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Panic Exit Hardware

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dhf Best Practice Guide: Panic and Emergency Exit Devices

BS EN 1125: 2008 & BS EN 179: 2008

This publication is one in a series of guides addressing the major issues that should be considered when specifying, ordering or using the products it describes. It aims to provide the reader with a concise document which includes a summary of relevant sections from the new European product standards. The reader will then be in a position to seek further specialist advice where necessary and recognise GENUINE conformity to the new standards.

NOTE: Unless stated otherwise, references in this document to BS EN 1125 and BS EN 179 refer to BS EN 1125:2008 and BS EN 179:2008 respectively. Information in this guide is correct at time of publication and intended for guidance only. Information may since have changed and readers should consult the appropriate standards and authorities to confirm its veracity.

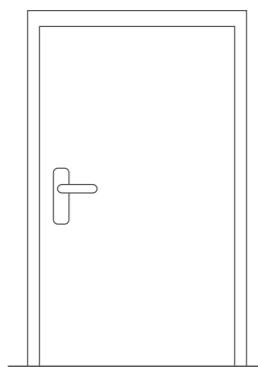
BS EN 179

Emergency Exit Devices

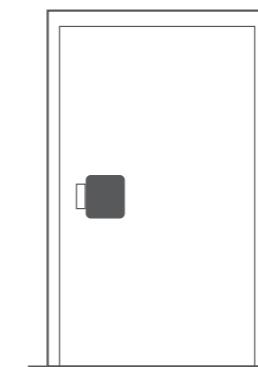
This standard covers devices to be used in emergency situations where people are familiar with the emergency exit and its hardware and therefore a panic situation is most unlikely to develop. Devices operated by a lever handle or push pad may therefore be used.

SCOPE BS EN 179

The main purpose of the performance requirements of this standard is to give safe and effective escape through a doorway with one single operation to release the device. However, escape can require prior knowledge of the operation of the device which is consequently considered suitable for locked doors on escape routes only where panic situations are not foreseen.



Type A: Emergency device lever handle



Type A: Emergency device lever handle

BS EN 1125 Panic Exit Devices

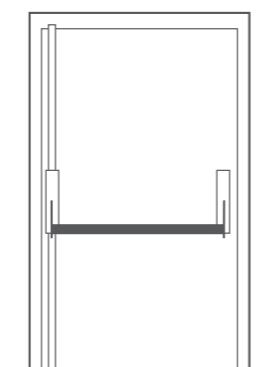
Experience relating to escape from buildings and general safety have made it desirable that doors at final exits in public buildings, places of entertainment, shops, etc should be fitted with panic devices operated by a horizontal bar. The emphasis for products covered by this standard is on safe exit rather than security.

These standards provide details on product types, classification by use, test cycles, door mass, corrosion resistance, as well as definitions, product performance requirements, test apparatus, test methods and marking of products. In addition, the published standards include annexes illustrating the various points made through diagrams and supplementary text.

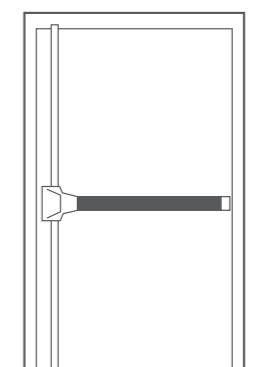
Extracts from BS EN 1125 and BS EN 179 are reproduced with permission from the British Standards Institute.

SCOPE BS EN 1125

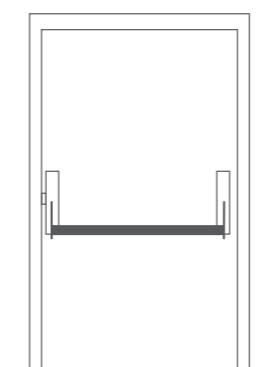
The main purpose of the performance requirements of this standard is to give safe and effective escape through a doorway with minimum effort and without prior knowledge of the device, i.e. for locked doors on escape routes where panic situations can be foreseen.



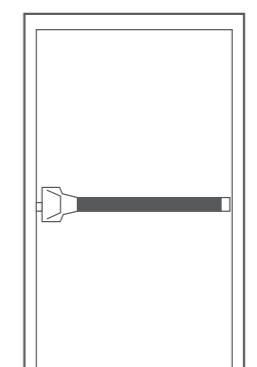
Type A: Panic bolt push bar



Type B: Panic bolt touch bar



Type A: Panic latch push bar

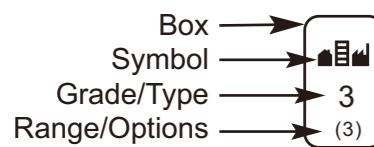


Type B: Panic latch touch bar

Classification

BS EN 1125 and BS EN 179 classify panic and emergency exit devices by using a 10 digit coding system. A similar classification applies to all building hardware product standards so that complementary items of hardware can be specified to, for instance, a common level of corrosion resistance, category of use, etc. Each digit refers to a particular feature of the product measured against the standard's performance requirements.

The dhf recommends the use of graphic icons to enhance clarity of information and has devised a system to facilitate assimilation of the various product classifications. Each feature within the product classification code is represented by an icon comprising four elements; Symbol, Grade / Type, Range/Options and Box:



Digit 1 Category of use

Only one category is identified, that being Grade 3: high frequency of use by public and others with little incentive to exercise care

Digit 2 Durability

Two categories of durability are defined:

- Grade 6: 100 000 cycles
- Grade 7: 200 000 cycles

kg Digit 3 Door mass and closing force

Three categories of test door mass are identified:

- Grade 5: up to 100 kg
- Grade 6: up to 200 kg
- Grade 7: over 200 kg

Digit 4 Fire resistance

Three categories of fire door resistance are identified:

- Grade 0: Not approved for use on fire / smoke door assemblies
- Grade A: Suitable for use on smoke door assemblies, subject to satisfactory assessment of the contribution of the panic / emergency device to the smoke resistance of specified smoke door assemblies
- Grade B: Suitable for use on fire / smoke door assemblies, subject to satisfactory assessment of the contribution of the panic / emergency device to the fire resistance of specified fire/smoke door assemblies

Such assessments are outside the scope of this European standard (see EN 1634-1)

Digit 5 Safety

All panic and emergency devices have a critical safety function therefore only the top Grade - 1 - is identified

Digit 6 Corrosion resistance

Two grades of corrosion resistance are identified according to EN 1670:

- Grade 3: high resistance (96 salt spray hours)
- Grade 4: very high resistance (240 salt spray hours)

Digit 7 Security

Products covered by BS EN 179 have 4 identified categories and generally have the opportunity of greater security against forced opening than devices covered by BS EN 1125.

BS EN 179

- Grade 2: 1 000 N
- Grade 3: 2 000 N
- Grade 4: 3 000 N
- Grade 5: 5 000 N

Digit 8 Projection of device

Two grades are identified relating to the projection of the device from the door face:

- Grade 1: projection up to 150 mm (large projection)
- Grade 2: projection up to 100 mm (standard projection)

Digit 9 Type of device

Two categories are identified for each standard:

BS EN 179

- Type A: emergency device with lever handle operation
- Type B: emergency device with push or pull pad operation

BS EN 1125

- Type A: panic device with push bar operation
- Type B: panic device with touch bar operation

Digit 10 Field of application

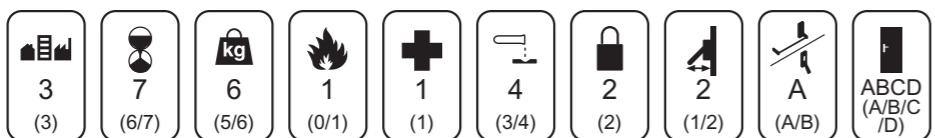
- A: Outward opening
Single & double exit doors; active & inactive leaf
- B: Outward opening
Single exit door only
- C: Outward opening
Double exit door; inactive door
- D: Inward opening
Single exit only

EN 1125

- A: Outward opening
Single & double exit doors; active & inactive leaf
- B: Outward opening
Single exit door only
- C: Outward opening
Double exit door; inactive door

• EXAMPLE:

The following marking denotes a panic exit device tested to 200 000 operations for a door mass up to 200 kg, suitable for fire door use with very high corrosion resistance with standard bar projection for use on single & double doors.



• MARKING

Visible on the product when fitted:

- (a) Manufacturer's name or trademark or other means of positive identification
- (b) Identification number of the certification body
- (c) CE mark symbol (as detailed in annex of standard)

Other markings which must be visible before fitting:

- (d) Classification code for the product
- (e) The number and year of the European standard
- (f) The month and year of final assembly by the manufacturer, which can be in a coded form

• CE MARKING

Panic and emergency exit devices intended for use on escape route doors are covered by a Construction Products Directive mandate issued by the European Commission. Consequently, these standards are regarded as "harmonised" standards and compliance with them, supported by suitable evidence, allows for the application of the CE mark.

As panic and emergency exit devices have a critical safety function, application of the CE mark will require the involvement of a notified certification body to provide verification of the compliance claims. This will involve initial type testing of the product to either EN 1125 or EN 179, initial inspection of the manufacturer's factory production control and continuing surveillance and approval of the factory production control. On satisfactory fulfilment of these tasks, the notified body issues an EC Certificate of Conformity which then permits the manufacturer to declare compliance and affix the CE mark to his product.

The standard requires the following additional information to accompany the CE mark:-

- the identification number of the notified certification body
- the name or identifying mark of the manufacturer
- the registered address of the manufacturer
- the last two digits of the year in which the marking was applied
- the number of the EC certificate of conformity
- reference to EN 1125:2008, or EN 179:2008, as appropriate

Note that although the notified body has to be involved to verify the manufacturer's claims, the manufacturer remains responsible for designing and "producing the product, for affixing the CE mark, and for ensuring that the product meets the requirements of the directive.

• SPECIFICATION ISSUES

The decision as to which products are specified should be made on the basis of the building use and occupancy. Products incorporating a horizontal bar (BS EN 1125) to operate the exit device must be used in public buildings, places of public entertainment, shops and any other location where the building occupants do not have prior knowledge of the escape device and where a panic situation can be foreseen.

Products incorporating a push or pull pad or lever handle to operate the exit device (BS EN 179) should only be used where building occupants are familiar with the emergency exit and its hardware and where a panic situation is not foreseen.

If there is any doubt about the conditions relating to building occupancy, the DHF recommends that devices covered by BS EN 1125 should be specified.

For safety reasons, the standard requires that the push bar of a type "A" panic device shall not protrude beyond either of the end supports. This means that for pairs of rebated doors, the traditional British designed "double panic bolt" cannot comply with the standard. An acceptable solution is for a single vertical panic bolt to be fitted on the "inactive leaf" and a panic latch on the "active leaf".

A grade 2 (standard projection) panic device should be used in situations where there is restricted width for escape or where doors are not able to open beyond 90°.

Panic device push and touch bars should be installed to provide the maximum effective length but never less than 60% of the door leaf width.

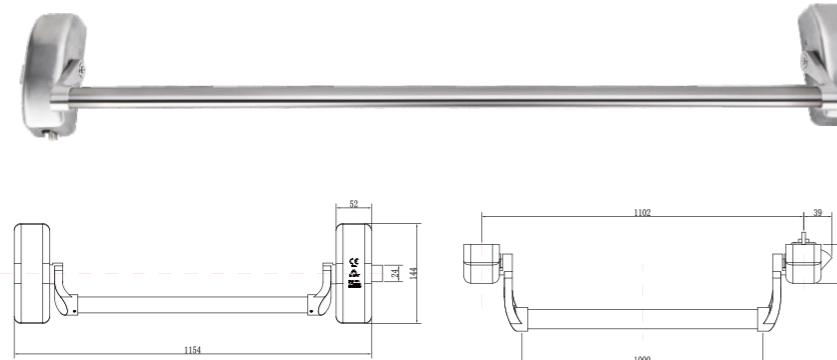
Devices complying with these standards will either be sold complete, i.e. including all the necessary components, or, if this is not done, the manufacturer must identify, in the product information supplied with the device, all the components and accessories which have been tested as compatible with the product.

Dogging devices or hold back features on exit devices cannot be used on fire doors, unless the hardware has been tested on a fire door in the unlatched condition. It is also important that the door to which the hardware is fitted has been tested in the unlatched condition.

EN 179:2008 includes devices for inward opening single doors. These devices were added to the standard to deal with situations where an outward opening door would risk causing an obstruction in a corridor.

Push Bar Panic Exit Device:

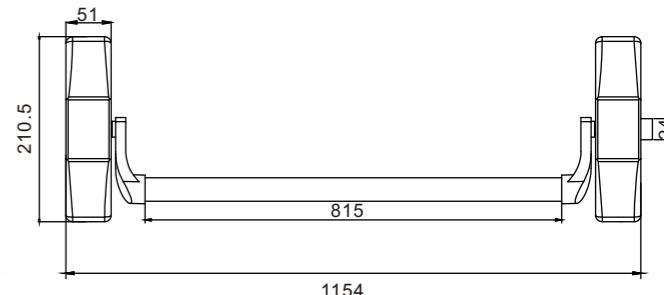
AVPD350



Model	AVPD350P	AVPD350S
Material	Steel	SUS 304
For Door Type	Single Door/ Double Door	
Door Width	650-1500 mm	
Max. Door Weight	200 kg	
Latch Point	1	
Finish	Steel painted silver, SSS and other finish on request.	

Panic Exit Hardware

AVPD450

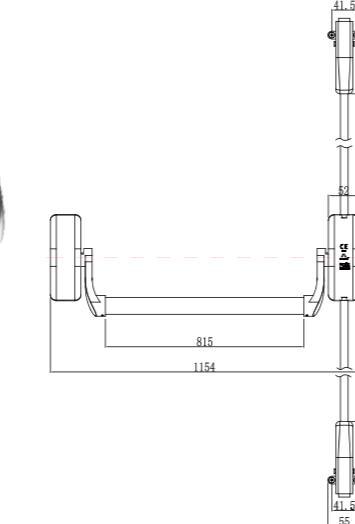


Model	AVPD450P	AVPD450S
Material	Steel	SUS 304
For Door Type	Single Door/ Double Door	
Door Width	650-1500 mm	
Max. Door Weight	200 kg	
Latch Point	1	
Finish	Steel painted silver, SSS and other finish on request.	

Push Bar Vertical Rod

Panic Exit Device:

AVPD360

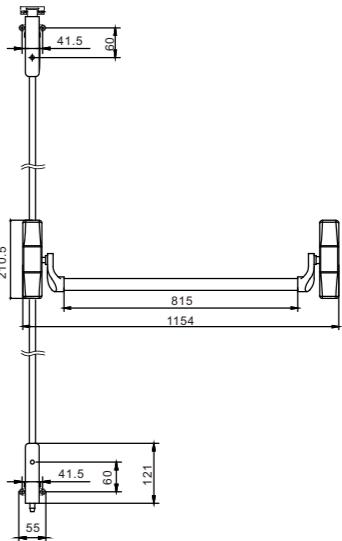
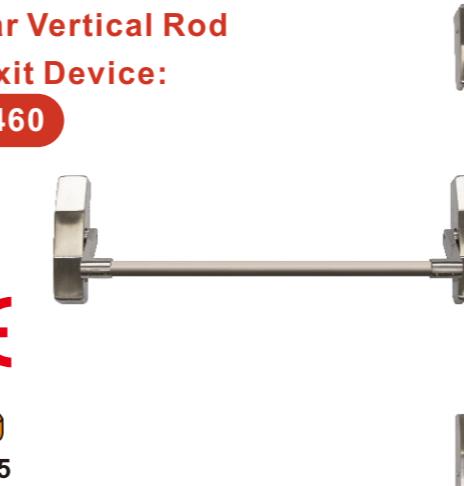


Model	AVPD360P	AVPD360S
Material	Steel	SUS 304
For Door Type	Single Door/ Double Door	
Door Width	650-1500 mm	
Door Height	2100 mm	
Max. Door Weight	200 kg	
Latch Point	2	
Finish	Steel painted silver, SSS and other finish on request.	

Push Bar Vertical Rod

Panic Exit Device:

AVPD460



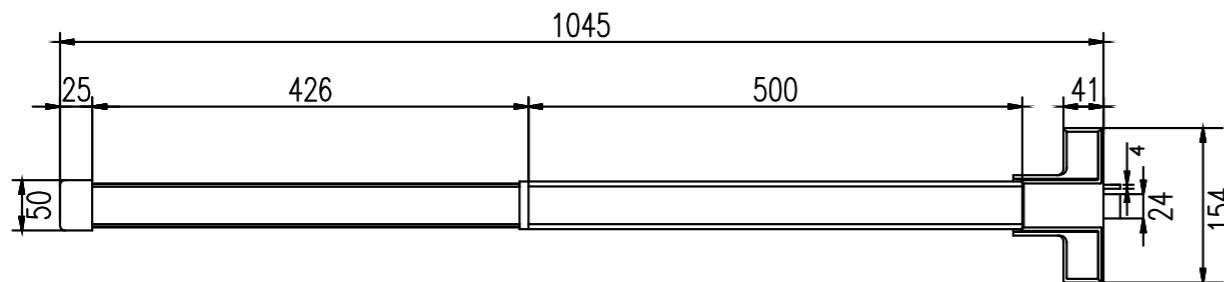
Model	AVPD460P	AVPD460S
Material	Steel	SUS 304
For Door Type	Single Door/ Double Door	
Door Width	650-1500 mm	
Door Height	2100 mm	
Max. Door Weight	200 kg	
Latch Point	2	
Finish	Steel painted silver, SSS and other finish on request.	

Touch Bar Half Length Panic Exit Device



AVPD5000P

AVPD5000S

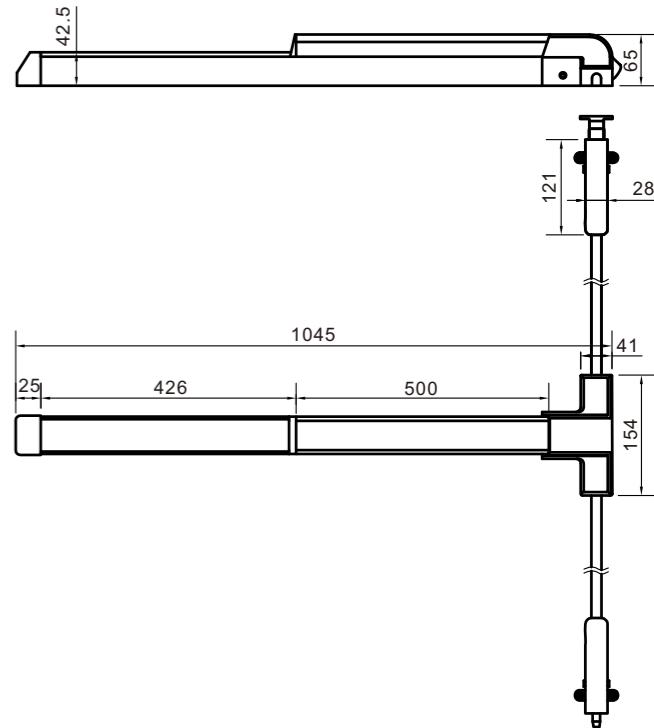


Touch Bar Half Length Vertical Rod Panic Exit Device



AVPD5600P

AVPD5600S



Features	AVPD5000P	AVPD5000S
Materials	Steel	SUS 304
Length	Standard size: 1045 mm. Standard width bars can be field cut to the opening width.	
Backset	2-7/16" for single door/ double door with mullion. 2-5/8" for double door with overlapping astragal	
Touch Bar Length	Standard 500 mm	
Door Width	650 mm to 1100 mm wide	
Latch Point	1 point latching	
Door Thickness	Suits 1- 3/4"(44.5 mm) standard	
Max. Door Weight	200 kg	
Finish	Steel painted silver, SSS and other finish on request.	
Fasteners	Standard machine screws, Wooden screw	
Dogging	Not available in Fire Exit Hardware	
Application	This exit device can have trims or levers on the other side of the door. Can be used on single and double doors.	

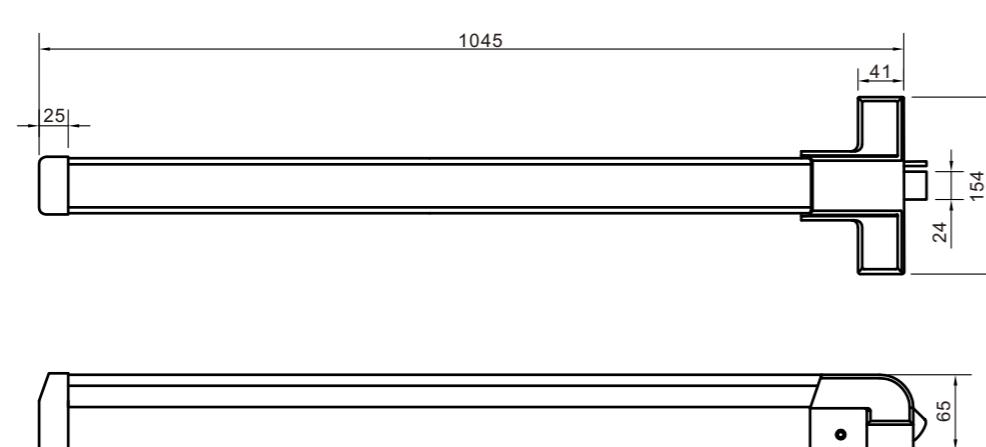
Features	AVPD5600P	AVPD5600S
Materials	Steel	SUS 304
Length	Standard size: 1045 mm. Standard width bars can be field cut to the opening width.	
Backset	2-7/16" for single door/ double door with mullion. 2-5/8" for double door with overlapping astragal	
Touch Bar Length	Standard 500 mm	
Door Width	650 mm to 1100 mm wide	
Latch Point	2 point latching	
Door Thickness	Suits 1- 3/4"(44.5 mm) standard	
Max. Door Weight	200 kg	
Touch bar centerline to finish floor	1000 mm at center	
Door Height	Standard 2100mm, for other door height	
Finish	Steel painted silver, SSS and other finish on request.	
Fasteners	Standard machine screws, Wooden screw	
Dogging	Not available in Fire Exit Hardware	
Application	This exit device can have trims or levers on the other side of the door. Can be used on single and double doors.	

Touch Bar Full Length Vertical Rod Panic Exit Device



AVPD5000-1P

AVPD5000-1S

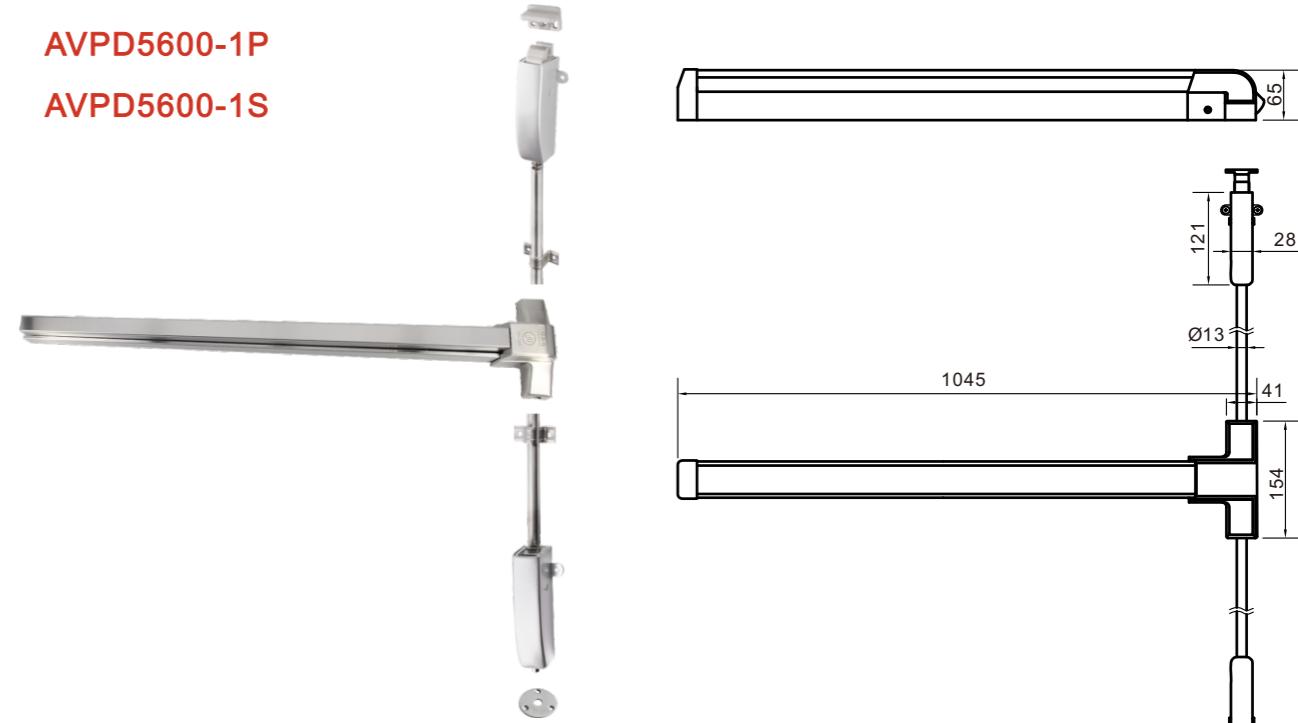


Touch Bar Full Length Vertical Rod Panic Exit Device



AVPD5600-1P

AVPD5600-1S



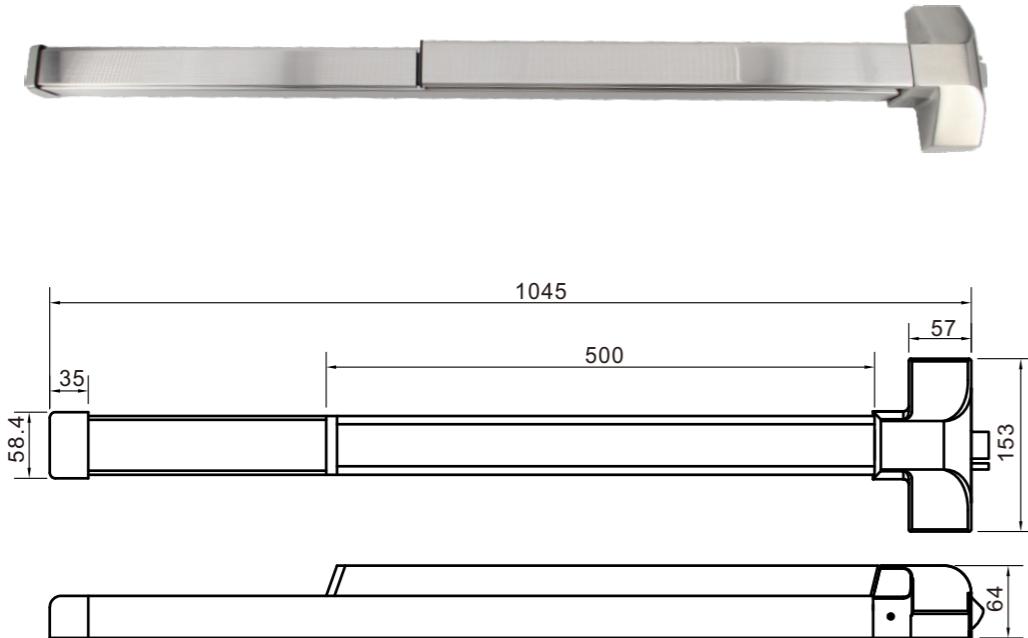
Features	AVPD5000-1P	AVPD5000-1S
Materials	Steel	SUS 304
Length	Standard size: 1045 mm. Standard width bars can be field cut to the opening width.	
Backset	2-7/16" for single door/ double door with mullion. 2-5/8" for double door with overlapping astragal	
Door Width	650 mm to 1500 mm wide	
Latch Point	1 point latching	
Door Thickness	Suits 1- 3/4"(44.5 mm) standard	
Max. Door Weight	200 kg	
Finish	Steel painted silver, SSS and other finish on request.	
Fasteners	Standard machine screws, Wooden screw	
Dogging	This exit device can have trims or levers on the other side of the door.	
Application	Can be used on single and double doors.	

Features	AVPD5600-1P	AVPD5600-1S
Materials	Steel	SUS 304
Length	Standard size: 1045 mm. Standard width bars can be field cut to the opening width.	
Backset	2-7/16" for single door/ double door with mullion. 2-5/8" for double door with overlapping astragal	
Door Width	650 mm to 1500 mm wide	
Latch Point	2 point latching	
Door Thickness	Suits 1- 3/4"(44.5 mm) standard	
Max. Door Weight	200 kg	
Touch bar centerline to finish floor	1000 mm at center	
Door Height	Standard 2100mm, for other door height	
Finish	Steel painted silver, SSS and other finish on request.	
Fasteners	Standard machine screws, Wooden screw	
Dogging	This exit device can have trims or levers on the other side of the door.	
Application	Can be used on single and double doors (with Astragal x Rim/ Mortise; without astragal x vertical rod).	

Touch Bar Half Length Panic Exit Device



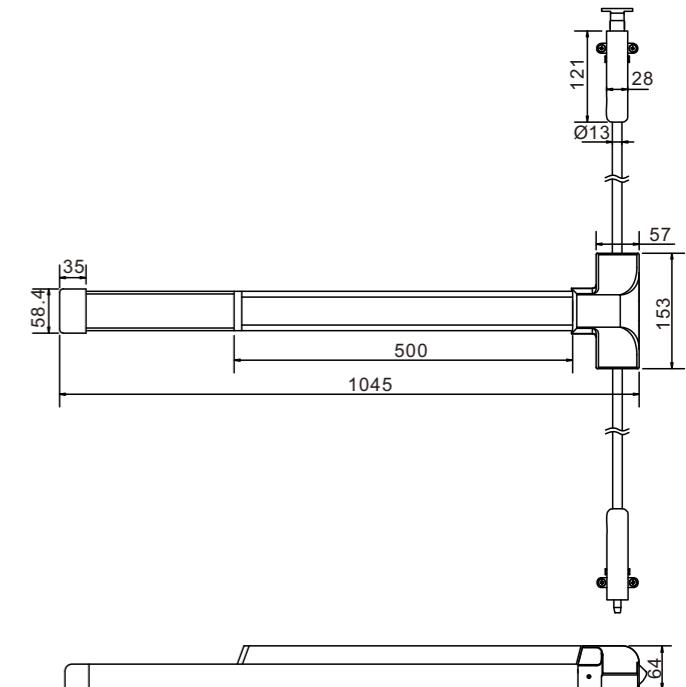
AVPD6050F



Touch Bar Half Length Vertical Rod Panic Exit Device



AVPD6060-F



Features	AVPD6050F-P	AVPD6050F-S
Materials	Steel	SUS 304
Length	Standard size: 1045 mm. Standard width bars can be field cut to the opening width.	
Backset	2-7/16" for single door/ double door with mullion. 2-5/8" for double door with overlapping astragal	
Touch Bar Length	Standard 500 mm	
Door Width	650 mm to 1100 mm wide	
Latch Point	1 point latching	
Door Thickness	Suits 1- 3/4"(44.5 mm) standard	
Max. Door Weight	200 kg	
Finish	Steel painted silver, SSS and other finish on request.	
Fasteners	Standard machine screws, Wooden screw	
Dogging	Not available in Fire Exit Hardware	
Application	This exit device can have trim or levers on the other side of the door. Can be used on single and double doors.	

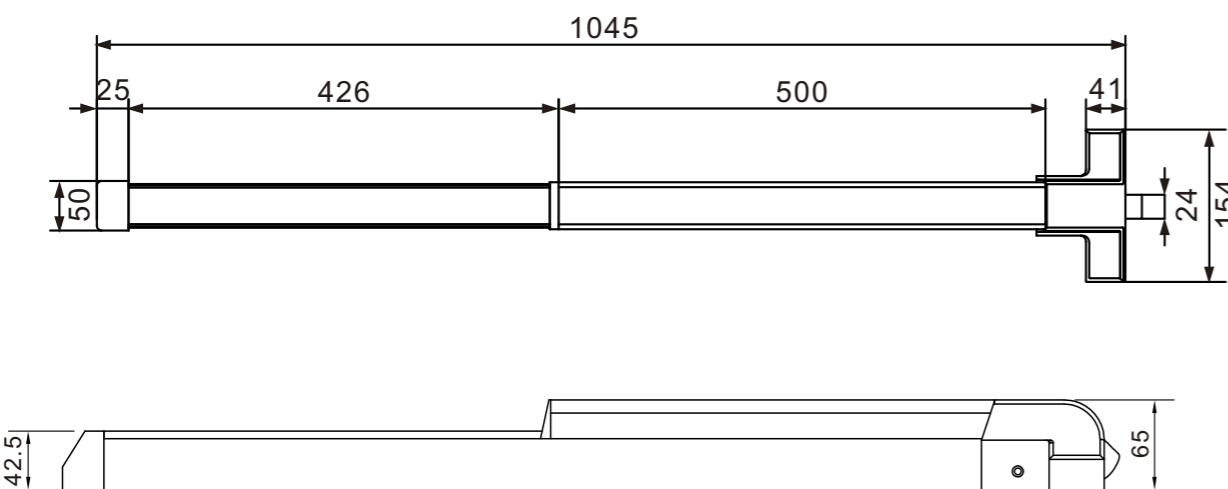
Features	AVPD6060F-P	AVPD6060F-S
Materials	Steel	SUS 304
Length	Standard size: 1045 mm. Standard width bars can be field cut to the opening width.	
Backset	2-7/16" for single door/ double door with mullion. 2-5/8" for double door with overlapping astragal	
Door Width	650 mm to 1100 mm wide	
Latch Point	2 point latching	
Door Thickness	Suits 1- 3/4"(44.5 mm) standard	
Max. Door Weight	200 kg	
Touch bar centerline to finish floor	1000 mm at center	
Door Height	Standard 2100mm, for other door height	
Finish	Steel painted silver, SSS and other finish on request.	
Fasteners	Standard machine screws, Wooden screw	
Dogging	Not available in Fire Exit Hardware	
Application	This exit device can have trim or levers on the other side of the door. Can be used on single and double doors (with Astragal x Rim/ Mortise; without astragal x vertical rod).	

Touch Bar Half Length Panic Exit Device



AVPD500P

AVPD500S



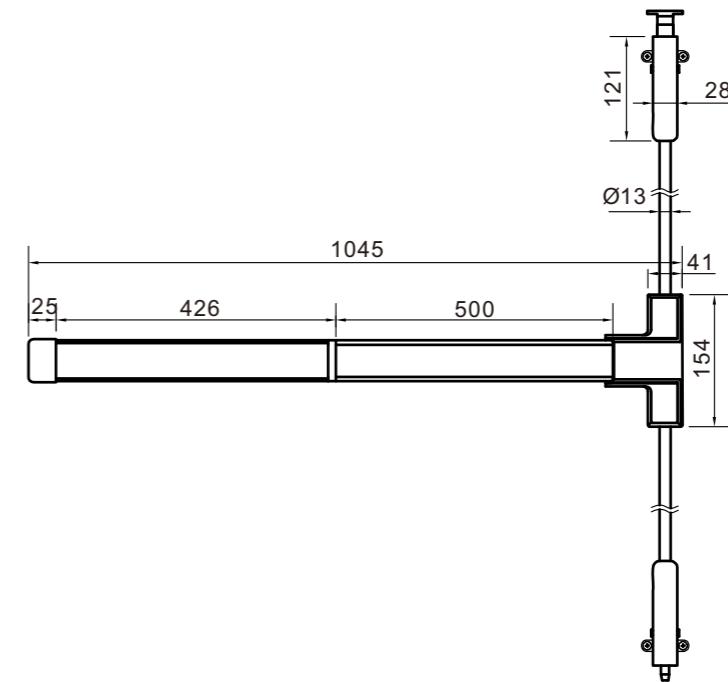
Features	AVPD500-P	AVPD500-S
Materials	Steel	SUS 304
Length	Standard size: 1045 mm. Standard width bars can be field cut to the opening width.	
Backset	2-7/16" for single door/ double door with mullion. 2-5/8" for double door with overlapping astragal	
Door Width	650 mm to 1100 mm wide	
Latch Point	2 point latching	
Door Thickness	Suits 1- 3/4"(44.5 mm) standard	
Max. Door Weight	200 kg	
Touch bar centerline to finish floor	1000 mm at center	
Door Height	Standard 2100mm, for other door height	
Finish	Steel painted silver, SSS and other finish on request.	
Fasteners	Standard machine screws, Wooden screw	
Dogging	Not available in Fire Exit Hardware, Hex key	
Application	This exit device can have trim or levers on the other side of the door. Can be used on single and double doors (with Astragal x Rim/ Mortise; without astragal x vertical rod).	

Touch Bar Half Length Vertical Rod Panic Exit Device



AVPD560P

AVPD560S

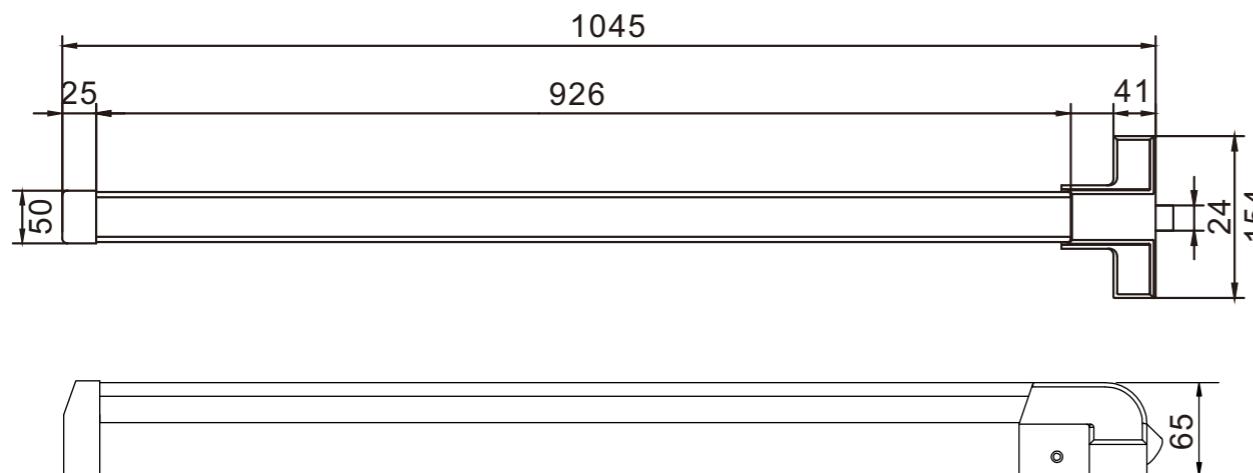


Features	AVPD560P	AVPD560S
Materials	Steel	SUS 304
Length	Standard size: 1045 mm. Standard width bars can be field cut to the opening width.	
Backset	2-7/16" for single door/ double door with mullion. 2-5/8" for double door with overlapping astragal	
Door Width	650 mm to 1100 mm wide	
Latch Point	2 point latching	
Door Thickness	Suits 1- 3/4"(44.5 mm) standard	
Max. Door Weight	200 kg	
Touch bar centerline to finish floor	1000 mm at center	
Door Height	Standard 2100mm, for other door height	
Finish	Steel painted silver, SSS and other finish on request.	
Fasteners	Standard machine screws, Wooden screw	
Dogging	Not available in Fire Exit Hardware, Hex key	
Application	This exit device can have trim or levers on the other side of the door. Can be used on single and double doors (with Astragal x Rim/ Mortise; without astragal x vertical rod).	

Touch Bar Full Length Panic Exit Device

AVPD500-1P

AVPD500-1S

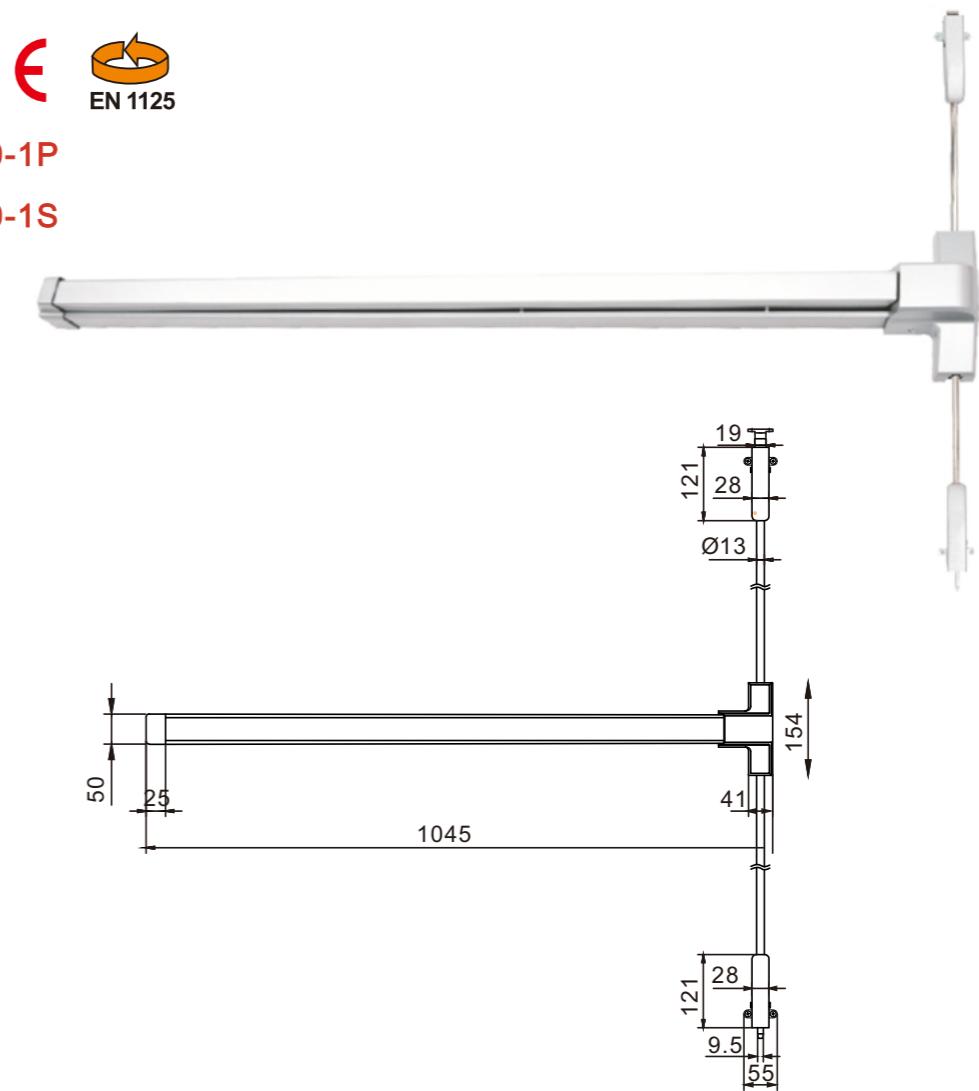


Features	AVPD500-1P	AVPD500-1S
Materials	Steel	SUS 304
Length	Standard size: 1045 mm. Standard width bars can be field cut to the opening width.	
Backset	2-7/16" for single door/ double door with mullion. 2-5/8" for double door with overlapping astragal	
Door Width	650 mm to 1100 mm wide	
Latch Point	2 point latching	
Door Thickness	Suits 1-3/4"(44.5 mm) standard	
Max. Door Weight	200 kg	
Touch bar centerline to finish floor	1000 mm at center	
Door Height	Standard 2100mm, for other door height	
Finish	Steel painted silver, SSS and other finish on request.	
Fasteners	Standard machine screws, Wooden screw	
Dogging	Not available in Fire Exit Hardware, Hex key	
Application	This exit device can have trim or levers on the other side of the door. Can be used on single and double doors (with Astragal x Rim/ Mortise; without astragal x vertical rod).	

Touch Bar Full Length Vertical Rod Panic Exit Device

AVPD560-1P

AVPD560-1S

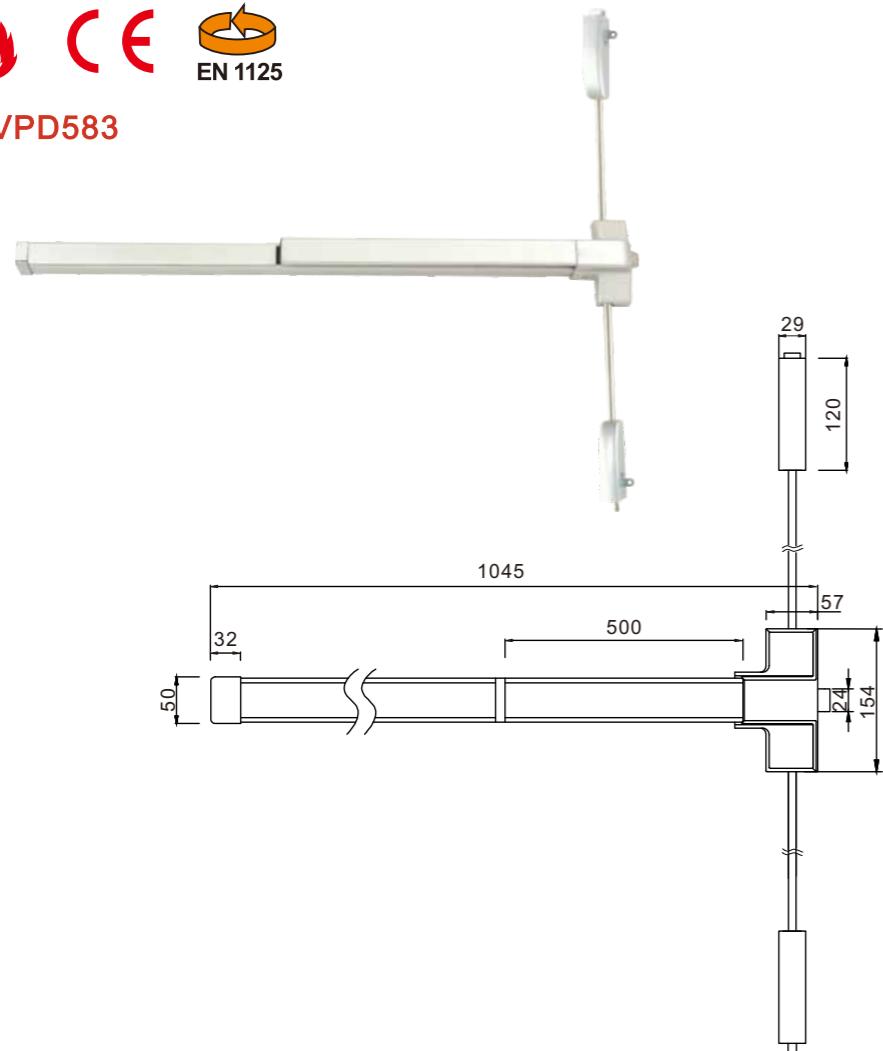


Features	AVPD560-1P	AVPD560-1S
Materials	Steel	SUS 304
Length	Standard size: 1045 mm. Standard width bars can be field cut to the opening width.	
Backset	2-7/16" for single door/ double door with mullion. 2-5/8" for double door with overlapping astragal	
Door Width	650 mm to 1100 mm wide	
Latch Point	2 point latching	
Door Thickness	Suits 1-3/4"(44.5 mm) standard	
Max. Door Weight	200 kg	
Touch bar centerline to finish floor	1000 mm at center	
Door Height	Standard 2100mm, for other door height	
Finish	Steel painted silver, SSS and other finish on request.	
Fasteners	Standard machine screws, Wooden screw	
Dogging	Not available in Fire Exit Hardware, Hex key	
Application	This exit device can have trim or levers on the other side of the door. Can be used on single and double doors (with Astragal x Rim/ Mortise; without astragal x vertical rod).	

Touch Bar Half Length Vertical Rod Panic Exit Device



AVPD583



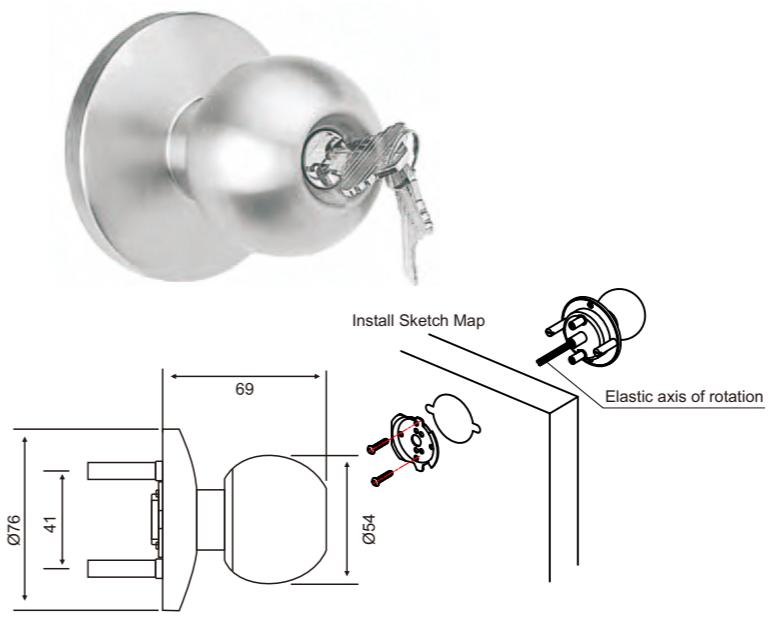
Features	AVPD583P	AVPD583S
Materials	Steel	SUS 304
Length	Standard size: 1045 mm. Standard width bars can be field cut to the opening width.	
Backset	3 1/8" from the door frame	
Door Width	650 mm to 1500 mm wide	
Latch Point	3 point latching	
Door Thickness	Suits 1- 3/4"(44.5 mm) standard	
Max. Door Weight	200 kg	
Touch bar centerline to finish floor	1000 mm at center	
Door Height	Standard 2100mm, for other door height	
Finish	Steel painted silver, SSS and other finish on request.	
Fasteners	Standard machine screws, Wooden screw	
Dogging	Not available in Fire Exit Hardware	
Application	This exit device can have trims or levers on the other side of the door. Can be used on single and double doors (with Astragal x Rim/ Mortise; without astragal x vertical rod).	

Lever Trim Model NO: AVPD017S



- Material : Stainless steel or Zinc Alloy
- Rosette Diameter: 77mm
- Lever Length: 134mm
- Lever Projection: 56mm
- Finish: satin / polish
- Non-Handed
- Cylinder: Standard Schlage C Keyway
- Fits standard door preps
- Spindle Structure
- Supplied with 3 keys
- ADA Compliant

Lever Trim Model NO: AVPD005S



Function Selection

- AVPD017S E : Classroom: Key retracts latch bolt, unlocks lever
ANSI Function 08
- AVPD017S ST: Storeroom; Key operation lever, otherwise always locked
ANSI Function 03
- AVPD017S P: Passage; Trim always operable
ANSI Function 14
- AVPD017S DMY: Dummy; Dummy trim, one sided
ANSI Function 02

Features

Function Selection

- 016 E: Classroom;
 - Key retracts latch bolt, unlocks lever
- ANSI Function 08
- 016 P: Passage;
 - Trim always operable
- ANSI Function 14
- 016 DMY: Dummy; Dummy trim,
 - one sided ANSI Function 02

Features

Lever Trim

Model NO: AVPD006S



Function Selection

- AVPD006S E: Classroom; Key retracts latch bolt, unlocks lever
ANSI Function 08
- AVPD006S ST: Storeroom; Key operation lever, otherwise always locked
ANSI Function 03
- AVPD006S P: Passage; Trim always operable
ANSI Function 14
- AVPD006S DMY: Dummy; Dummy trim, one sided
ANSI Function 02

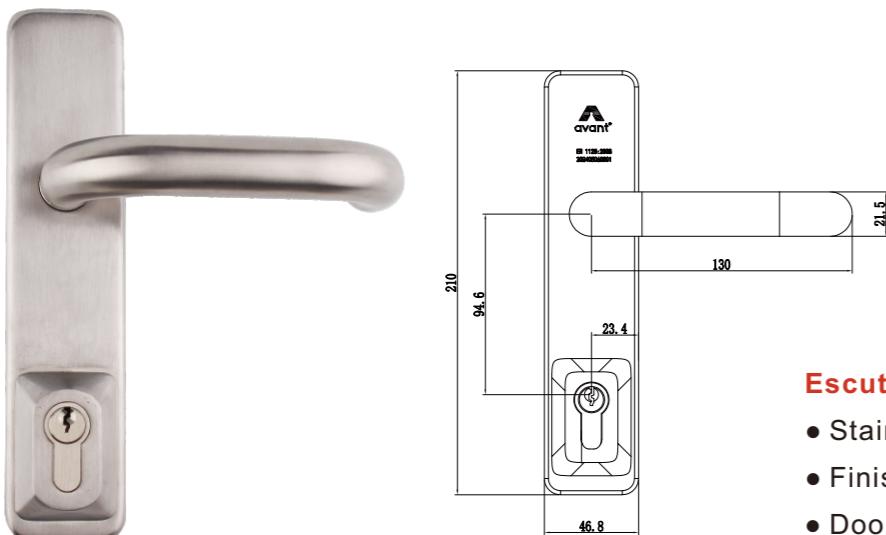
Features

- Non handed Grade 1
- Cylindrical body hardened steel, Heavy duty tailpiece
- For 1-3/4" and 2-1/4" doors
- Rose diameter 3-1/2", lever length 4-3/4", Fits 161 cutout
- Patented Clutch function
- Finishes: 26D, 32D, US3, US4

Application: For fire and non fire rim and vertical rod exit device.

Escutcheon Lever Trim

Model NO: AVPD008E



Escutcheon Lever Trim

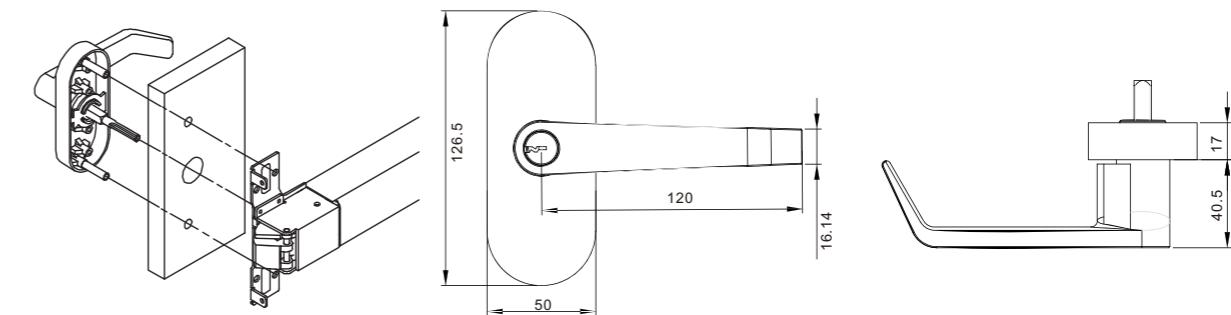
- Stainless steel 304
- Finish: SSS, PSS, PVD, AB
- Door thickness: 45mm-50mm

Escutcheon Lever Trim

Model NO: AVPD018E



- Material: Stainless steel or Zinc Alloy
- Finish: SSS or Chrome, Nickel
- Escutcheon Plate Width: 50mm
- Escutcheon Plate Height: 126.5mm
- Lever Length: 120mm
- Supplied with mounting hardware instruction and 3 Keys
- ADA Compliant
- Spindle Structure
- Application: For fire-rated metal or wood doors



Escutcheon Lever Trim

Model NO: AVPD019P



- Material: Zinc Alloy
- Finish: Chrome, Nickel
- Escutcheon Plate Width: 36mm
- Escutcheon Plate Height: 136mm
- Lever Length: 108mm
- Euro Profile Half Cylinder with 3 Keys
- ADA Compliant
- Spindle Structure
- Application: For fire-rated metal or wood doors

