm Corrosive category C4 & C5-I M acc. DIN EN ISO 12944-2

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1. Description

1.1 General

1.1.1 Application

The ASSA ABLOY DL6030C combidock is the optimal solution for docking bays where vehicles of various sizes are loading and unloading. For smaller vehicles only the 1000 mm wide middle section of the lip is extended. For loading and unloading large vehicles, the full 2000 mm wide lip can be extended.

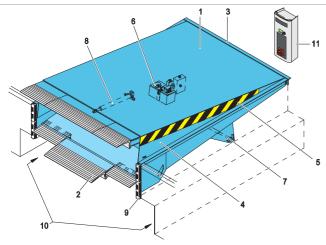
The ASSA ABLOY DL6030C combidock system meets the standard demands of most loading operations and fully complies with rules and regulations of the European Standard EN 1398.

1.1.2 Mode of operation

The operation of the ASSA ABLOY DL6030C combidock is based on an electro-hydraulic telescopic lip, controlled by a semi-automatic control unit.

When the dock leveler is raised, the lip extends and the leveler lowers gently onto the lorry bed. After loading or unloading, the leveler is raised again, the lip retracts and the platform returns to its parking position, i.e. to ramp level.

1.1.3 Overview



- 1) Leveler platform
- 2) Telescopic lip
- 3) Leveler frame
- 4) Side plates
- 5) Warning stripes
- 6) Hydraulic unit
- 7) Lift cylinders
- 8) Telescopic lip cylinder
- 9) Buffers (optional)
- 10) Tail lift recess
- 11) Control nut

1.1.4 Standard

Frames - connection to building:	T-frame	
Surface	Painting RAL 5010	
Hydraulic Equipment	Low noise hydraulic unit Two hydraulic lift cylinders One hydraulic lip cylinder	
Lip	Lip length 500 mm Aluminium lip	
1.1.5 Option)S	

1.1.5 Option	IS
Frames - connection to building	W-frame [frame for welding]
Surface	Painting RAL 3002, RAL 6005 or RAL 9005 Hot dip galvanised
Hydraulic equipment	Low temperature oil Bio oil
Energy & Ergonomics	EPDM seal Slip protection/noise reduction
Lip option	Lip length 1000 mm

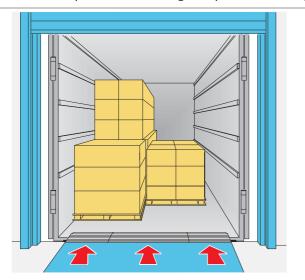
1.2 Mini-combidock lip

The telescopic lip of the ASSA ABLOY DL6030C combidock is divided in 3 sections. The middle section is approximately 1000 mm wide, to fit small vehicles like vans. When the outer sections are included, the lip is approximately 2000 mm wide, to fit large vehicles like trucks.

The lip is extremely flat, to secure a smooth transition from platform to vehicle bed.

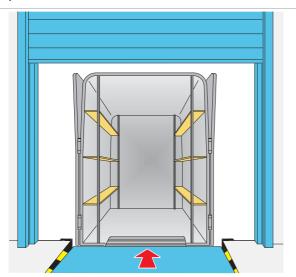
1.2.1 Big truck

For loading and unloading large vehicles, the selector switch of the control unit is put in the position: Articulated lorries with high loading bearing capacity. In this position the full 2000 mm wide lip is extended during the operation of the lip.



1.2.2 City van

For loading and unloading city vans, the selector switch of the control unit is put in the position: Small vans with low loading bearing capacity. In this position only the 1000 mm wide middle section of the lip is extended during the operation of the lip.



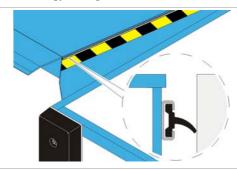
1.3 Platform

1.3.1 Platform tear-plate thickness

The 8 mm (8/10) tear-plate is designed for loading and unloading with typical 4 wheel pneumatic-tired fork-lift trucks, and is also suitable for handling equipment with high point loads, such as electric pallet trucks.

1.3.2 EPDM seal

To seal the gap between leveler and pit, an EPDM seal can be factory-installed between the flexible platform and frame. By reducing draughts into the building, working conditions improve and energy savings increase.



1.3.3 Slip protection / noise reduction

Applying a polyurethane slip protection coating on the lip and platform ensures a durable non-slip and noise reduction surface. The effect is a smooth and comfortable surface for handling equipment that is less receptive to wear and tear.

The PU coating material is resistant to impact, to thermal impact and most types of chemicals and it has a high loading capacity.

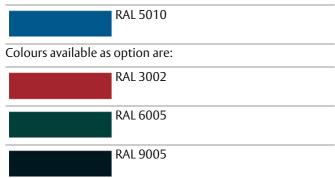


1.4 Surface

1.4.1 Painting

1.4.1.1 Colors

The dock leveler standard finish is painted. The standard color is:



1.4.1.2 Standard paint class

If the dock leveler is to be used in a rural area, the standard finish is:

 Paint class 1; 80 μm factory painted for corrosive category C2 M

1.4.1.3 Paint classes

If the dock leveler is to be used in an urban or industrial atmosphere, or in a coastal area, it may be appropriate to select an alternative paint class with increased resistance to corrosion C3 M.

Paint class 3; 160 μm factory painted for corrosive category C3 M

1.4.2 Hot galvanising

To increase corrosion protection to C4 for saline coastal areas or C5-I for aggressive or humid atmospheres, the dock leveler can be delivered with hot dip galvanised (80 μm) steel parts.

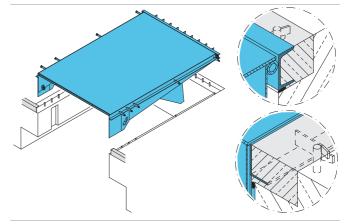
1.5 Frames - connection to building

The frame is the leveler's connection point to the building and a rigid support for the leveler.

The ASSA ABLOY DL6030C combidock is available with different frame types. The frame can be embedded in concrete or installed via screws or welding. All frames are illustrated with the tail lift recess. The levelers are also available without tail lift recess.

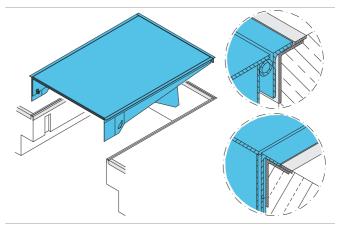
1.5.1 T - leveler frame for embedding in concrete

The T-frame is installed in one step. The leveler is directly embedded in concrete.



1.5.2 W - leveler frame for welding

The W-frame is designed to weld the leveler directly to the floor slab. In case of future replacement, the welding points can be ground away.



Docking control systems 1.6

1.6.1 950 Docking LA CD





- Selector Switch for operation mode: Articulated
- Selector Switch for operation mode: Small vans
- 20kN Light illuminates when weight compensation is activated.





950 Docking LA CD 1.6.2



- Hold-to-run button to lift platform.
- Hold-to-run button to position the lip on the truck
- Impulse auto button to put the leveler back in parking position.
- Mains isolator or emergency stop button.
- Interface to incorporate ASSA ABLOY Eye and/or wheel chock.

1.6.3 950 Docking DLA CD



- Hold-to-run button to lift platform.
- Hold-to-run button to position the lip on the truck
- Impulse auto button to put the leveler back in parking position.
- Mains isolator or emergency
- stop button. Interface to incorporate ASSA ABLOY Eye and/or
- wheel chock.
 Designed to operate an overhead sectional door in the docking station.

950 Docking LSA CD 1.6.4



- Hold-to-run button to lift platform.
- Hold-to-run button to position the lip on the truck bed.
- Impulse auto button to put the leveler back in parking position.
- Mains isolator or emergency stop button.
- Interface to incorporate ASSA ABLOY Eye and/or wheel chock.
- Designed to operate an inflatable shelter in the docking station.

1.6.5 950 Docking DLSA CD



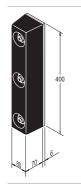
- Hold-to-run button to lift
- platform. Hold-to-run button to position the lip on the truck
- Impulse auto button to put the leveler back in parking position.
- Mains isolator or emergency stop button.
- Interface to incorporate ASSA ABLOY Eye and/or wheel chock.
- Designed to operate an overhead sectional door and an inflatable shelter in the docking station.

1.7 Equipment

1.7.1 Buffers

Buffers placed in front of the dock leveler absorb the energy of a vehicle that accidentally or intentionally hits the building. Buffers are available in various sizes, in fixed or moving models, and with rubber finishing or steel plate and spring function.

1.7.1.1 RS

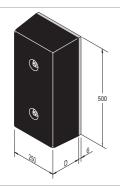


Application

The RS buffer is the economical solution for docking stations where vehicles of equal sizes load and unload.

We recommend to use 2 RS buffers installed in a row on both sides of the DL6030C combidock.

1.7.1.2 RB



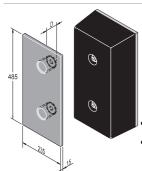
Application

The RB buffer is a large fixed rubber. It is the universal building and vehicle protection solution.

Available depths:

- 90 mm
- 140 mm

1.7.1.3 RB with steel front plate



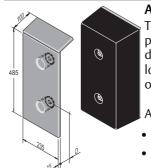
Application

The RB buffer with steel protection front plate increases the building protection and the buffer service life.

Available depths:

- 90 mm
- 140 mm

1.7.1.4 RB with steel front and top plate



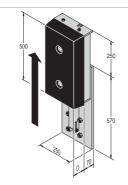
Application

The RB buffer with steel protection front and top plate is designed for vehicles with high lorry beds like interchangeable open bodies and containers.

Available depths:

- 90 mm
- 140 mm

1.7.1.5 EBH



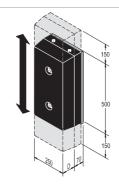
Application

The EBH buffer is the ideal solution for docking stations where vehicles of notable height differences load and unload. This buffer can be vertically adjusted by a 'release device'.

Available depths:

- 90 mm
- 140 mm

1.7.1.6 EBF



Application

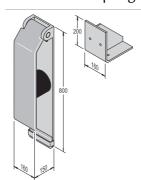
The EBF buffer is the ideal solution for docking stations where vehicles are expected to make notable vertical suspension changes when loading or unloading.

This buffer follows vertical movements of the vehicle.

Available depths:

- 90 mm
- 140 mm

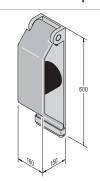
1.7.1.7 Steel spring buffer 800



Application

The 800 mm steel spring buffer is designed for applications where vehicles generally are higher than ramp level.

1.7.1.8 Steel spring buffer 600



Application

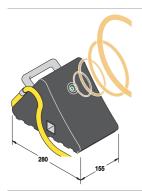
The steel spring buffer is the ideal protector of the ramp as well as the vehicle itself.

1.7.2 ASSA ABLOY DE6090E Eye



The ASSA ABLOY Eye is an electronic, sensor-based dock-in system, which measures the distance between the vehicle and the building. This makes it easier for the driver to complete the dock-in procedure, but also detects objects or people behind the vehicle.

1.7.3 ASSA ABLOY DE6090WC Wheel chock



The wheel chock has a sensor to detect the presence and position of the vehicle and is connected to the dock leveler control panel. If no vehicle is detected, the docking station is blocked for safety reasons. Furthermore, the wheel chock prevents the vehicle from moving during loading/unloading.

1.7.4 ASSA ABLOY DE6090TLS Traffic light system



The traffic light system either has a sensor above the dock leveler that measures the presence of the vehicle or it is a wheel chock that detects the vehicle.

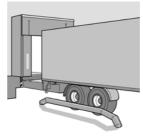
If there is no vehicle (dock leveler is free), the traffic light inside is red, outside is green.
The traffic light can also be combined with a wheel chock, ASSA ABLOY Eye or door/leveler interlocking.

1.7.5 ASSA ABLOY DE6090DL Dock light Heavy Duty LED



Where dock lights are often a vulnerable object in the docking area, the virtually indestructible Dock Light Heavy Duty LED is the perfect solution to bring light in the truck and docking area. It is designed for the most demanding environments and can withstand possible hard hits from a moving forklift without being damaged.

1.7.6 Parking guides



This visual aid makes it easier to park the vehicle and reduces the risk of collision. Especially advantageous for docking stations with wide leveler lips and cushion shelters. Parking guides can be bolted or cast in concrete on the floor before the leveler.

2. Selection guide

2.1 Load capacity according to EN 1398

The EN 1398 describes 3 key definitions about loads.

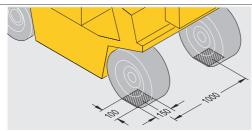
2.1.1 Rated load

The rated load is the total weight of the goods, the forklift truck and the driver.



2.1.2 Axle load

Axle loads shall be taken acting over two rectangular contact areas at 1 m lateral distance. These areas shall only apply if the actual conditions do not call for more severe loading. The size of the footprint [mm 2] is derived from the wheel load [N] divided by 2 [N/mm 2]. The ratio of the rectangular print is W:L = 3:2.



In the drawing measures for a leveler with a load capacity of 100kN or 150kN are shown.

2.1.3 Dynamic load

The dynamic load is the movement of the rated load and is the pressure on the leveler platform caused by the moving forklift truck.



2.2 Select the load capacity

The load capacity of a dock leveler must always be higher than the rated load.

2.2.1 Example for lorries

Weight of forklift truck	3600 kg
Weight of goods	1500 kg
Weight of driver	100 kg
Total weight/rated load	5200 kg
Suitable load capacity of the leveler	6000 kg/60kN

2.2.2 Example for vans

•	
Weight of pallet truck	100 kg
Weight of goods	1500 kg
Weight of driver	100 kg
Total weight/rated load	1700 kg
Suitable load capacity of the leveler	2000 kg/20kN

2.3 Select the leveler length

When determining the leveler length, measure the maximum height difference between the truck bed and the dock level. Next, determine which vehicles will be used and lookup the maximum gradient the vehicles are allowed to be used on.

Vehicle	Max gradient
Roll cage	3%
Hand pallet truck	3%
Electric pallet truck	7%
Forklift truck (battery)	10%
Forklift truck (gas / petrol)	15%

2.3.1 The calculation

Minimal leveler length = height difference / gradient (%)

2.3.2 Example

Vehicle:	Electric pallet truck (max 7% gradient)
Truck height:	1350 – 1000 mm
Dock height:	1150 mm

The difference between Truck height and Dock height = 175 mm

175 mm / 7% = 2500 mm leveler length

2.4 Nominal width

The correct nominal width must exceed the widest loading vehicle by at least 700 mm. The ASSA ABLOY DL6030C combidock is available with a nominal width of 2000 mm.

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3. Specifications

3.1 Dimensions

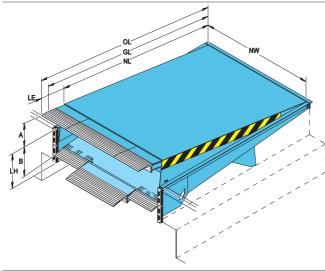
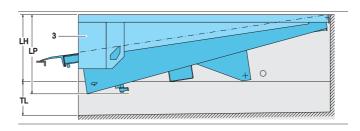


Abb.	Dimension
NL	Nominal length
OL	Overall length (NL +500 mm)
GL	Gradient length (NL + 360 mm)
NW	Nominal width (= 2000 mm)
LE	Leveler extension
LH	Leveler height
Α	Working range above dock level
В	Working range below dock level
PD	Pit depth
LP	Lowest Position
TL	Tail lift area
3	Leveler frame



Dimensions 500 mm lip

Vertical Working range 60kN mode

NL	LH	LP	Α	B - inside LH*	B - down to LP
3000	800	950	450	375	550
3500	900	1150	560	360	650
4000	930	1150	590	390	650

Vertical Working range 20kN mode

NL	LH	LP	Α	B - inside LH*	B - down to LP
3000	800	950	100	375	550
3500	900	1150	100	360	650
4000	930	1150	100	390	650

Dimensions 1000 mm lip

Vertical Working range 60kN mode

NL	LH	LP	Α	B - inside LH*	B - down to LP
3000	800	950	520	415	620
3500	900	1150	635	400	650
4000	930	1150	660	430	650

Vertical Working range 20kN mode

NL	LH	LP	Α	B - inside LH*	B - down to LP
3000	800	950	100	415	620
3500	900	1150	100	400	650
4000	930	1150	100	430	650

^{*} When tail lift is in use

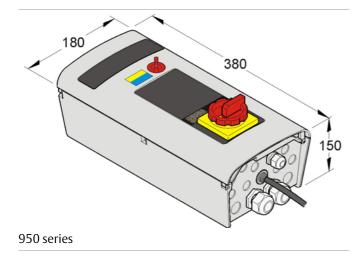
Specifications 13

3.2 Platform thickness

Thickness	Max. point load
8 mm (8/10)	6,5 N / mm ²
	, ,

3.3 Control unit

3.3.1 Dimensions



3.3.2 Functions

Functions included	LA- CD	DLA- CD	LSA- CD	DLSA-CD
Hold to run button				
Close (hold to run)				
Impulse auto button				
Extend lip (hold to run)				•
Mains isolator				
Emergency stop button				
400V				
230V				
Maintenance indicator				•
3 Digit display				
Memory function				
BUS network interface				
ASSA ABLOY eye				
Wheel chock				
Door control				
Shelter control				

■ Standard

☐ Option / Available

Specifications 14

4. CEN Performance

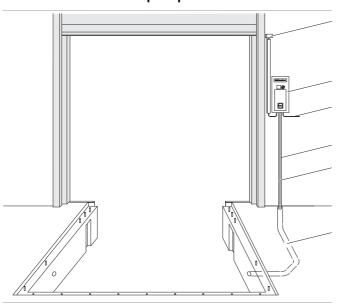
4.1 Safety according to the European Standard EN 1398

- Emergency Stop Function.
 - Safety valves block lowering movement after max. 6% of the nominal length of the leveler.
 - Two lift cylinders make sure the leveler stops in a horizontal position.
- Free floating position.
- Platform torsion. Lateral deflection of at least 3% of nominal width.
- Toe guards cover gap between platform and pit in leveler's highest position.
- Working range gradient max. 12,5% (~7°).
- Warning stripes on side plates and on frame (black/yellow).

CEN Performance 15

5. Building and space requirements

5.1 Electrical preparations



- 1 Control unit (included in the delivery)
- 2 Conduit for wiring internal diameter 50, angles <45° (by others)

3 Mains supply: 3/N/PE AC 50 Hz

400V 3-phase, 230V 3-phase

Mains fuse: D0 10 A gL Motor power: 1,5 kW

4 Control cable: 18 x 0,75 mm²

5 Main connection 230V: 4 x 1,5 mm²

6 Optional safety switch on sectional door to disable leveler when door is closed*

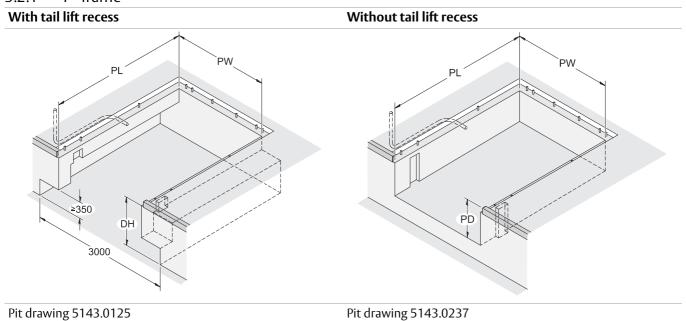
Building and space requirements

^{*}Non standard

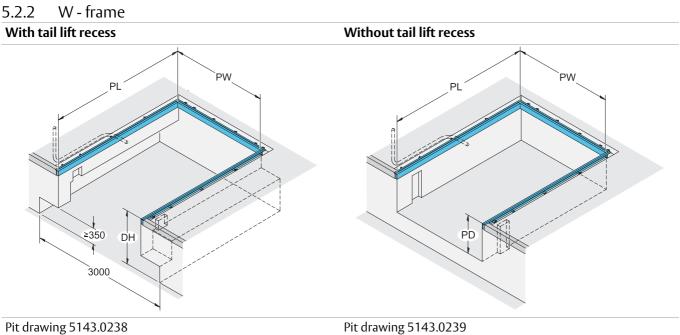
Pit preparations 5.2

This section illustrates the required pit preparations for each frame type for the ASSA ABLOY DL6030C combidock.

5.2.1 T - frame



5.2.2



Building and space requirements

6. 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-Act	tive Care		
	0	0	0	0	Other customized requests such as Response Time, Performance InfoPack and Advanced User Training
	0	0	•	0	Replacement of worn parts according to preventive Consumable Exchange Program
	0	0	•	0	Replacement of spare parts on breakdown
	0	•	•	0	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 standard 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

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ASSA ABLOY

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

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sustainable operations.

