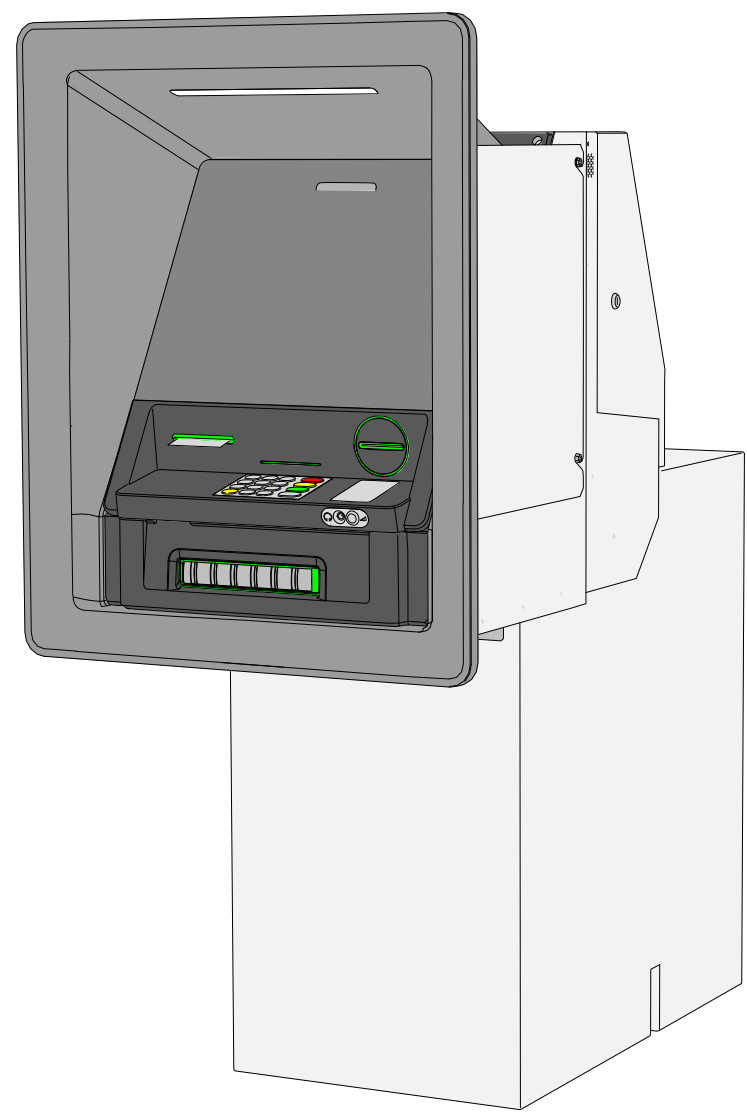




NCR SelfServ™ 27 ATM Site Preparation



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Clearances - Corridor

Clearances - Exterior Wall

Clearances - Hot Air Outlets

AUDIENCE

This document is intended for architects and those responsible for preparing a site prior to the arrival of the ATM.

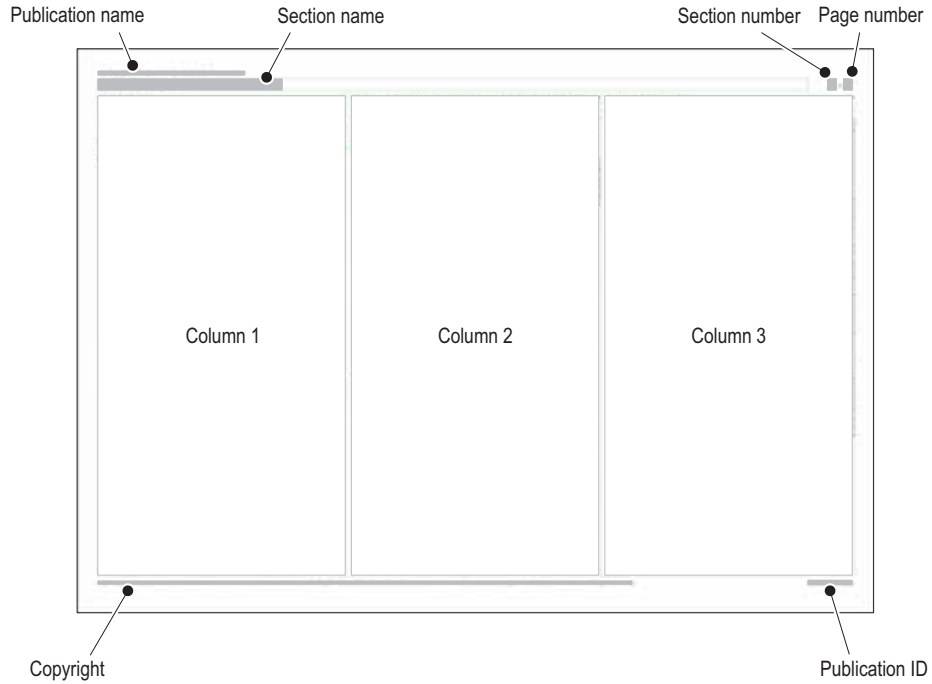
ABOUT THIS DOCUMENT

This site preparation document is designed to be read on wide aspect ratio screens. Each section has been structured to fit the maximum amount of information on the minimum number of pages yet still be readable when printed on A3 size paper. Printing on smaller paper sizes may reduce readability but will make handling easier.

The document is organised into sections covering the following topics:

- Introduction - this section
- Customer Responsibilities
- Standards Compliance
- Product Overview
- Site Requirements
- Power Requirements
- Cable Requirements
- Decals
- Variant Details - CEN, Short Sleeve
- Variant Details - CEN, Standard Sleeve

Each page has two or three columns laid out as follows:



Where left and right side are stated the ATM is viewed from the front (facia side) of the ATM. All plan views are top down unless otherwise stated.

Unless otherwise stated all dimensions are rounded to the nearest millimetre and equivalent decimal of an inch.

REVISION RECORD

Date	Revision	Pages	Reason for Change
January 2015	A	All	New Publication
June 2015	B	4-1	Update to list of security enclosures
		9-1 and 10-1	Added weight and floor loading for GAS EX security enclosures
		9-3 and 10-3	Added Cable entry side view illustrations
		9-6 and 10-6	Additional minimum service area for GAS EX security enclosure
February 2016	C	3-1, 9-3, 10-3	Updated the Accessibility statement and Hole in the Wall statements and table to have a consistent information to all SelfServ products.
		9-1, 10-1	Corrections on Weight and Floor Loading
July 2016	D	5-2	Temperature range corrected.

NOTICE

This is a contractual document. It contains important warnings and confers important legal rights and obligations. You are advised to read it carefully.

It is the responsibility of you, the customer, to assure that all installation preparations are complete and in compliance with all specifications and requirements of NCR and all applicable national, state, or local codes, regulations and laws.

This equipment must be installed and used in strict accordance with the manufacturer's instructions. However, there is no guarantee that interference to radio communications will not occur in a particular commercial installation. If this equipment does cause interference, which can be determined by turning the equipment off and on, the user is encouraged to consult an NCR service representative immediately.



CAUTION

NCR Corporation is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by NCR. Such unauthorized modifications, substitutions, or attachments may void the user's authority to operate the equipment. The correction of interference caused by such unauthorized modifications, substitutions, or attachments will be the responsibility of the user.

SITE COMPLIANCE

This document contains the information necessary for the preparation of a site conforming to NCR specifications. It is very important that the site complies with the requirements specified in this document, because, once the equipment has been installed, deficiencies in site preparation or the problems caused by these deficiencies are much more difficult to detect and correct.

Further, failure to comply with these requirements or to take proper steps to protect equipment against risks identified in this document may cause serious damage to the equipment and to the customer's business.

In addition to the need to comply with the requirements specified, electrical wiring and mechanical systems must also comply with all relevant codes, laws and regulations.

It is important that the site be prepared by a customer or his agent who is fully conversant with the special requirements of electronic equipment. The responsibility for ensuring that the site is prepared in compliance with this document remains with the customer.

For information and guidance purposes only, a list is provided, in general terms, of those matters for which the customer is responsible. This list is not intended to be comprehensive, and in no way modifies, alters, or limits the responsibility of the customer for all aspects of adequate site preparation.

NCR staff will be available to answer questions relating to the contents of this document but, except where:

- a. the customer has been notified that a full or partial consultancy service is available and/or that NCR will be willing to undertake a preliminary or final site survey and
- b. the customer shall have entered into a formal contract with NCR for provision of the same

no comment, suggestion or advice offered or not offered about preparation of the site nor any inspection of the site whether before or after preparation is to be taken as approval of the location of the site and equipment or of its preparation and NCR will not be liable in respect of any comment, suggestion or advice given by its staff or in respect of any failure to give advice.

Finally, only the customer can know the full extent of damage which may be caused to his business by reason of failure of the equipment which is to be installed. For this reason it is the customer's responsibility to ascertain the extent of any such possible damage to his existing or planned business, and to effect, full insurance in respect of it.

CUSTOMER ACTIONS

The customer must do or provide the following:

- When required by NCR, provide the NCR customer service representative with appropriate drawings that indicate:
 - Location of the equipment
 - Site wiring (power and signal, paths and lengths)
 - Location of other equipment capable of generating electrical noise, electromagnetic interference, heat, etc.
- Make building alterations necessary to meet wiring and other site requirements.
- Provide and install all communications cables, wall jacks, special connectors, and associated hardware.
- Provide and install necessary power distribution boxes, conduits, grounds, lightning protection, and associated hardware.
- Make sure all applicable codes, regulations and laws (including, but not limited to, electrical, building, safety, and health) are met.
- Provide and install auxiliary power or other equipment as required.
- Provide storage or service areas as required.
- Make sure the environmental requirements of the system/unit are met.
- Provide floor coverings and environmental systems that limit or control static electricity build-up and discharge.
- Install the product at a height which meets the accessibility regulations of the relevant country.

RADIO FREQUENCY INTERFERENCE

FCC Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case you, the customer, will be required to correct the interference at your own expense.

Canadian Class A Device Declaration

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n’émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

SAFETY

Safety Directive

- 2006/95/EC ‘Low Voltage Directive and Amendment’.

Harmonised Safety Standard

- EN 60950-1: ‘Information Technology Equipment - Safety’

ELECTROMAGNETIC COMPATIBILITY (EMC)

Immunity Standards

The ATM complies with the following requirements for radiated and conducted immunity:

- EN 55024

As per the requirements of EN55024 (2010), the ATM complies with the requirements of the following normative Immunity Standard:

- EN 61000-4-2 Electrostatic Discharge
- EN 61000-4-3 Radiated RF
- EN 61000-4-4 Electrical Fast Transient/Burst
- EN 61000-4-5 Surge
- EN 61000-4-6 Conducted RF
- EN 61000-4-8 Power Frequency Magnetic Field
- EN 61000-4-11 Voltage Dips/Short Interruption.

EMC Directives

This equipment has been found to comply with the essential requirements of EMC Directive 2004/108/EC, by testing to harmonized standard, EN55022and EN55024. The equipment complies with the limits for a Class A digital device, pursuant to EN55022.

The ATM complies with the following Electromagnetic Compatibility (EMC) directives and standards for IT equipment:

- 2004/108/EC ‘EMC Directive’
- 93/68/EEC ‘CE Marking Directive’

Emission Standards

The ATM complies with the following requirements for radiated and conducted emissions:

- EN 55022 Class A
- FCC 47CFR Part 15. Class A
- CISPR 22 Class A
- AS/NZS 3548 Class A
- GB 9254 Class A
- CNS 13438 Class A.

Additional Requirements for 220V - 240V Units

The ATM complies with the following requirements for conducted emissions:

- EN 61000-3-2: Mains harmonics, Class A
- EN 61000-3-3: Mains flicker.

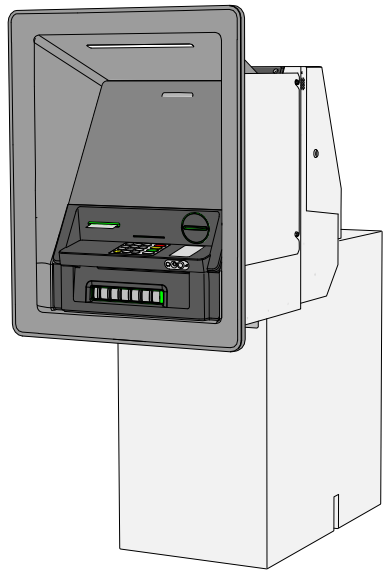
ACCESSIBILITY

It is the responsibility of the owning institution to ensure that the heights from the floor level to the facia items comply with any local regulations.

Note: The heights listed in this document assume that the installation does not add depth in front of the ATM. Increased depth may change the height requirements due to increasing the user's reach, therefore please refer to the relevant accessibility regulation if additional depth has been added.

GENERAL DESCRIPTION

The NCR SelfServ 27 ATM is a ‘through the wall’ ATM which may be installed through any suitable exterior wall or in a vestibule location.



Options

Access

- Rear Access

Standard Security Enclosures

- CEN Grade I
- CEN Grade III
- CEN Grade IV

Solid and Gas Explosion Resistant (EX GAS) Security Enclosures

- CEN Grade III EX GAS A2P A3E
- CEN Grade IV

Note: For France-specific A2P A1E safes, please refer to CEN Grade III EX GAS A2P A3E safe data.

Sleeve

- Short
- Standard

ACOUSTICS

For most variants the acoustics sound power does not exceed:

- 65 dB(A) when idle
- 68 dB(A) when operating.

However, the following configurations will affect the sound levels as shown in the table below:

Configuration	Acoustic sound power when operating
Cooling fans	does not exceed 75 dB(A)

HEAT DISSIPATION

The NCR SelfServ product range is a flexible hardware platform. NCR recommends that actual power measurements are taken and used to establish the heat dissipation for specific hardware configurations. These measurements should include any custom or third party features.

Where specific measurements are not available then, as a guide, **760 KJ/hour** can be used as an indicative heating load. This figure is based on an ATM in idle mode, with a medium to high feature functionality configuration.

Heat dissipation figures are largely unaffected by transactional rates.

PRODUCT IDENTIFICATION

The illustration below is typical of the layout of the product identification label which is fixed inside the ATM.



The product is identified by a class and a 4 digit model number. The serial number is unique to each ATM. The tracer number is used to identify where the ATM was built.

Please quote all of the serial and tracer numbers, including the prefix, when making reference to the ATM.

Electrical rating information is also shown on the product label.

POSITIONING THE ATM

- The ATM may be installed through any suitable exterior wall or vestibule location.
- The ATM must be positioned away from heat sources or any air conditioning equipment and within easy reach of power outlets.
- Bright lights or windows behind the user may degrade camera performance. Position the ATM away from direct sunlight.
- Allow sufficient room for installation and servicing requirements.

FLOOR

- The ATM *must* be installed on a level, even, concrete or other noncombustible surface. In locations where the floor may be uneven, it is recommended that a steel plate is used under the ATM.
- An antistatic floor covering should be used and must be of a type that will not generate dust or fluff.
- The ATM must be installed on a floor capable of supporting the maximum weight including media. Only the maximum weight should be considered as additional options may be added after installation. Floor loading is calculated by dividing the maximum weight of the ATM by the surface area of the ATM base in contact with the floor.
- Service areas, ATM weights and floor loading can be found in the Variant Details section for your ATM.

DOORWAYS AND CORRIDORS

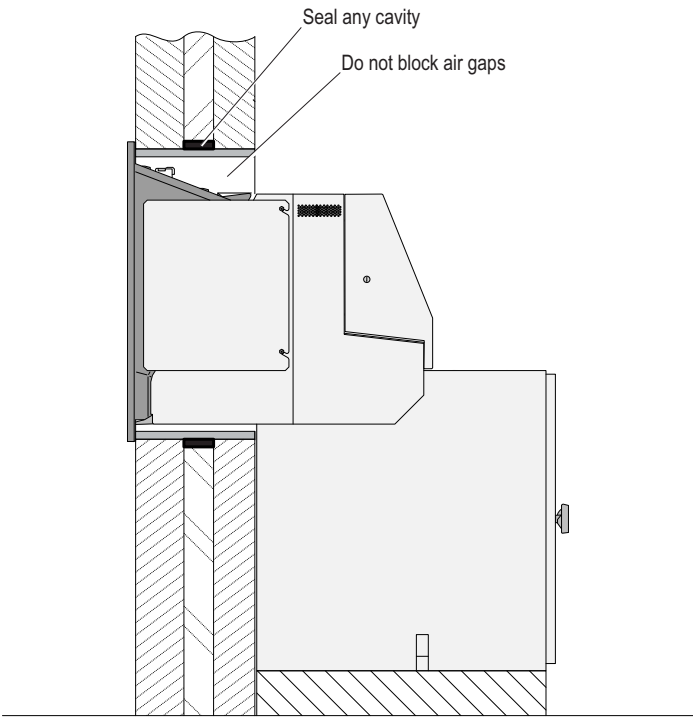
- Make sure that doorways and corridors leading to your point of installation are wide enough to allow the package to pass through, or make arrangements to unpack the ATM and remove it from the pallet in an area with sufficient access then move it to the installation site.
- Make sure that any corridors can support the weight of the ATM, including all packaging and the pallet.
- Corridor sizes and ATM weights can be found in the Variant Details section for your ATM.

WALL

A **25 mm** (1.0 in.) wide smooth surface is required around the edge of the wall opening to enable a good weather seal.

Wall Cavity

Any cavity in the wall must be sealed at installation time to provide a flush surface that does not extend into the wall opening. Leave the gap between the ATM sleeve and the wall opening clear to allow air at room temperature to circulate.

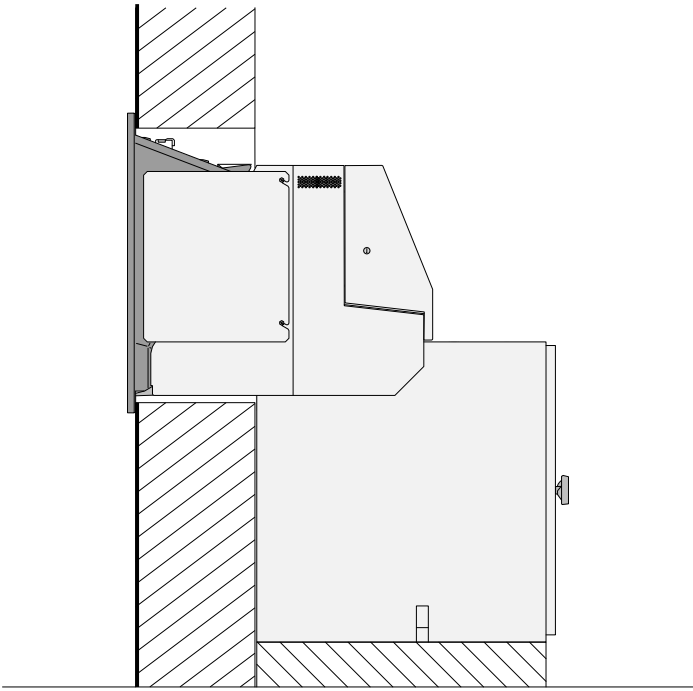


Installing Through a Glass Wall

If you are installing your ATM through a glass wall you may require a suitable glass support (normally a steel collar) to sit between the ATM collar and the glass. The requirement for this support should be determined by the architect. If required, any such support should be sourced locally.

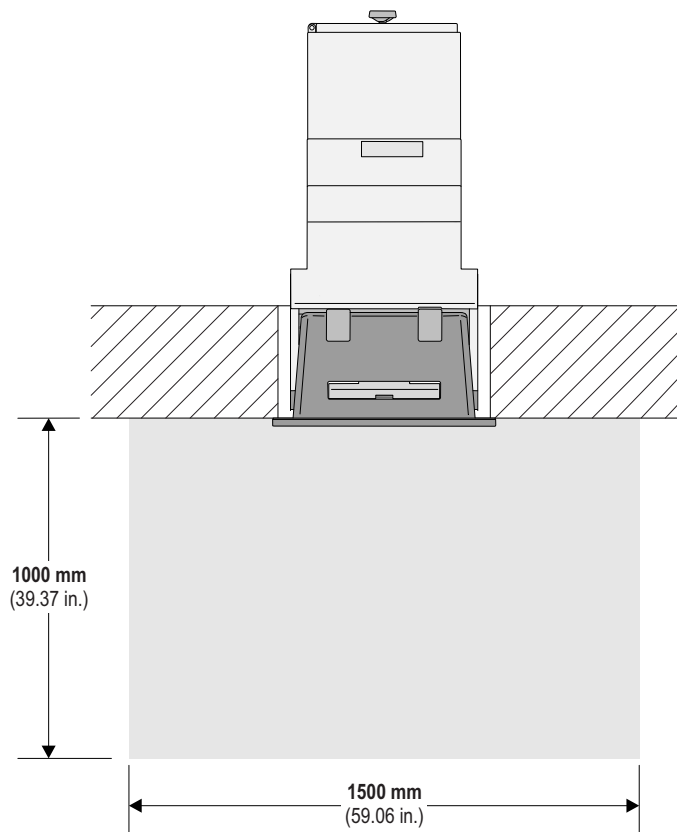
Collar Tolerance

The collar cannot accommodate large dips or depressions in the wall. Make sure the wall is smooth and even.



AMBIENT LIGHTING

If the ATM is fitted with a camera, it is strongly recommended that there is a minimum of 50 lux lighting at floor level within the area illustrated below.



TASK LIGHTING

A minimum of 200 lux is required for task lighting.

TEMPERATURE AND HUMIDITY

Continuous operating at or near the range limits, or in a location where the temperature and humidity change beyond the specification, should be avoided.

*If installing through an exterior wall, the site must meet the requirements of **both** the Interior and Exterior environments.*

Note: For exterior through the wall ATMs the humidity inside the building is restricted to a maximum of **30%** at an outside temperature of **-35°C** (-31°F), with a linear relationship between temperature and humidity to a maximum humidity at **0°C** (32°F).

Normal Operating Range (Interior Environment)

- Temperature: **0°C** to **40°C** (32°F to 104°F)
- Relative Humidity: 20% to 80%
- Dew Point Temperature Restriction: **26°C** (79°F) maximum

Normal Operating Range (Exterior Environment)

- Temperature: **-35°C** to **50°C** (-31°F to 122°F)
- Relative Humidity: 10% to 90%
- Dew Point Temperature Restriction: **26°C** (79°F) maximum

Storage Range (Up To Three Months)

- Temperature: **-10°C** to **50°C** (14°F to 122°F)
- Relative Humidity: 10% to 90%

Transit Range (Up To One Week)

- Temperature: **-40°C** to **60°C** (-40°F to 140°F)
- Relative Humidity: 5% to 95%

Extreme Power On Range (Up To One Hour)

- Temperature: **0°C** to **45°C** (32°F to 113°F)
- Relative Humidity: 10% to 95%

BAROMETRIC PRESSURE

- Operating/Transit Limits: **105 kPa** (15.2 lbf/in²) to **70 kPa** (10.2 lbf/in²)
- Equivalent Altitude: Up to a maximum of **3000 m** (9842.52 ft)

AC POWER REQUIREMENTS

The maximum current requirements are:

- 10A at 120V
- 4.5A at 230V.

The maximum inrush current is 100A.

NCR does not recommend running an ATM with deposit devices without an Uninterruptible Power Supply (UPS). Without a UPS, there is the potential for customer’s cash to be retained in the device if there is a power failure.

INPUT VOLTAGE

The ATM can operate from the following input mains voltages:

- 90V to 136V at 50/60Hz
- 180V to 264V at 50/60Hz.

GROUNDING

The ATM operates from a single phase, 3 wire supply: live, neutral and ground.

The ATM power requirements will normally permit it to operate within existing wiring configurations and from existing mains outlets provided that:

- the branch circuit of the distribution panel supporting the ATM is not also used to support equipment with heavy inductive loads such as air conditioners or AC motors.
- other branch circuits on the same distribution panel do not support such equipment.
- the installation meets or exceeds the regulatory and local guidelines with regard to electrical safety and all conductor sizing.

The normal and safe operation of this ATM is dependant on the above. Only qualified personnel that meet local certification standards should be permitted to ensure compliance.

Note that the building ground point can also affect data integrity. For additional information refer to [Data Line Transient Protection](#) in the [Cable Requirements](#) section.

TRANSIENT PROTECTION

In the process of power distribution, transient electrical energy (including, but not limited to, lightning strikes, intermittent short circuits, and switching transients) can be introduced on to power lines. Such transient energy can be very damaging to electronic hardware and can also cause data corruption. Under these circumstances, NCR recommends the use of AC power transient suppressors and data (communication) line transient suppressors. Such protective devices are intended to guard against power and data line transients that can result in hardware damage and various system or program errors.

Improvement of any deficiencies in power quality is a customer responsibility. Malfunction and/or component failure as a result of power quality problems are/is not covered by NCR Corporation Maintenance Agreement. NCR accepts no liability for any such occurrence nor for its consequences.

When power transient suppression is required, the suppressors used should meet the following minimum requirements:

- Dissipate energy to match the appropriate application categories as defined by ANSI/IEEE Standard C62.41, Guide on Surge Voltages in Low-Voltage AC Power Circuits.
- Be of the voltage limiting (clipping), or tracking filter type. The suppressor must not ‘clamp’ the voltage to zero, and must self-recover after the passage of the transient. The suppressor may be of the hybrid type construction that makes use of various technologies in order to meet speed and dissipation requirements.
- Exhibit a ‘short circuit’ mode upon its failure, thus providing a positive indication of its failure such as a blown fuse or tripped breaker
- Be listed by the accepted safety organization for the country involved (e.g. UL, CSA, VDE, ETL, etc.) and the installation must conform to local, state, and national electrical codes and regulations.

Location Category	Comparable to IEC No 664 Category	Transient	
		Waveform	Amplitudes
B = Major feeders, short branch circuits, and load centres	III	Volts = 1.2 x 50 μ s	6kV
		Current = 8 x 20 μ s	3kA
C = Service Entrance and run to load centre	IV	0.5 μ Rise - 100 kHz	6kV
		Ringwave	500A
		Volts = 1.2 x 50 μ s	10kV or more
		Current = 8 x 20 μ s	10kA or more

CABLE PREPARATION

NCR supply a power cable for the ATM. Other external cables are not supplied. Specifications for these cables are given in this section.

It is the customer’s responsibility to have any required external cables installed and to make sure that all cable preparations comply with NCR specifications as well as with all national, state or local telephone and telegraph regulations and laws.

When producing cables allow for **2.2 m** (7.22 ft) of cable within the ATM.

DATA LINE TRANSIENT PROTECTION

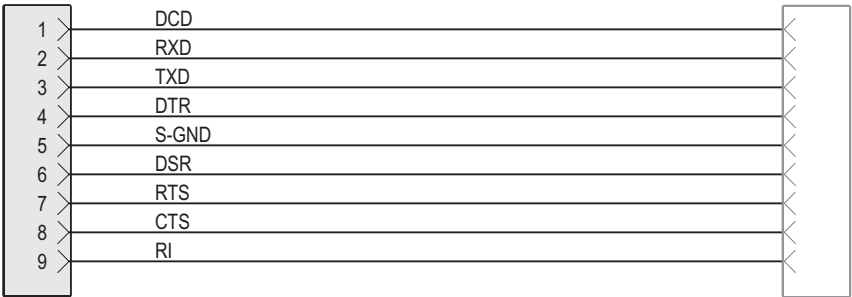
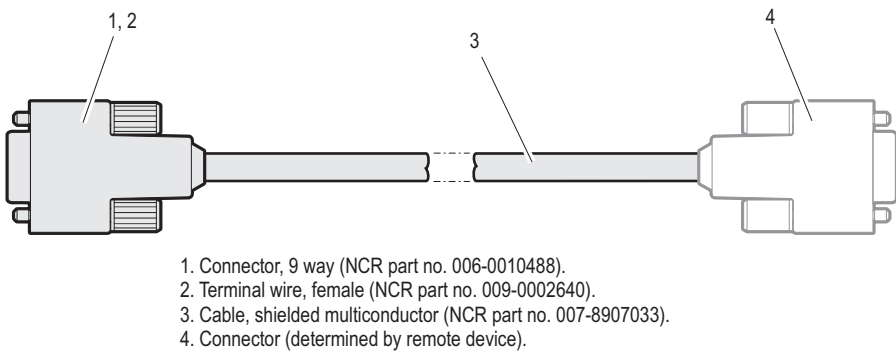
Voltage transients, line noise, surges, sags, impulses, and spikes may be experienced routinely or sporadically. When such phenomena occur the use of protective devices may be required to ensure proper operation of the equipment.

It is the responsibility of the customer to install and connect a data line transient suppression system to correct or prevent any deficiencies. Such systems must meet the following minimum requirements:

- Be of the self-recovering voltage limiting type. Exhibit a ‘short circuit’ mode upon its failure to ensure a positive indication of its failure. Insert minimum inductive and capacity loading at the operating frequency. Be installed in accordance with all applicable local, state, and national electrical codes and regulations.
- Protect the data port from damage in the presence of a data line transient event as defined in IEC Standard 1000-4-5 (formerly IEC 801-5).

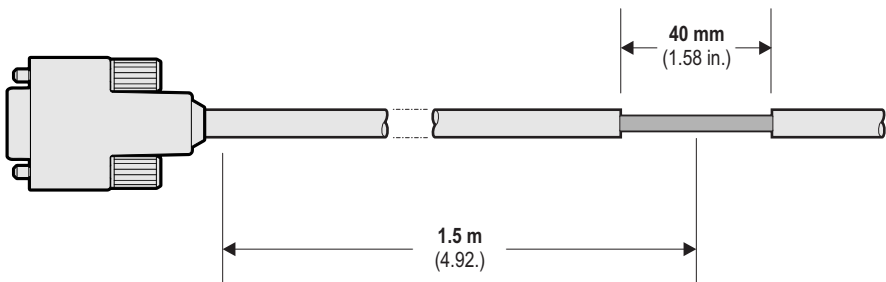
RS-232 CABLE (9 PIN)

The ATM can have up to two RS-232 (9 pin) outlets. The cable for each outlet should not exceed **12.24 m** (40.16 ft) and must conform to the following specification:



Remove a **40 mm** (1.58 in.) section of the outer sleeve, **1.5 m** (4.92 ft.) from the ATM end of the cable.

Take care not to cut through the cable shielding.

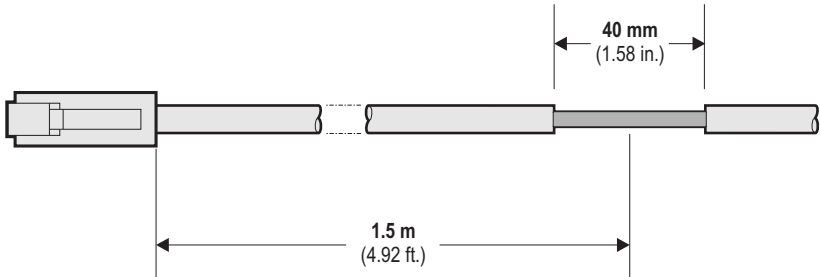


ETHERNET STANDARD CABLE

The ethernet standard cable must be fully shielded, 8 pin, category 5 compliant and must not exceed **97 m** (318.20 ft) in length.

Remove a **40 mm** (1.58 in.) section of the outer sleeve, **1.5 m** (4.92 ft.) from the ATM end of the cable.

Take care not to cut through the cable shielding.



POWER CABLE

The ATM is supplied either as a 120V or a 220-240V unit. 120V ATMs are supplied with a power cable fitted with a NEMA type 5-15P power source connector. 220-240V ATMs are supplied with an unterminated power cable. Information about suitable power connectors is supplied with the accessories.

The power cable supplied is **3 m** (9.84 ft) in length. If it is necessary to increase this length to meet site requirements, then the extension must satisfy local or country regulations.

 **WARNING** This equipment must be earthed.

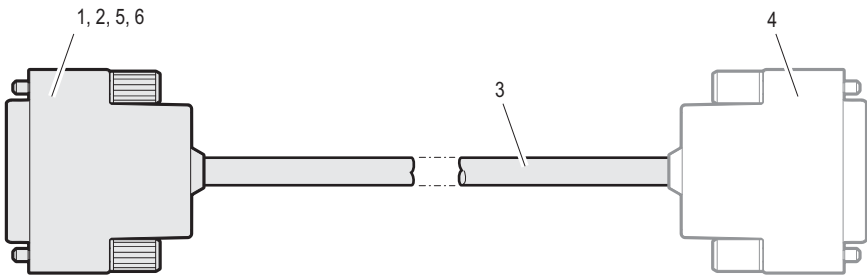
ALARM INTERFACE CABLES

The ATM may optionally be configured to provide an alarm interface which enables the ATM to be connected to an external local alarm system. The interface may take the form of one of two options; a basic alarm system or an enhanced alarm system.

A stabilised, non-interruptible power supply must be provided through the external alarm system. The alarm interface cable wiring must conform to the following specification:

- 12V +/- 2V dc
- 200mA maximum
- Ripple, 5% maximum.

Basic Alarm Cable



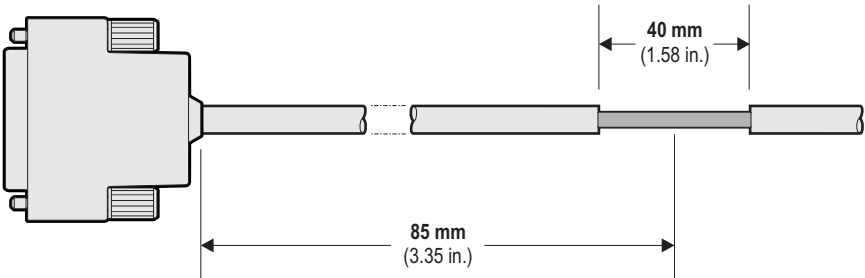
- 1. Connector, 25 Way (NCR part no. 006-0005896)
- 2. Terminal, wire, female (NCR part no. 009-0002640)
- 3. Cable, multiconductor (determined by the alarm installed).
- 4. Connector (determined by remote device).
- 5. Shell Hood (NCR part no. 006-1500038).
- 6. Screw retainer (NCR part no. 601-0101584).

1	Chassis GND
2	Not connected
3	Not connected
4	Not connected
5	Not connected
6	Not connected
7	Silent Alarm Common *
8	Door Alarm N.O.
9	Door Alarm N.C.
10	Vibration/Heat Common
11	Not connected
12	+12V
13	Not connected
14	Not connected
15	Not connected
16	Not connected
17	Not connected
18	Not connected
19	Silent Alarm N.O. *
20	Silent Alarm N.C. *
21	Door Alarm Common
22	Vibration/Heat N.O.
23	Vibration/Heat N.C.
24	Not connected
25	+12V Return

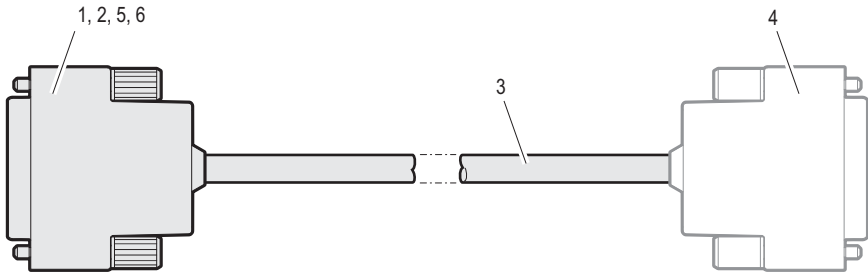
* Optional

Remove a **40 mm** (1.58 in.) section of the outer sleeve, **85 mm** (3.35 in.) from the ATM end of the cable.

Take care not to cut through the cable shielding.



Enhanced Alarm Cable



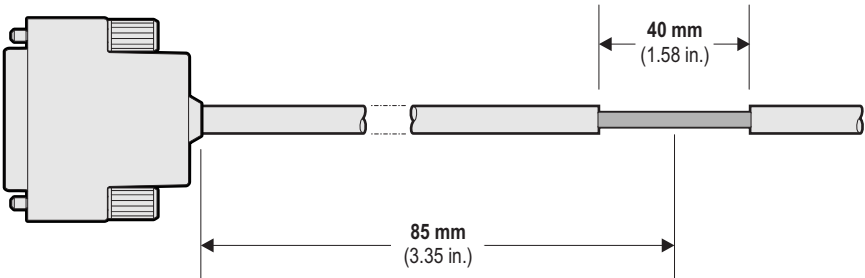
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- 5. Shell Hood (NCR part no. 006-1500038).
- 6. Screw retainer (NCR part no. 601-0101584).

1	Chassis GND
2	Not connected
3	Test Transmitter A
4	Not connected
5	Tamper Alarm N.O.
6	Tamper Alarm N.C.
7	Silent Alarm Common *
8	Door Alarm N.O.
9	Door Alarm N.C.
10	Composite Attack Common
11	Not connected
12	+12V
13	Not connected
14	Not connected
15	Not connected
16	Test Transmitter B
17	Not connected
18	Tamper Alarm Common
19	Silent Alarm N.O. *
20	Silent Alarm N.C. *
21	Door Alarm Common
22	Composite Attack N.O.
23	Composite Attack N.C.
24	Not connected
25	+12V Return

* Optional

Remove a **40 mm** (1.58 in.) section of the outer sleeve, **85 mm** (3.35 in.) from the ATM end of the cable.

Take care not to cut through the cable shielding.



DECAL DESIGN AND MATERIAL

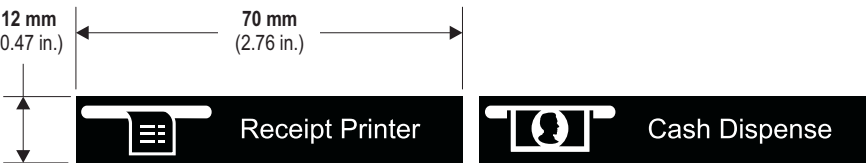
Decals should be a maximum of **0.5 mm** (0.02 in.) thick. NCR recommends they be made from textured polycarbonate with 3M 467 High Performance MP adhesive unless otherwise specified.

Decals should provide good contrast, at least 70%, between foreground (text/icon) and background.

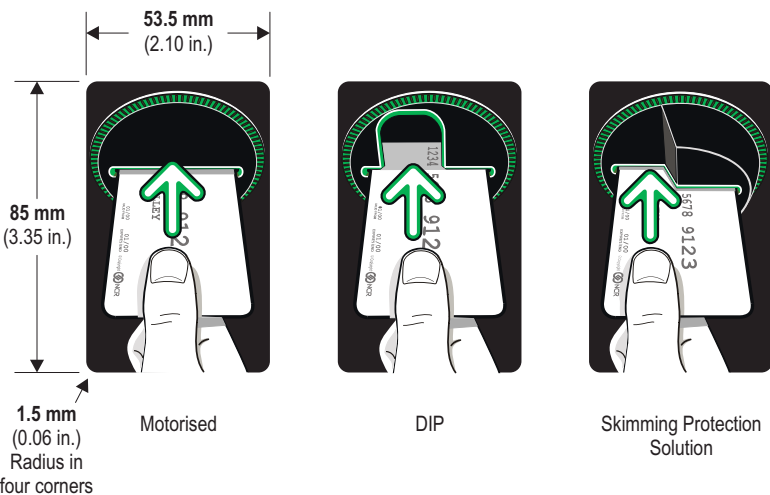
A sans serif typeface should be used (Tiresias is recommended). The text size should be at least 14 point, and larger where possible. Where tactile decals are required they should be designed in line with specific country requirements.

SUGGESTED DESIGNS

Device Identification Decals



Card Insertion

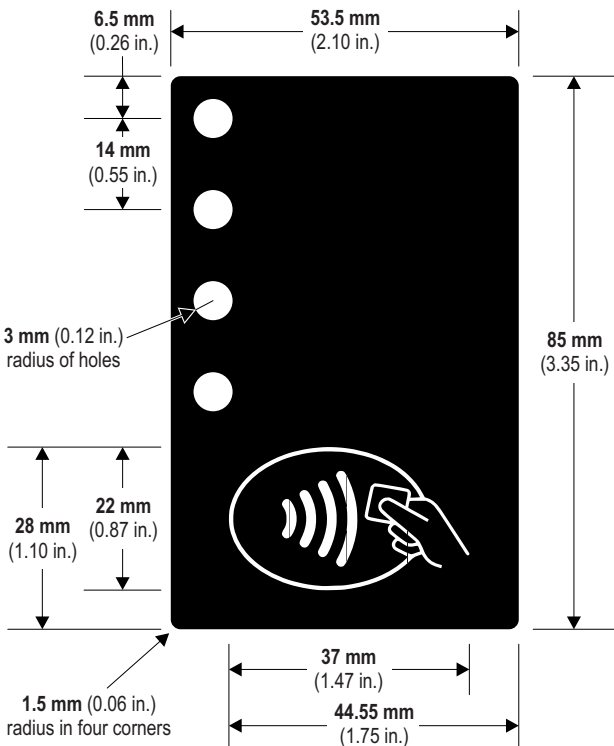


Contactless Card Reader (CCR) Landing Zone

Visible LED Sequence

Decals for CCR with visible LED sequence should be **0.125 mm** (0.005 in.) thick made from PVC with laminate finish and Scotch MP467 adhesive. Holes should be made as shown below so that the LED light can shine through.

Make sure that the contactless logo is sized as shown below to meet EMV guidelines.



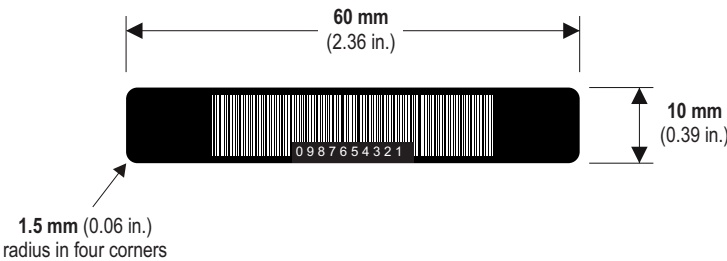
Hidden LED Sequence

CCR with hidden LED sequence includes a clear plastic cover printed with the contactless logo onto the underside and uses a halo lighting approach.



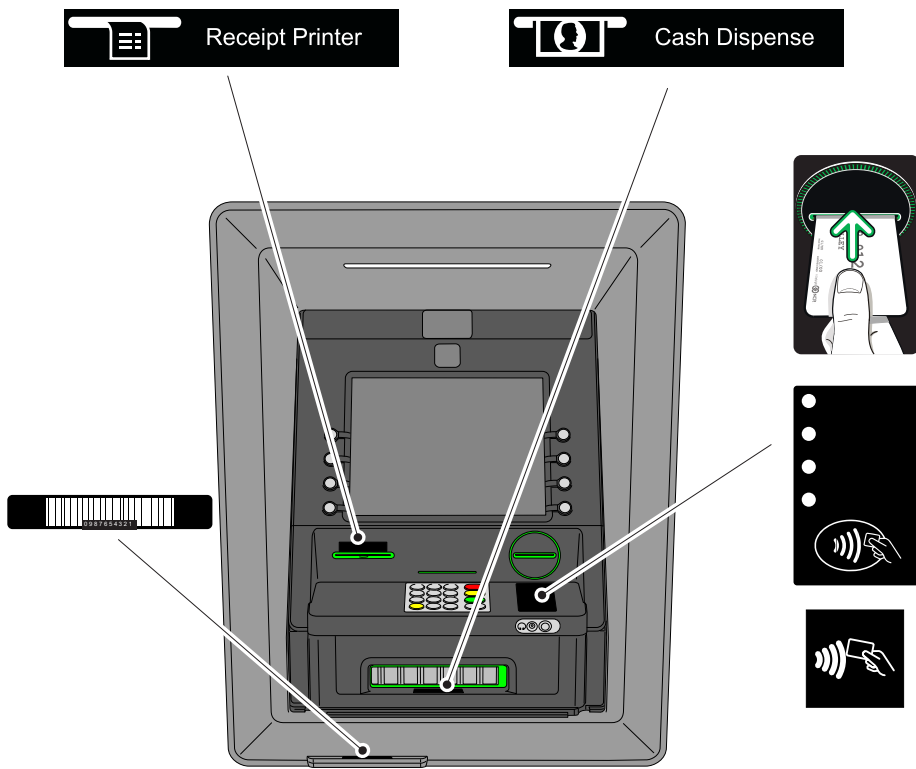
Barcode Reader

NCR recommends that the barcode reader decal should be **0.125 mm** (0.005 in.) thick made from PVC with laminate finish and with MP467 adhesive.



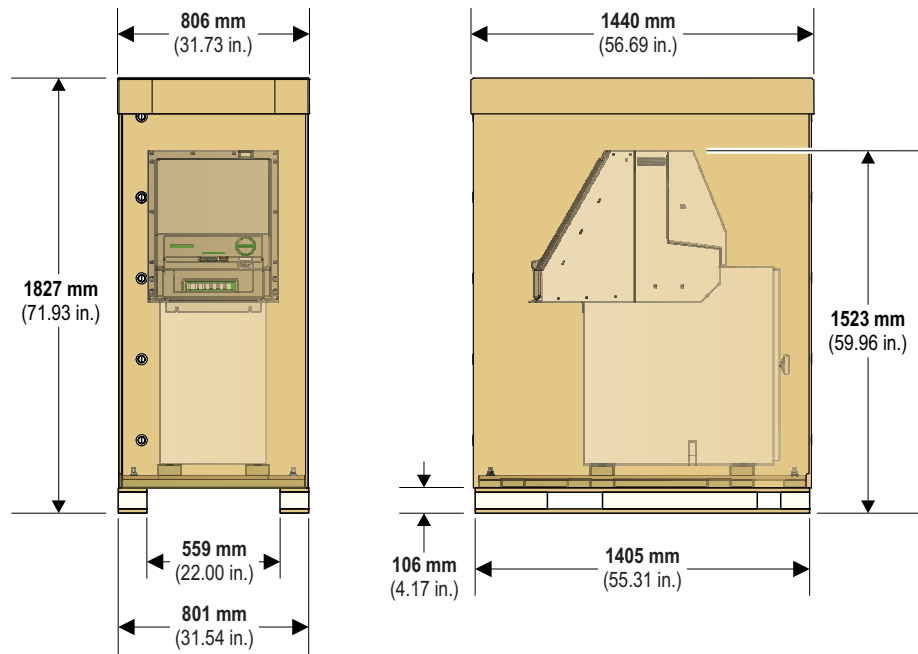
DECAL PLACEMENT

NCR recommends placing the decals above or below the device interface slots, determined by the space available near the slot.

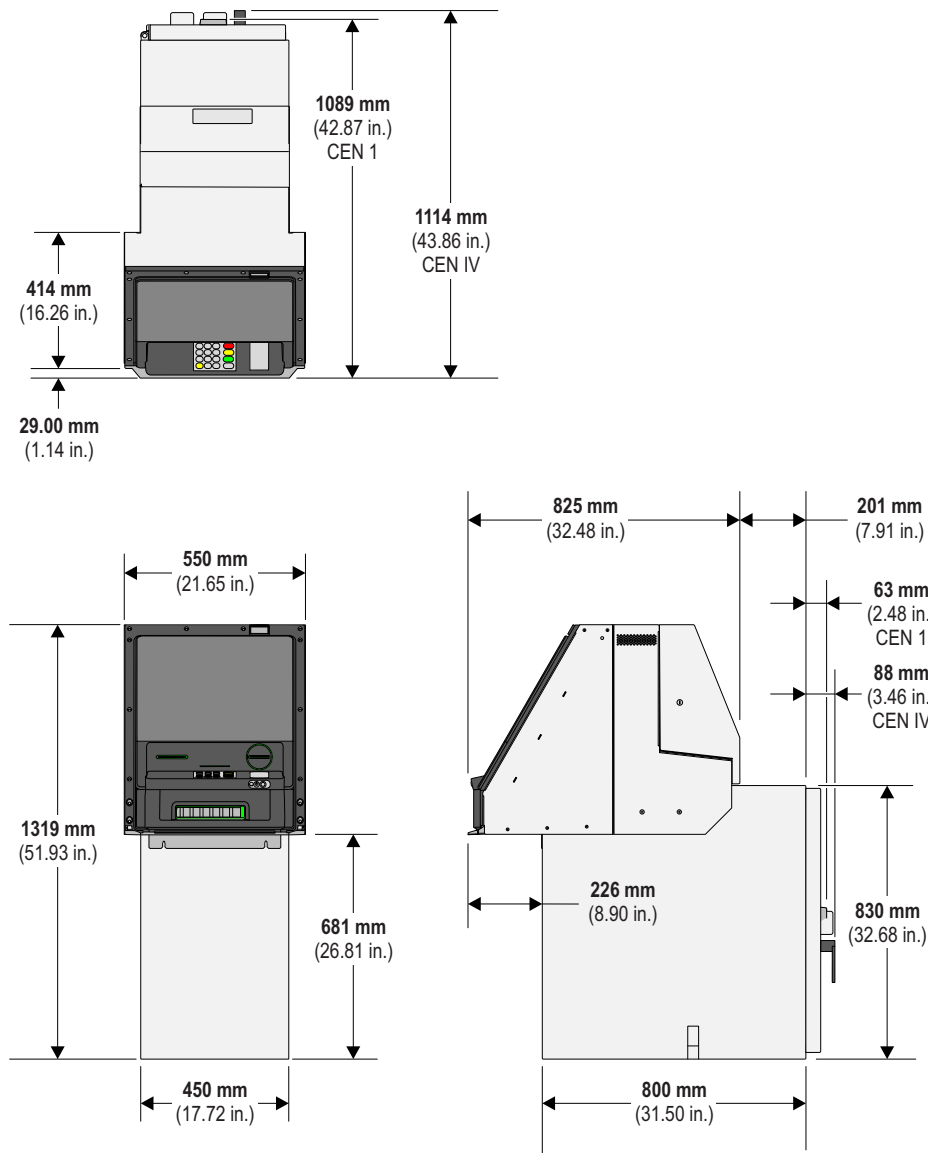


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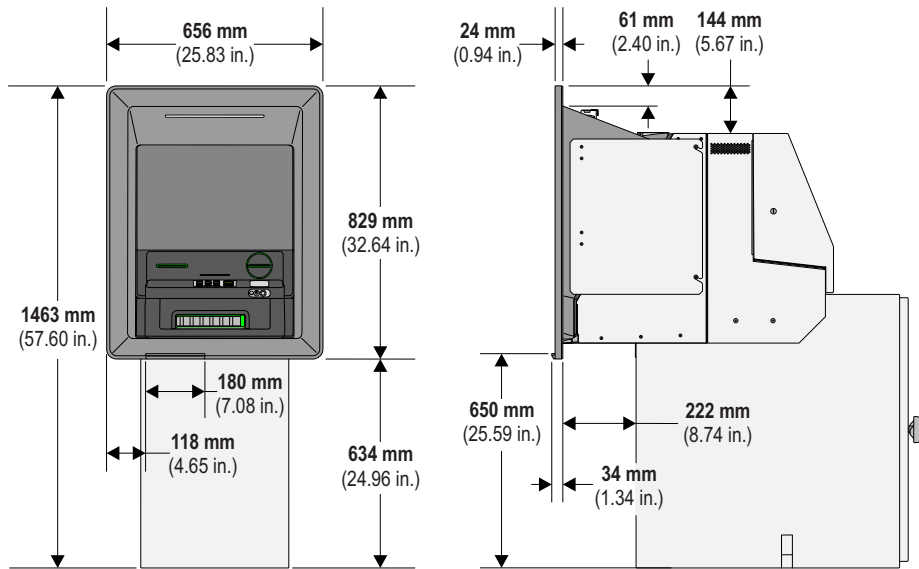
PACKAGE DIMENSIONS



ATM DIMENSIONS



COLLAR DIMENSIONS



WEIGHT AND FLOOR LOADING

Standard Security Enclosures

	CEN Grade I	CEN Grade IV
Maximum weight	498 kg (1098 lb)	610 kg (1345 lb)
Floor loading	1383 kg/m ² (283.3 lb/ft ²)	1694 kg/m ² (347.0 lb/ft ²)

Solid and Gas Explosion Resistant (EX GAS) Security Enclosures

	CEN Grade III
Maximum weight	560 kg (1235 lb)
Floor loading	1556 kg/m ² (318.6 lb/ft ²)

Variant Details - Short Sleeve

SECURITY BOLTS

Bolts and anchors must be supplied by the owning organisation.

To meet security standards the ATM must be bolted to the floor, through all of the bolt holes, using bolts with anchor washers as specified below. Bolts and anchor washers are to be supplied by the owning organisation.

Make sure that the floor or plinth is capable of withstanding the loading imposed by the anchor points for these bolts.

If an adjustable plinth is used, it must be bolted to the floor to the same specification as the ATM.

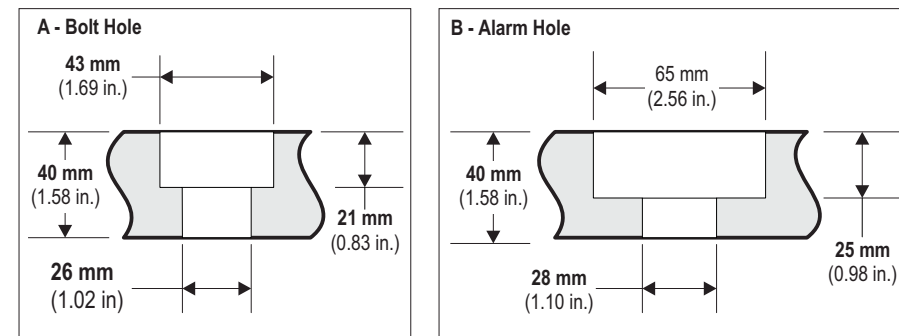
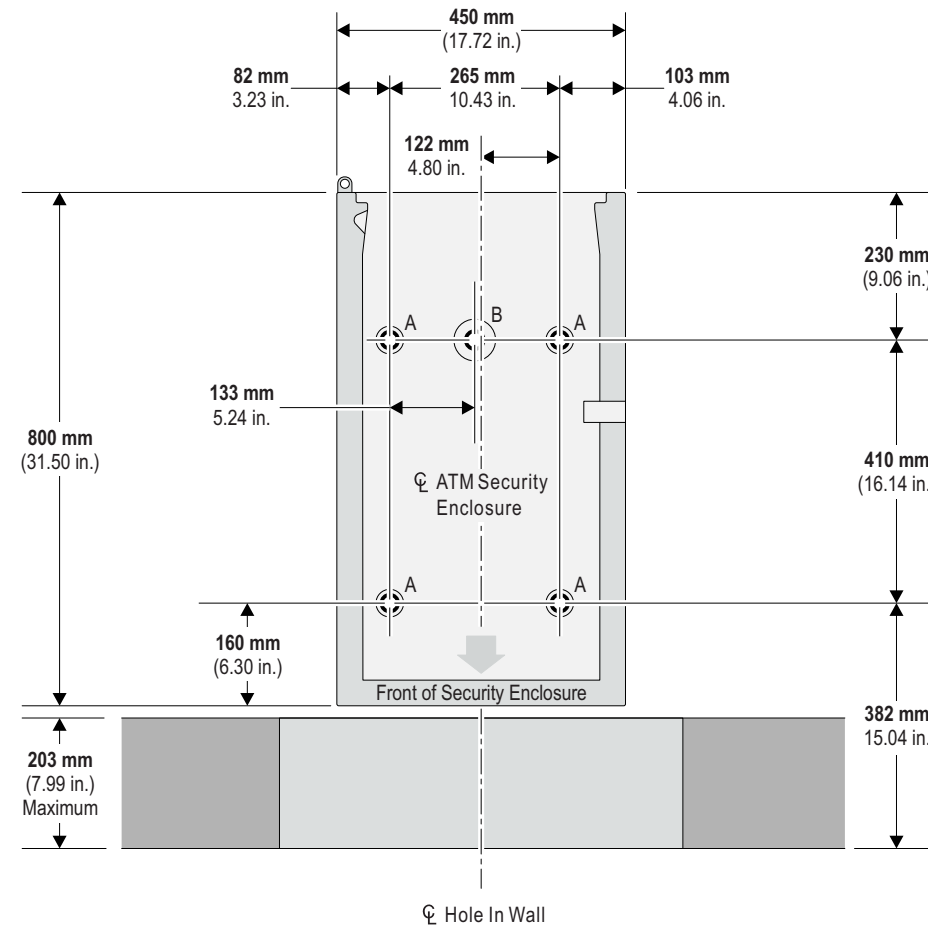
The minimum specification for bolts and washers to secure the ATM to a concrete floor is:

- Bolts
 - Type - either resin anchor or shield anchor bolts
 - Size - **M16** (5/8 in.)
 - Minimum Length - **150 mm** (5.9 in.)
 - Strength - high tensile (minimum ISO property class **8,8**).
- Washers
 - Type - flat, steel (as per DIN7349 or equivalent)
 - Size - **M16** (5/8 in.)
 - Outer diameter - no greater than **40 mm** (1.58 in.)
 - Minimum thickness - **6 mm** (0.2 in.).

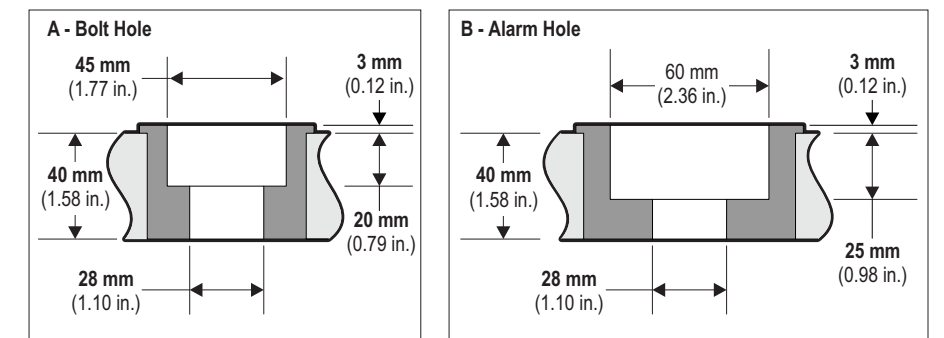
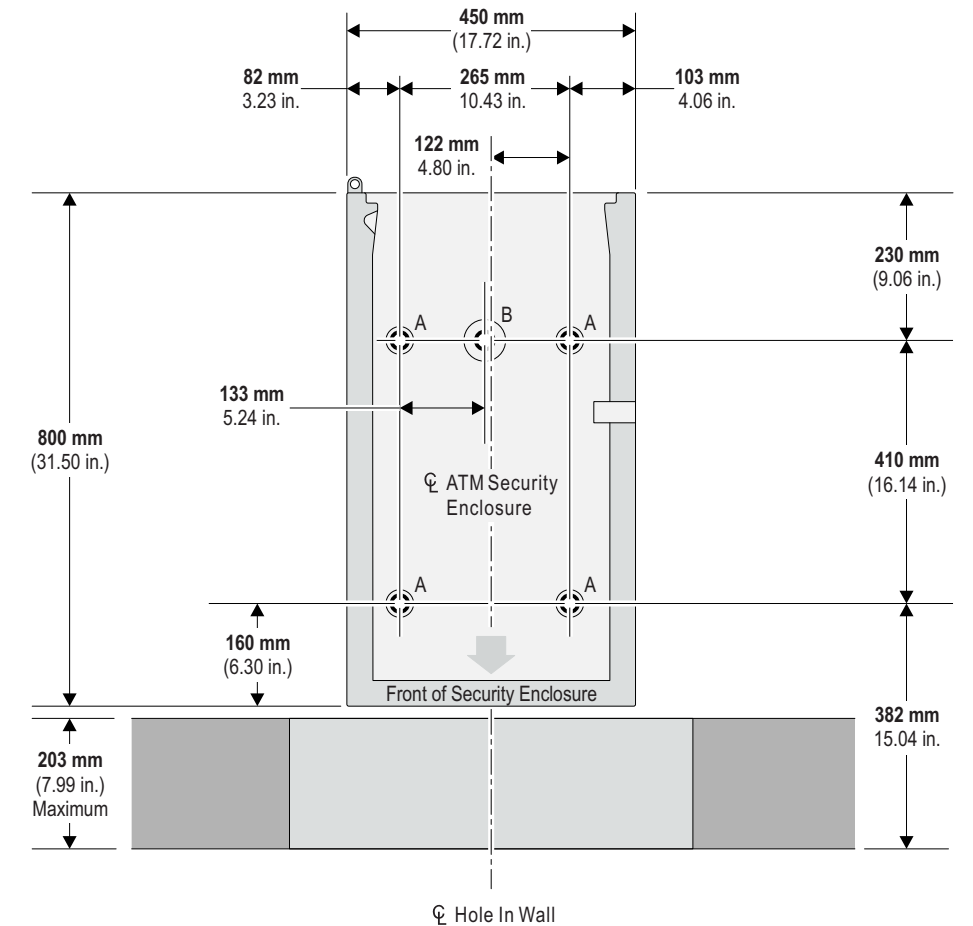
BOLT HOLES

The ATM must be bolted to the floor or plinth, through all the holes marked 'A', using four bolts with anchor washers.

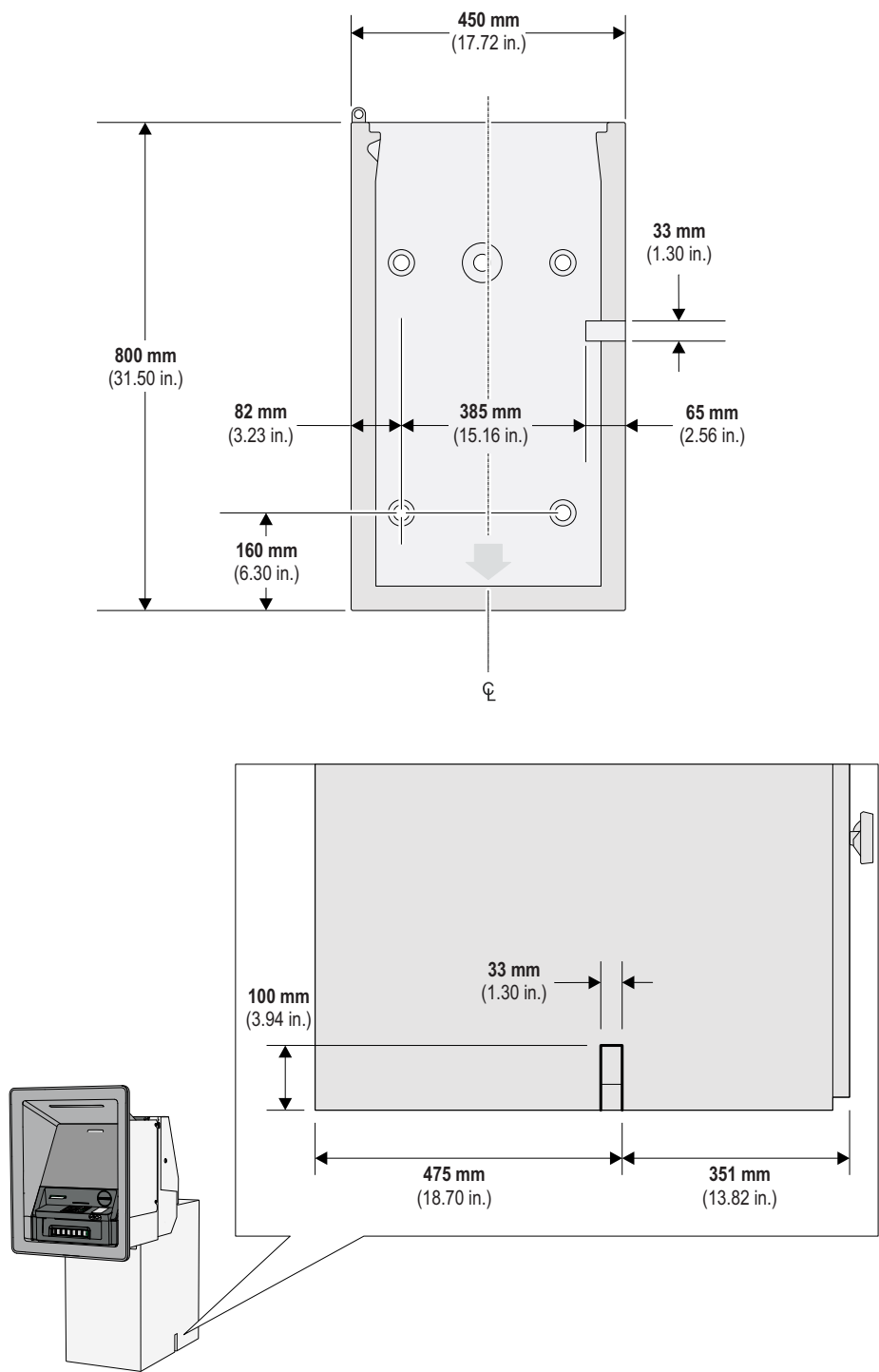
CEN 1 Security Enclosure



CEN IV Security Enclosure



CABLE ENTRY

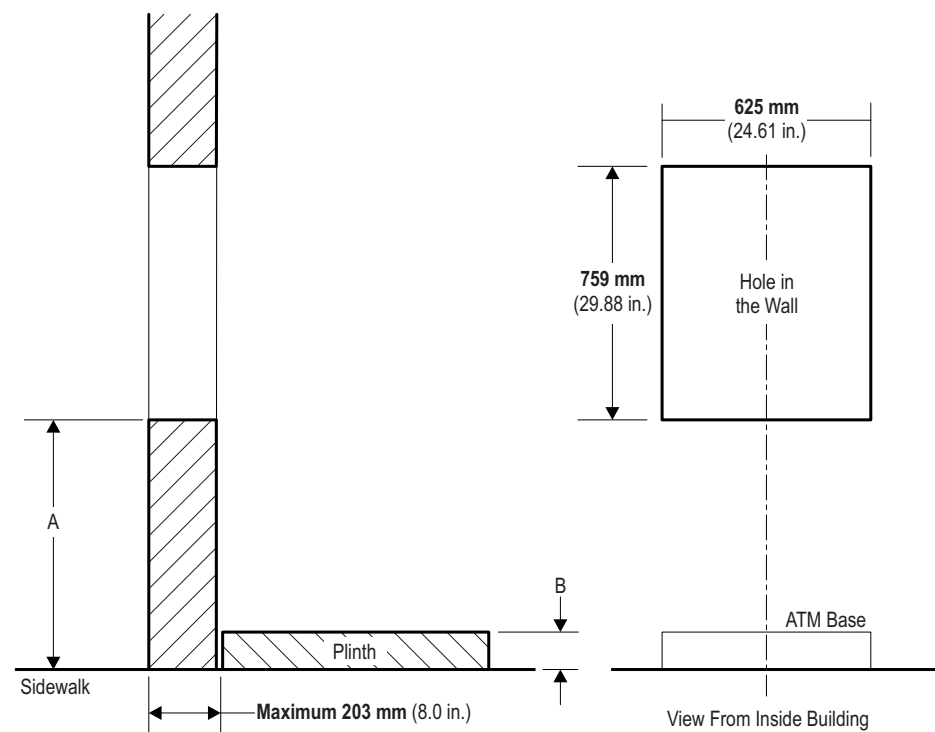


HOLE IN THE WALL

Hole at Lowered Height

It is the responsibility of the owning institution to make sure that the heights from the sidewalk level to the fascia items comply with any local regulations.

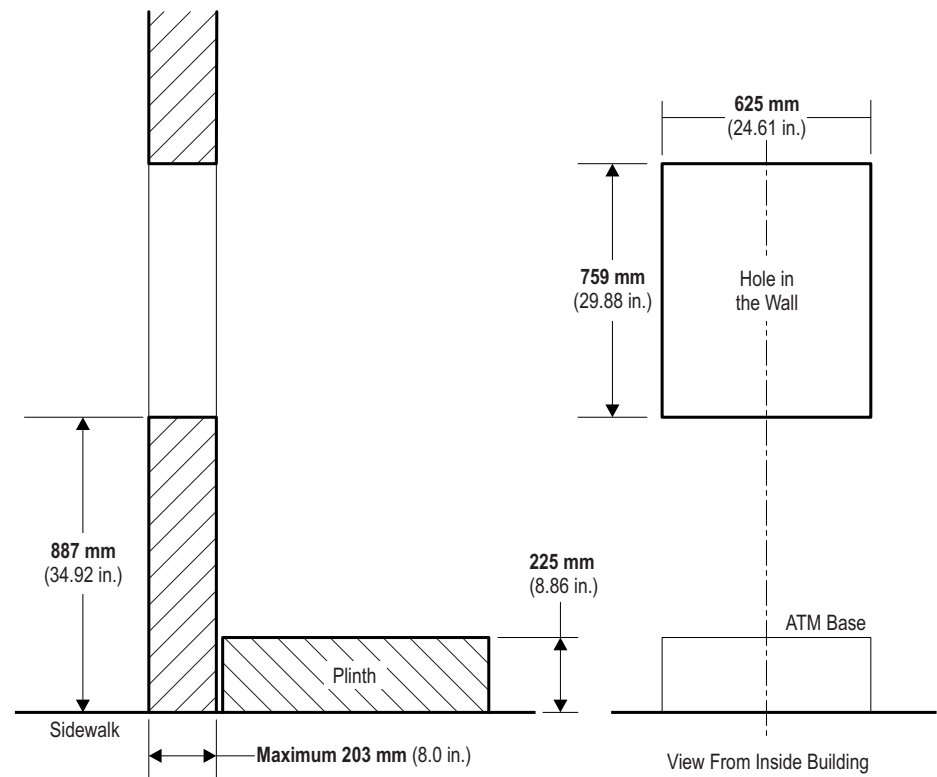
For correct installation height you must consider the difference in height between the sidewalk and the interior floor. If there is no difference then the plinth must have one of the heights specified in the table below.



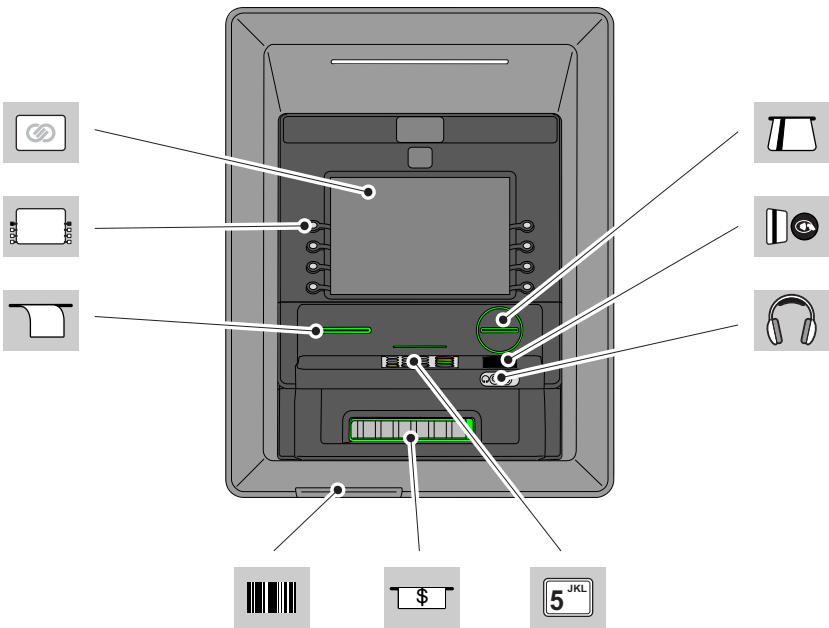
	Accessibility Regulations		
	UK (CAE Parallel Approach)	USA (ADA)	Canada & Australia (CSA Parallel Approach)
A - Bottom of hole	737 mm (29.02 in.)	707 mm (27.83 in.)	687 mm (27.05 in.)
B - Plinth height	75 mm (2.95 in.)	45 mm (1.77 in.)	25 mm (0.98 in.)

Hole at Optimum Height

This height assures the best display viewability for able-bodied people. It does NOT comply with the lowered height regulations listed in the previous section.

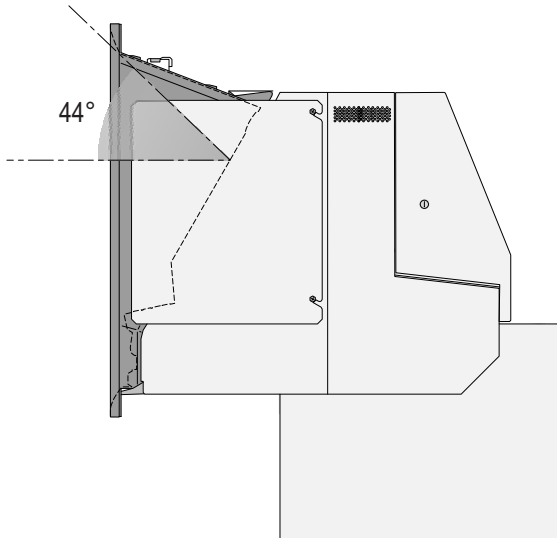


FACIA ITEMS



Topmost Viewable Facia Item

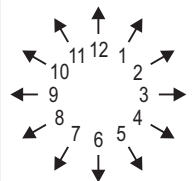
The topmost viewable facia item is the **381 mm (15 in.) Touchscreen**.



Heights and Depths

Facia Item			Height from base of ATM	Depth from front of barcode shelf	Depth from front of collar
	Touchscreen	Top	1175 mm (46.26 in.)	285 mm (11.22 in.)	275 mm (10.83 in.)
	Display with FDKs	Top FDK	1095mm (43.11 in.)	230 mm (9.06 in.)	220 mm (8.66 in.)
	Card Reader		917mm (36.10in.)	145 mm (5.71 in.)	135 mm (5.31 in.)
	Receipt		917mm (36.10in.)	145 mm (5.71 in.)	135 mm (5.31 in.)
	PIN Pad	Number 5 key	866 mm (34.09 in.)	106mm (4.17 in.)	96 mm (3.78 in.)
	Contactless Card Reader (under shelf)		862 mm (33.94 in.)	98 mm (3.86 in.)	88 mm (3.46 in.)
	Private Audio		834 mm (32.84 in.)	39 mm (1.54in.)	29 mm (1.14in.)
	Cash Exit/Entry		749mm (29.49 in.)	64 mm (2.52 in.)	54 mm (2.13 in.)
	Barcode Reader	Activation point	650 mm (25.59 in.)	5 mm (0.20 in.)	0 mm (0.00 in.)

Distance for Voice Guidance

Facia Item					Distance from No. 5 Key
	Card Reader		2		167 mm (6.57 in.)
	Contactless Card Reader (behind Facia)		3		156 mm (6.17 in.)
	Private Audio		4		172 mm (6.77 in.)
	Cash Exit/Entry		6		125 mm (4.21 in.)
	Barcode Reader	Activation point	7		261 mm (10.28 in.)
	Receipt		10		126 mm (4.96 in.)
	Display with FDKs	Top Left FDK	11		297 mm (11.69 in.)
	Touchscreen	Middle	12		232 mm (9.13 in.)

SERVICING AREAS - OPTIMUM

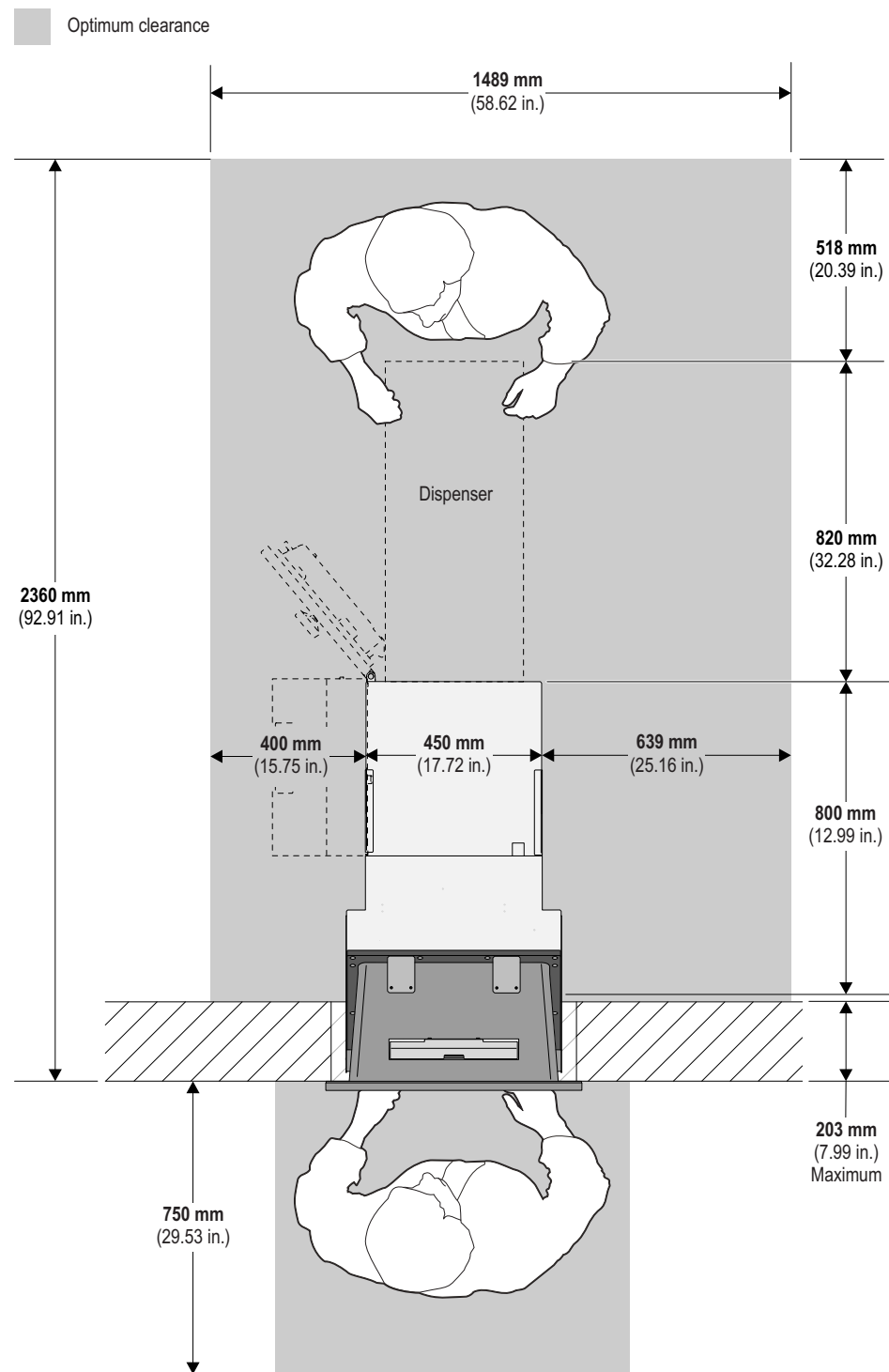
The optimum servicing area provides the best access to the ATM for all servicing and operation tasks.

Wherever possible the ATM should be installed within the optimum servicing area.

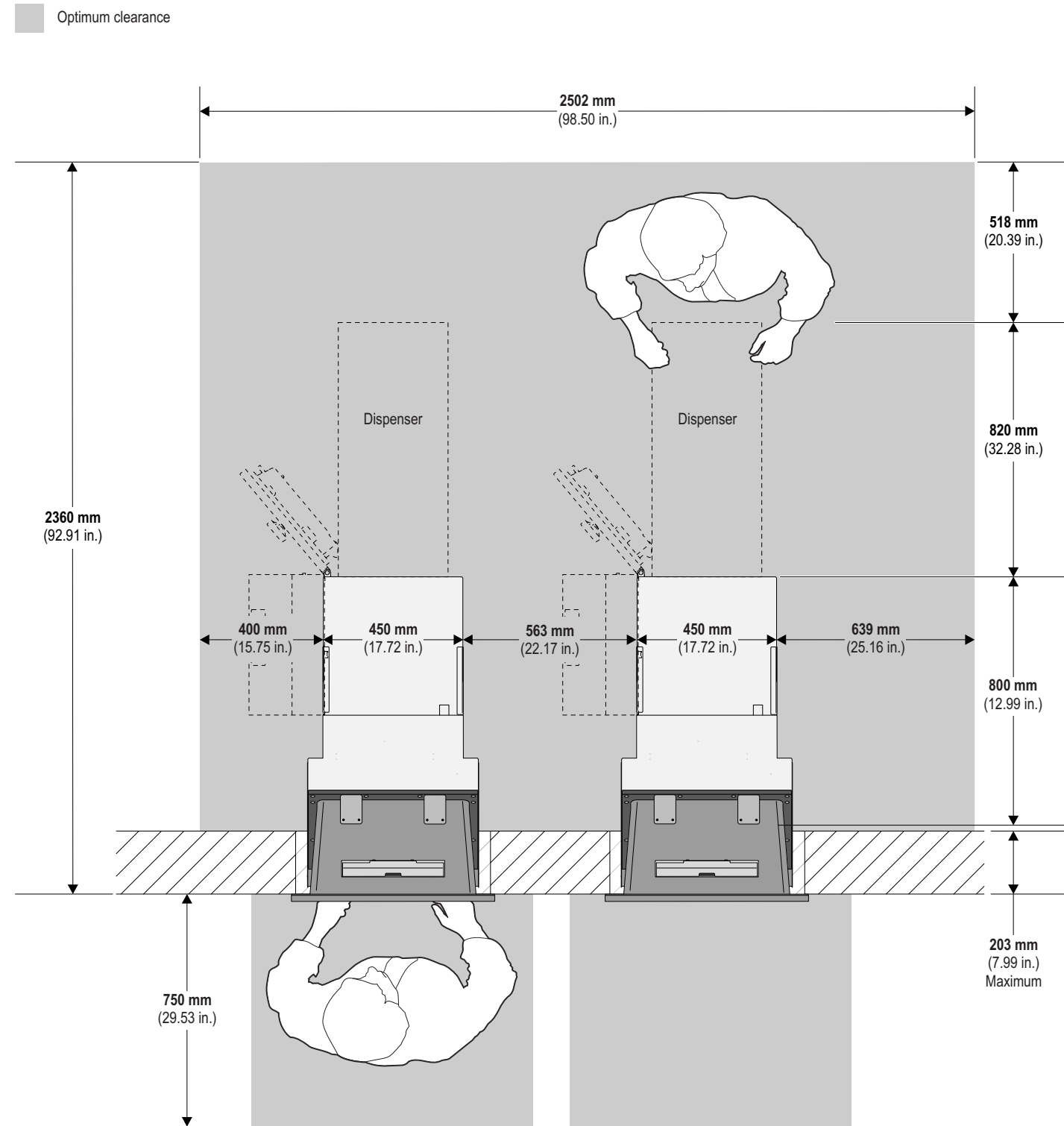
If the optimum area is not available then refer to Servicing Areas - Minimum. However note that installing the ATM in the minimum servicing area may increase the servicing and/or upgrading time over a ATM installed using the optimum area.

If you install in the minimum area then note that doors may open, and devices rack out, beyond the area shown. Always leave as much space as possible around the ATM to facilitate safe operation and servicing.

Single ATM



Side By Side



SERVICING AREAS - MINIMUM

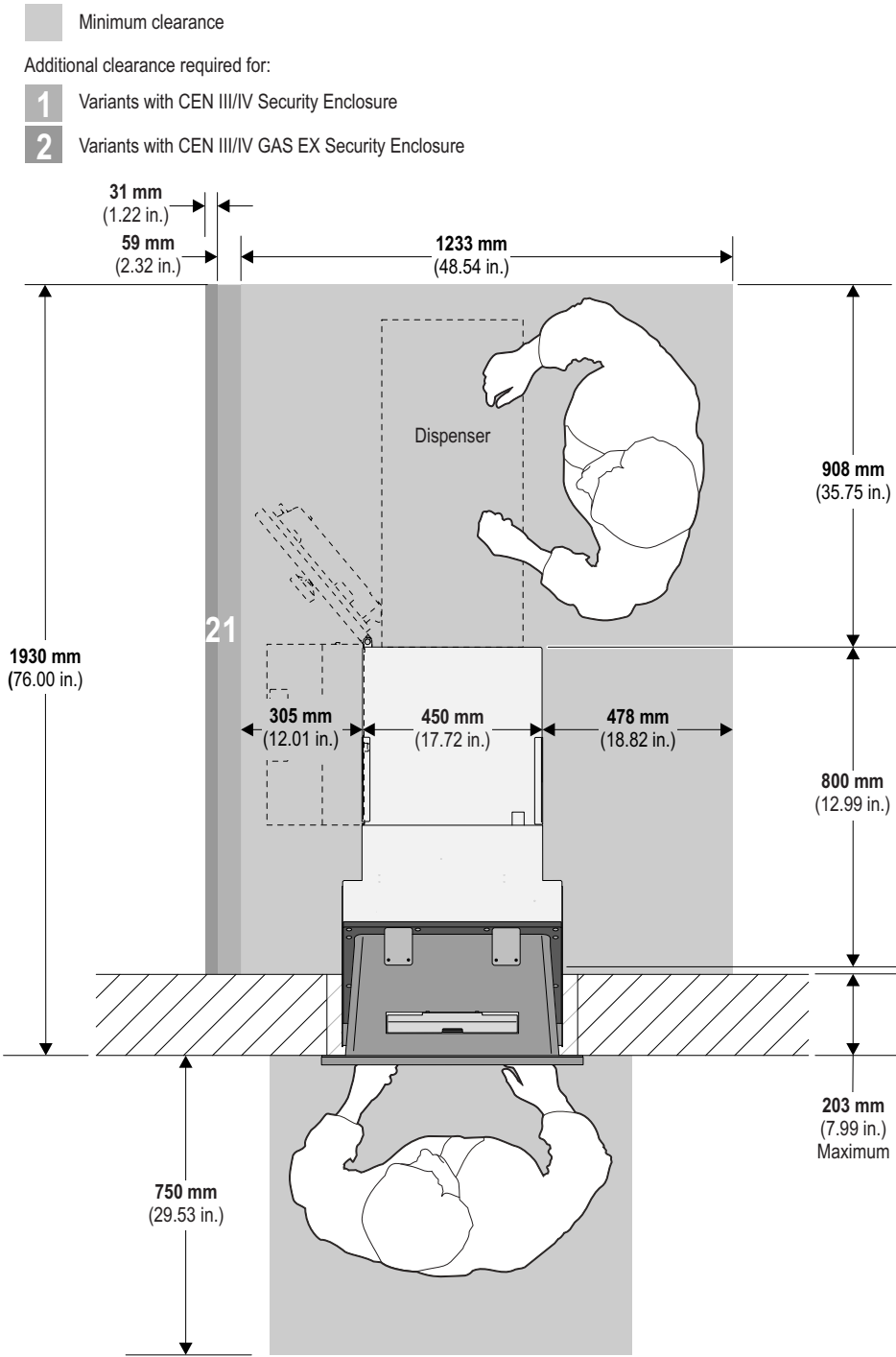
This is the **minimum** area required for operating and servicing the ATM.

Wherever possible the ATM should be installed within the optimum servicing area. Installing the ATM in the minimum servicing area may increase the servicing and/or upgrading time.

If the minimum area is not available then consult your local service representative. Every site is different and you may still be able to install the ATM but with further increases to servicing and/or upgrading time.

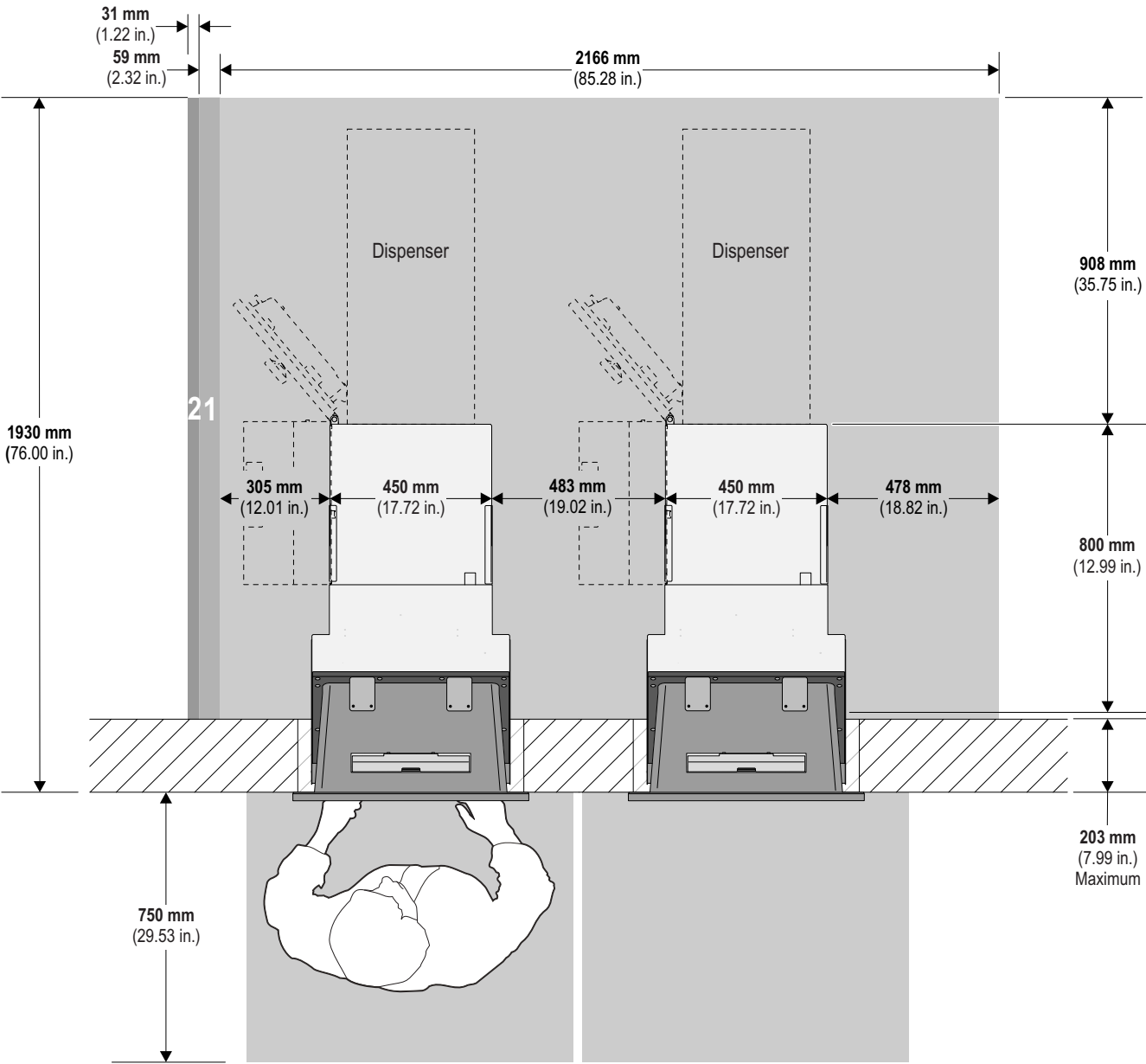
If you install in the minimum area then note that doors can open, and devices rack out, beyond the area shown. Always leave as much space as possible around the ATM to facilitate safe operation and servicing.

Single ATM



Side By Side

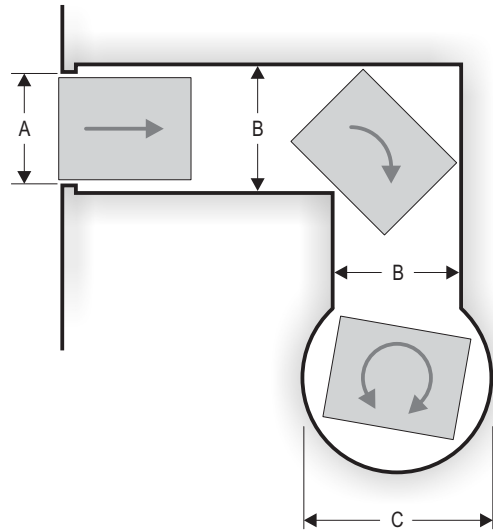
- Minimum clearance
- Additional clearance required for:
- 1 Variants with CEN III/IV Security Enclosure
 - 2 Variants with CEN III/IV GAS EX Security Enclosure



CLEARANCES - CORRIDOR

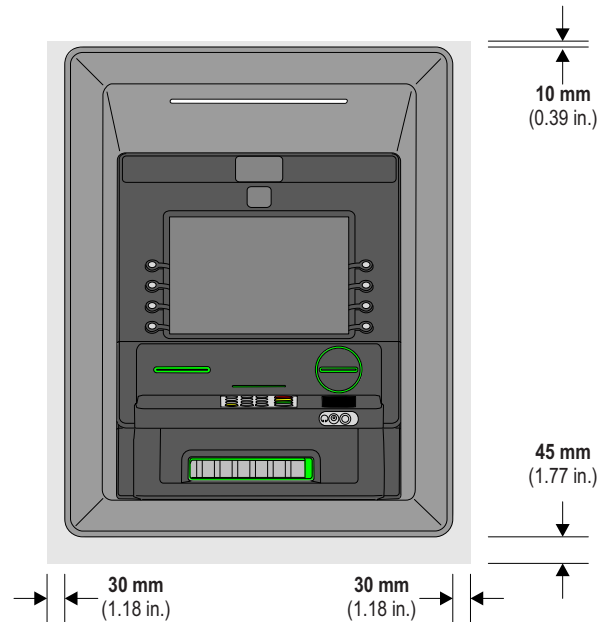
The dimensions shown assume the ATM is being moved using equipment that does not extend beyond the ATM or packaging.

A surrounding clearance of **6 mm** (0.24 in.) has been allowed in the dimensions.



		Packaged ATM (pallet, carton and lid)	Packaged ATM (pallet and carton)	Unpackaged ATM	
				CEN 1	CEN IV
A	Doorway or straight corridor	818 mm (32.20in.)	813 mm (32.01 in.)	562 mm (22.13 in.)	562 mm (22.13 in.)
B	Corridor with corner	1091 mm (42.95 in.)	1075 mm (42.32in.)	786 mm (30.94 in.)	795 mm (31.30in.)
C	Rotation about centre	1662 mm (65.43 in.)	1629 mm (64.13in.)	1232 mm (48.50 in.)	1254mm (49.37 in.)

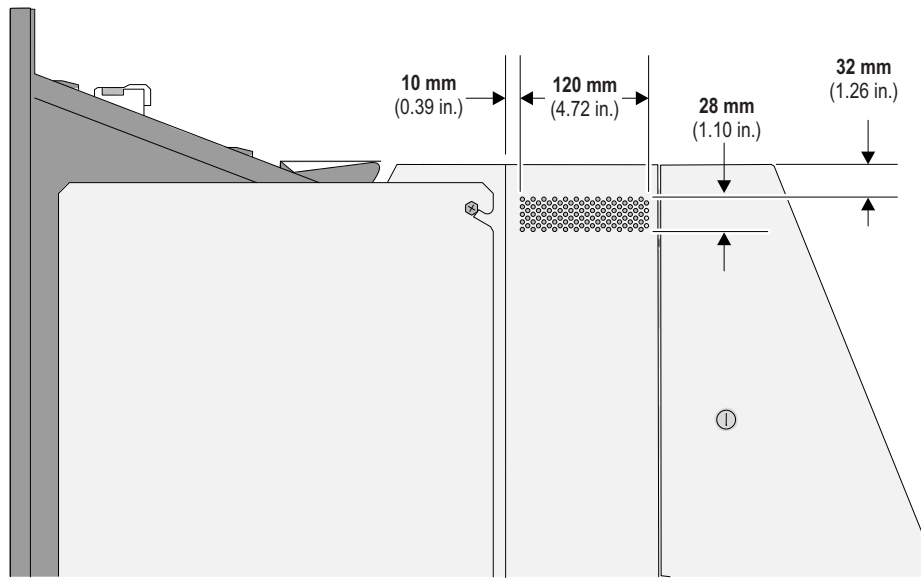
CLEARANCES - EXTERIOR WALL.



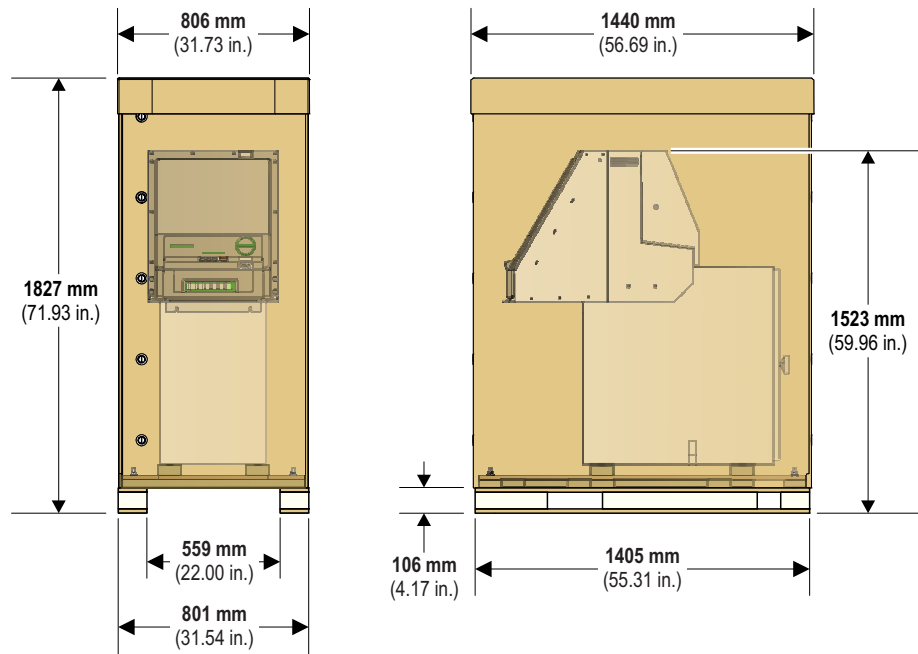
CLEARANCES - HOT AIR OUTLETS

The illustration below shows the position of the hot air holes on both sides of the ATM.

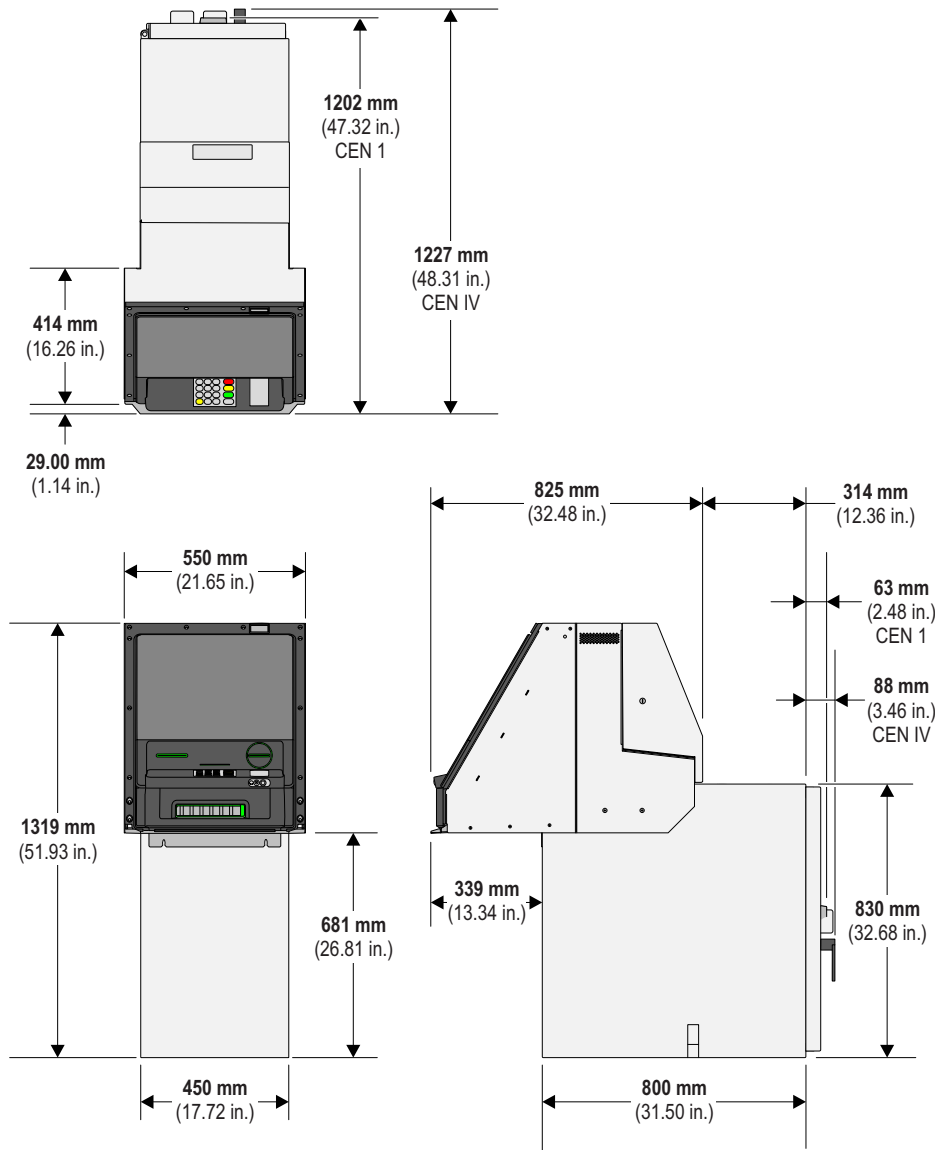
Do not obstruct the hot air holes as this can cause the ATM to overheat.



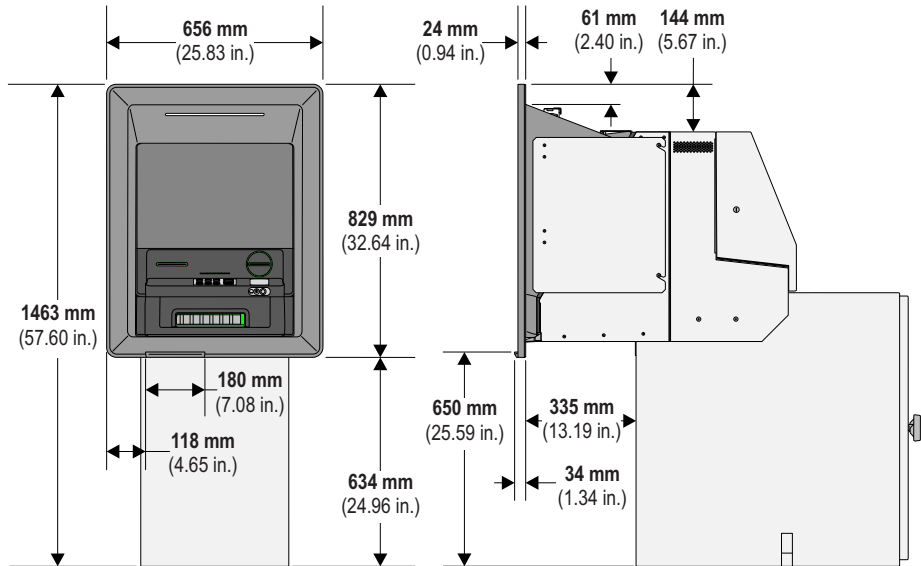
PACKAGE DIMENSIONS



ATM DIMENSIONS



COLLAR DIMENSIONS



WEIGHT AND FLOOR LOADING

Standard Security Enclosures

	CEN Grade I	CEN Grade IV
Maximum weight	498 kg (1098 lb)	610 kg (1345 lb)
Floor loading	1383 kg/m ² (283.3 lb/ft ²)	1694 kg/m ² (347.0 lb/ft ²)

Solid and Gas Explosion Resistant (EX GAS) Security Enclosures

	CEN Grade III
Maximum weight	560 kg (1235 lb)
Floor loading	1556 kg/m ² (318.6 lb/ft ²)

SECURITY BOLTS

Bolts and anchors must be supplied by the owning organisation.

To meet security standards the ATM must be bolted to the floor, through all of the bolt holes, using bolts with anchor washers as specified below. Bolts and anchor washers are to be supplied by the owning organisation.

Make sure that the floor or plinth is capable of withstanding the loading imposed by the anchor points for these bolts.

If an adjustable plinth is used, it must be bolted to the floor to the same specification as the ATM.

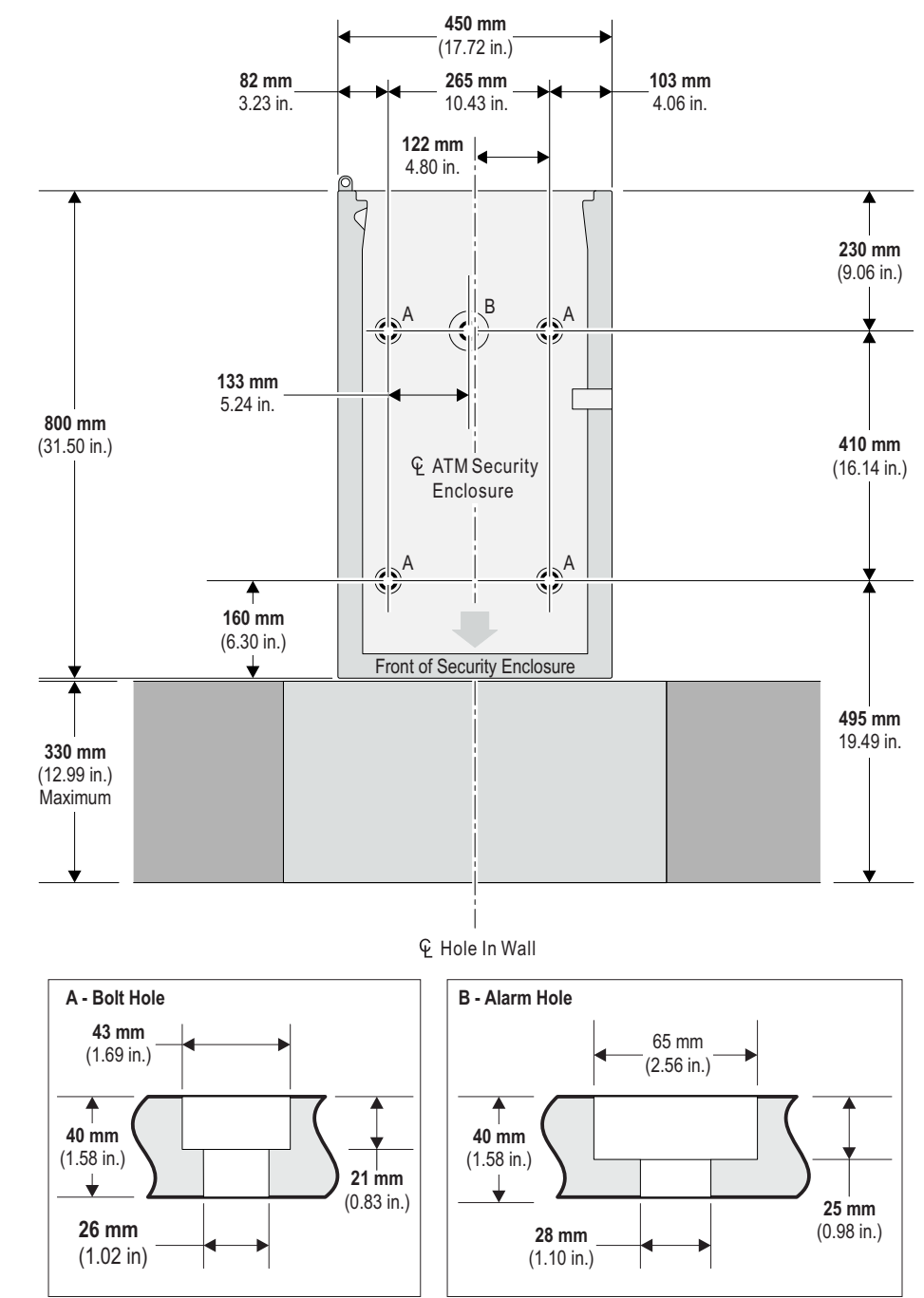
The minimum specification for bolts and washers to secure the ATM to a concrete floor is:

- Bolts
 - Type - either resin anchor or shield anchor bolts
 - Size - **M16** (5/8 in.)
 - Minimum Length - **150 mm** (5.9 in.)
 - Strength - high tensile (minimum ISO property class **8,8**).
- Washers
 - Type - flat, steel (as per DIN7349 or equivalent)
 - Size - **M16** (5/8 in.)
 - Outer diameter - no greater than **40 mm** (1.58 in.)
 - Minimum thickness - **6 mm** (0.2 in.).

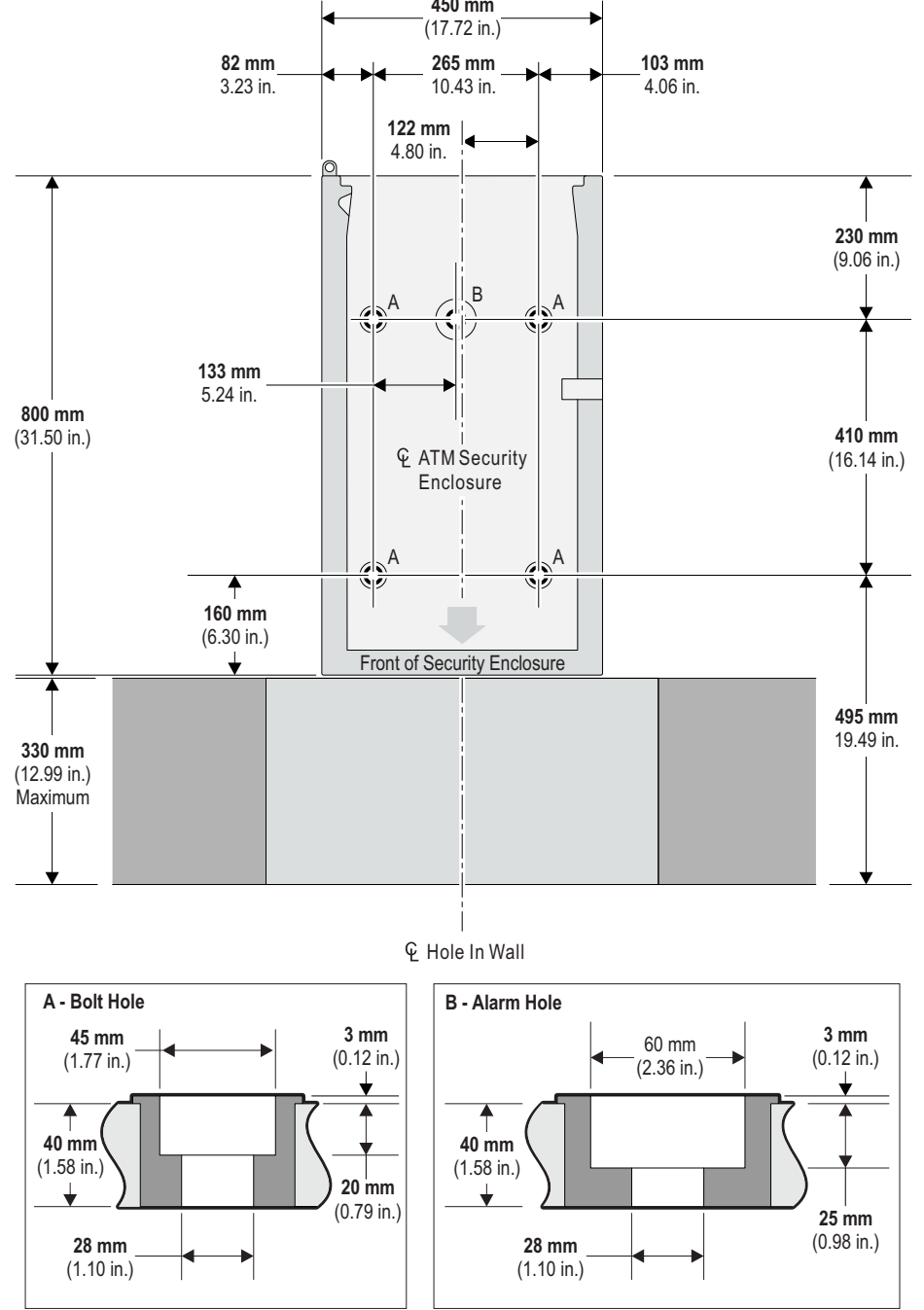
BOLT HOLES

The ATM must be bolted to the floor or plinth, through all the holes marked ‘A’, using four bolts with anchor washers.

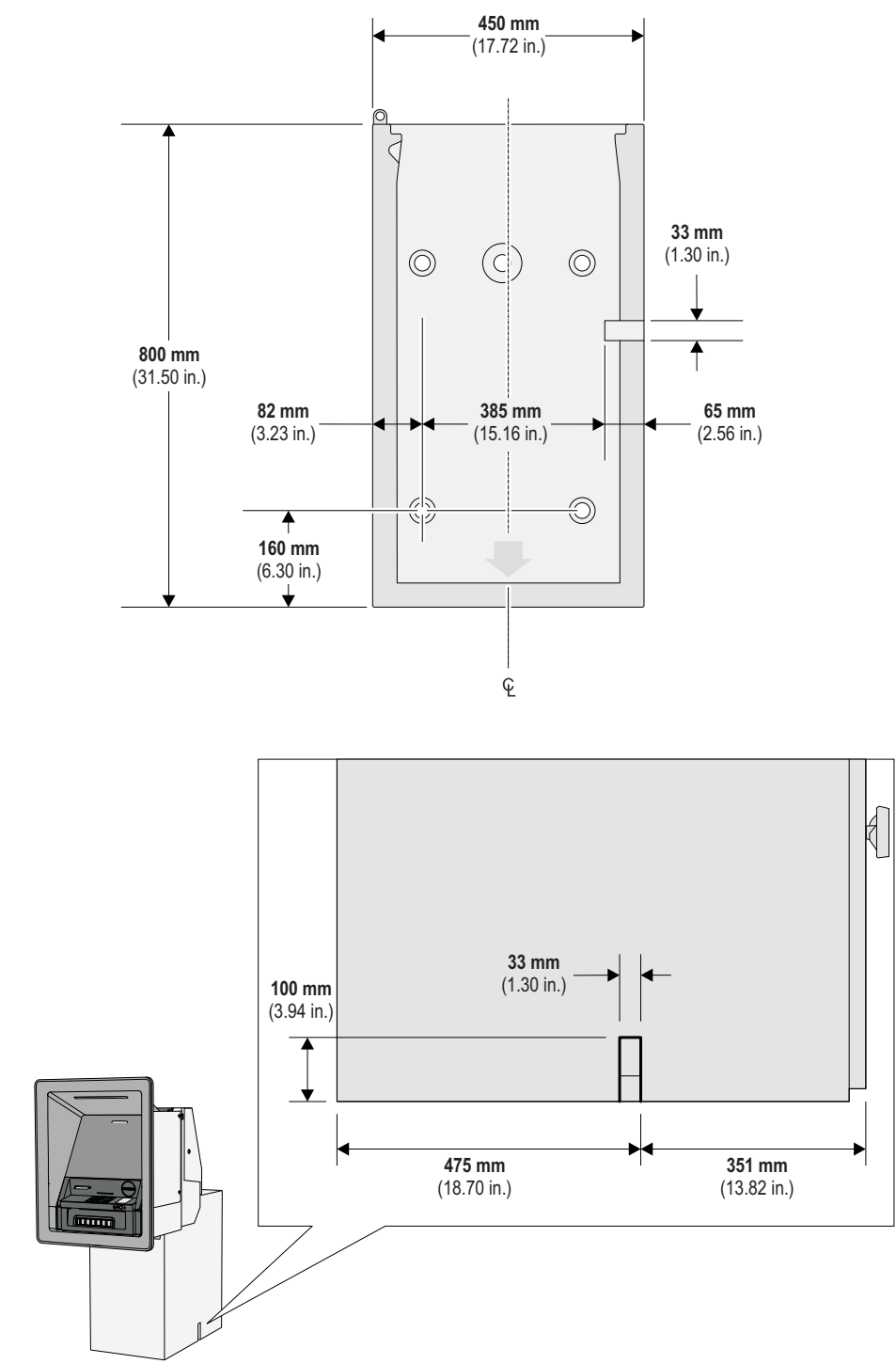
CEN 1 Security Enclosure



CEN IV Security Enclosure



CABLE ENTRY

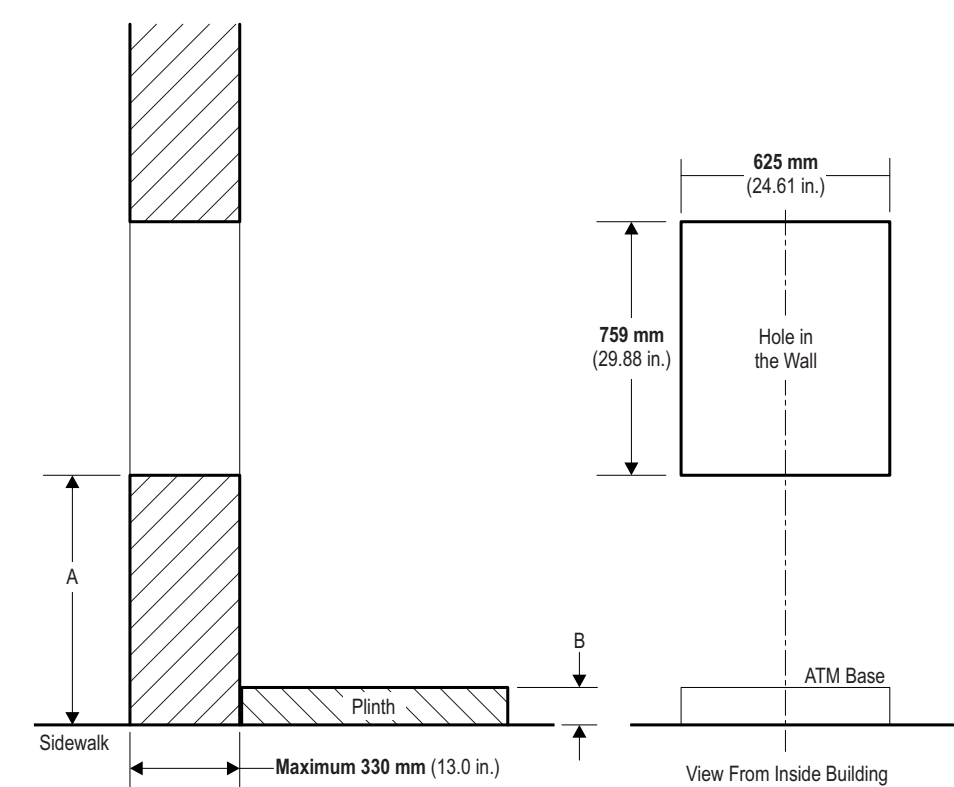


HOLE IN THE WALL

Hole at Lowered Height

It is the responsibility of the owning institution to make sure that the height from the sidewalk level to the highest operable point on the facia (see 'Facia Items') complies with any local regulations.

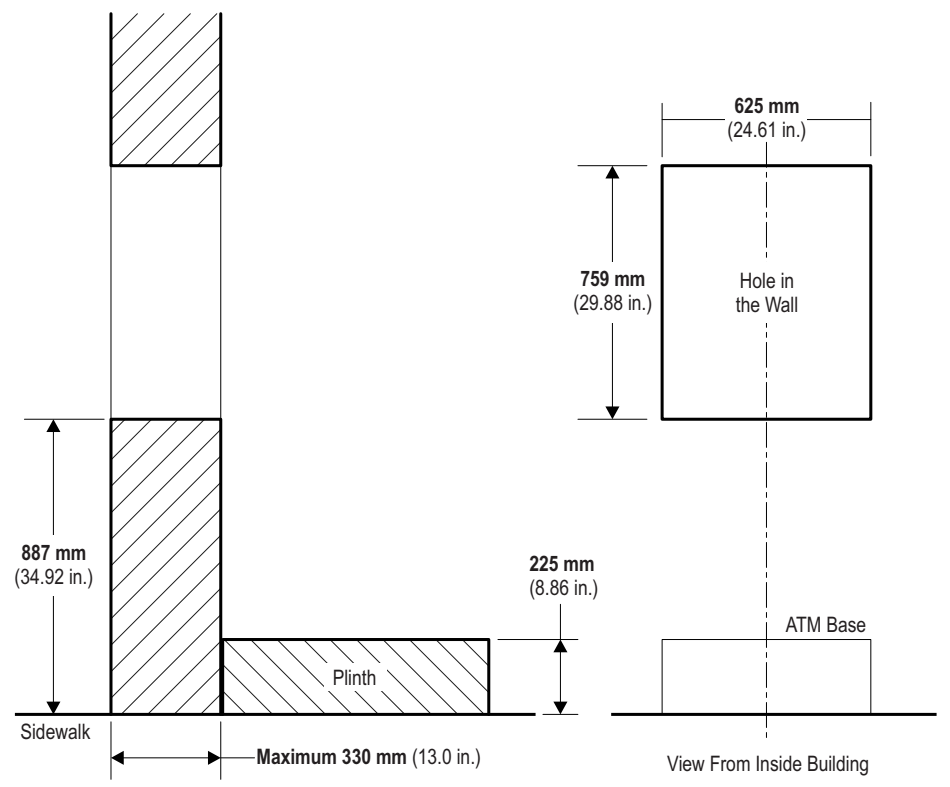
For correct installation height you must consider the difference in height between the sidewalk and the interior floor, and install the ATM on a plinth if necessary. Note that CEN certified security enclosures must have a CEN certified plinth.



	Accessibility Regulations		
	UK (CAE Parallel Approach)	USA (ADA)	Canada & Australia (CSA Parallel Approach)
A - Bottom of hole	737 mm (29.02 in.)	707 mm (27.83 in.)	687 mm (27.05 in.)
B - Plinth height	75 mm (2.95 in.)	45 mm (1.77 in.)	25 mm (0.98 in.)

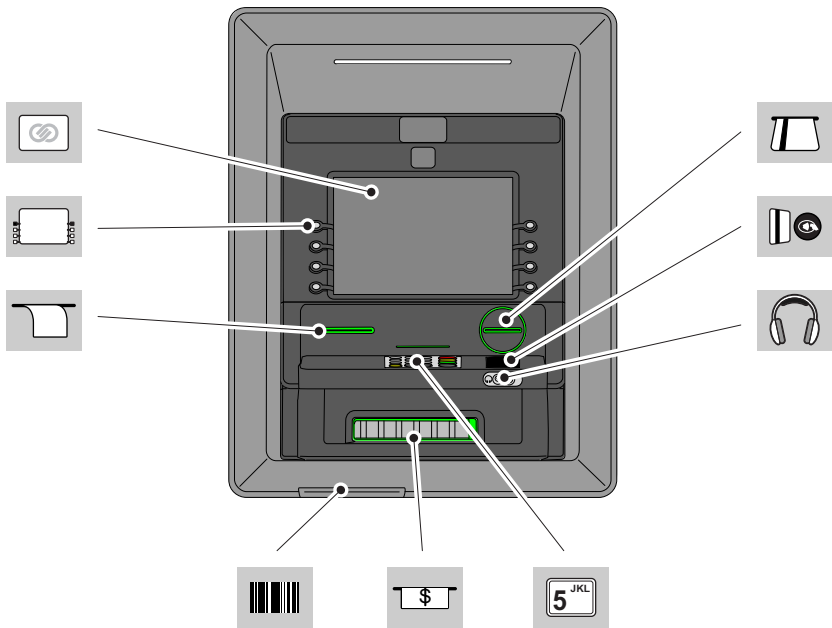
Hole at Optimum Height

This height assures the best display viewability for able-bodied people. It does NOT comply with the lowered height regulations listed in the previous section.



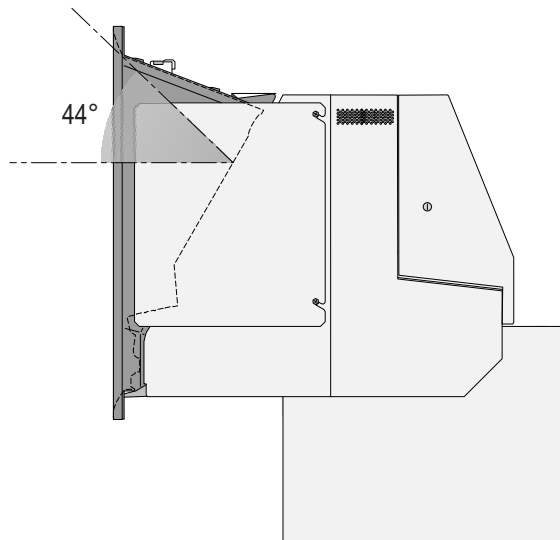
Variant Details - Standard Sleeve

FACIA ITEMS



Topmost Viewable Facia Item

The topmost viewable facia item is the **381 mm (15 in.) Touchscreen**.



Heights and Depths

Facia Item			Height from base of ATM	Depth from front of barcode shelf	Depth from front of collar
	Touchscreen	Top	1175 mm (46.26 in.)	285 mm (11.22 in.)	275 mm (10.83 in.)
	Display with FDKs	Top FDK	1095mm (43.11 in.)	230 mm (9.06 in.)	220 mm (8.66 in.)
	Card Reader		917mm (36.10in.)	145 mm (5.71 in.)	135 mm (5.31 in.)
	Receipt		917mm (36.10in.)	145 mm (5.71 in.)	135 mm (5.31 in.)
	PIN Pad	Number 5 key	866 mm (34.09 in.)	106mm (4.17 in.)	96 mm (3.78 in.)
	Contactless Card Reader (under shelf)		862 mm (33.94 in.)	98 mm (3.86 in.)	88 mm (3.46 in.)
	Private Audio		834 mm (32.84 in.)	39 mm (1.54in.)	29 mm (1.14in.)
	Cash Exit/Entry		749mm (29.49 in.)	64 mm (2.52 in.)	54 mm (2.13 in.)
	Barcode Reader	Activation point	650 mm (25.59 in.)	5 mm (0.20 in.)	0 mm (0.00 in.)

Distance for Voice Guidance

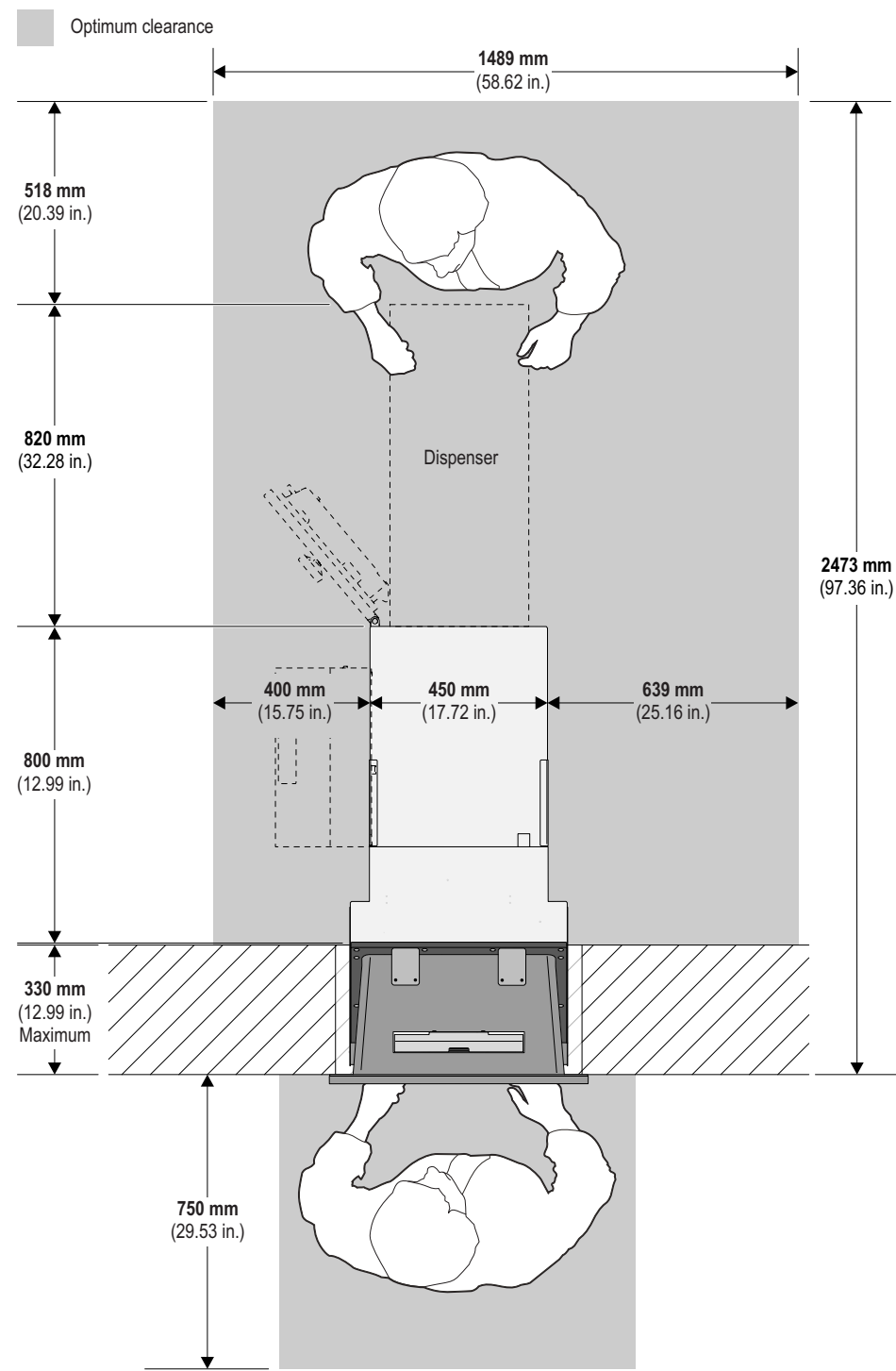
Facia Item					Distance from No. 5 Key
	Card Reader		2		167 mm (6.57 in.)
	Contactless Card Reader (behind Facia)		3		156 mm (6.17 in.)
	Private Audio		4		172 mm (6.77 in.)
	Cash Exit/Entry		6		25 mm (4.21 in.)
	Barcode Reader	Activation point	7		261 mm (10.28 in.)
	Receipt		10		126 mm (4.96 in.)
	Display with FDKs	Top Left FDK	11		297 mm (11.69 in.)
	Touchscreen	Middle	12		232 mm (9.13 in.)

SERVICING AREAS - OPTIMUM

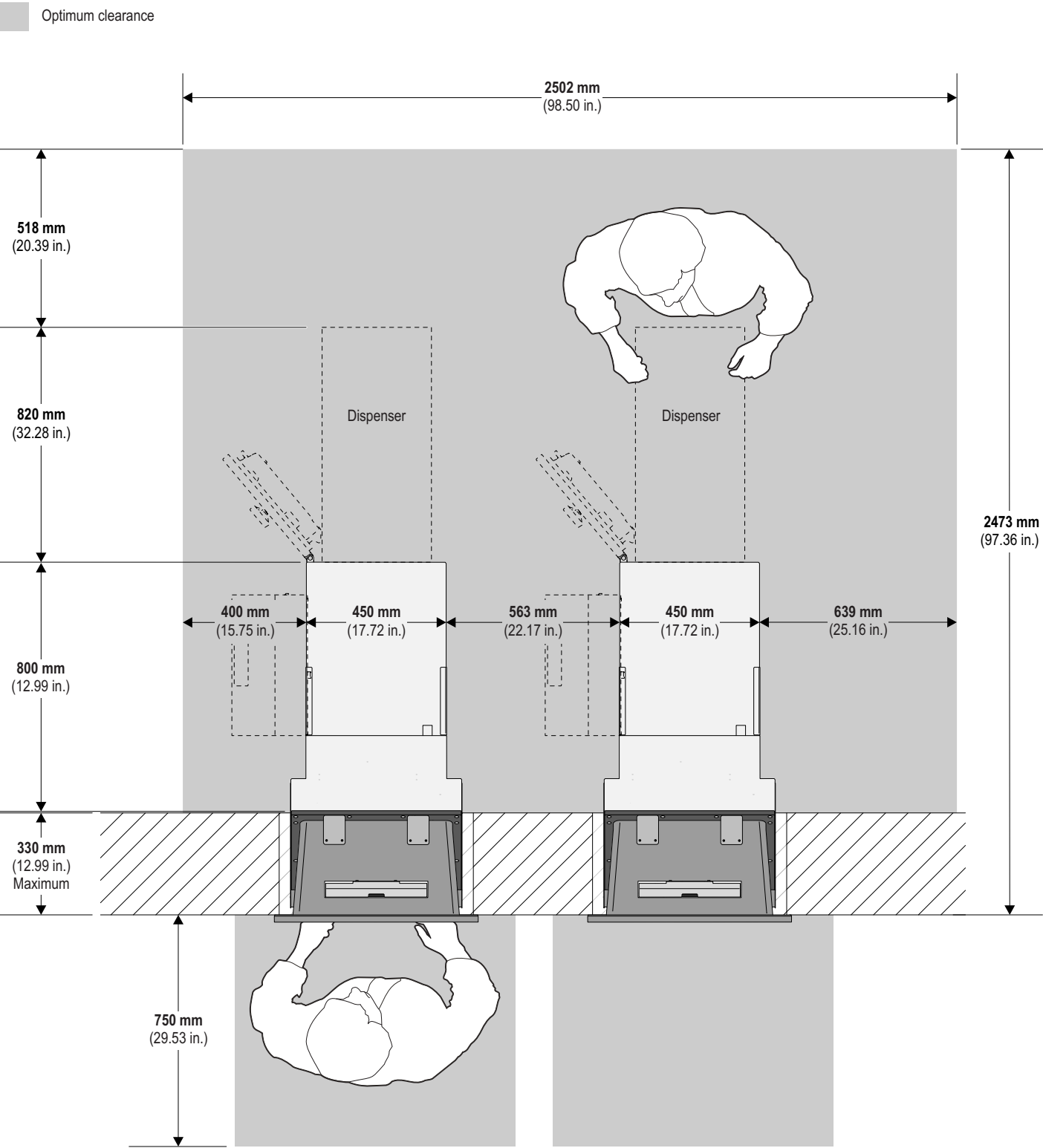
The optimum servicing area provides the best access to the ATM for all servicing and operation tasks.
Wherever possible the ATM should be installed within the optimum servicing area.

If the optimum area is not available then refer to Servicing Areas - Minimum. However note that installing the ATM in the minimum servicing area may increase the servicing and/or upgrading time over a ATM installed using the optimum area.
If you install in the minimum area then note that doors may open, and devices rack out, beyond the area shown. Always leave as much space as possible around the ATM to facilitate safe operation and servicing.

Single ATM



Side By Side



SERVICING AREAS - MINIMUM

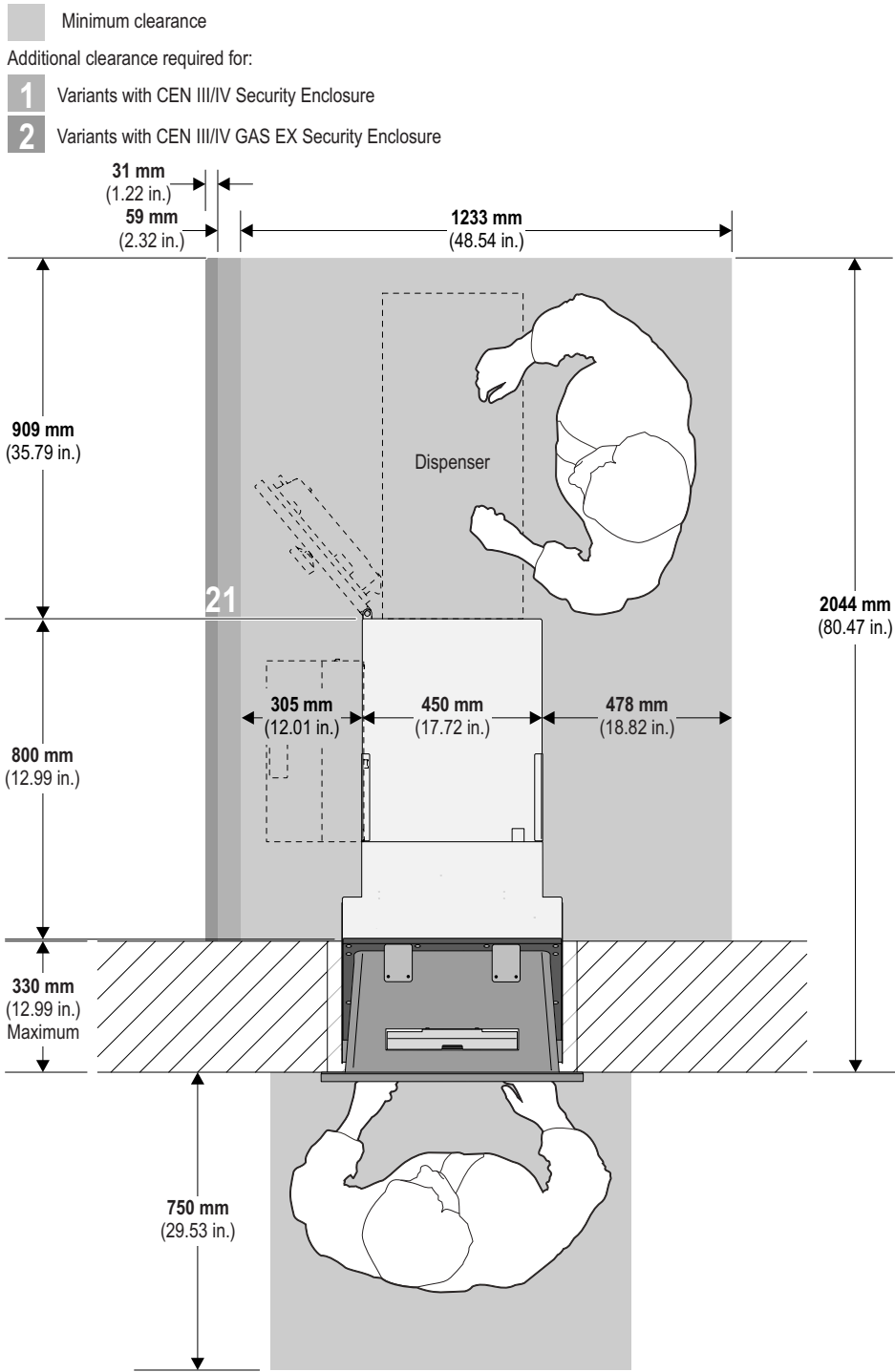
This is the **minimum** area required for operating and servicing the ATM.

Wherever possible the ATM should be installed within the optimum servicing area. Installing the ATM in the minimum servicing area may increase the servicing and/or upgrading time.

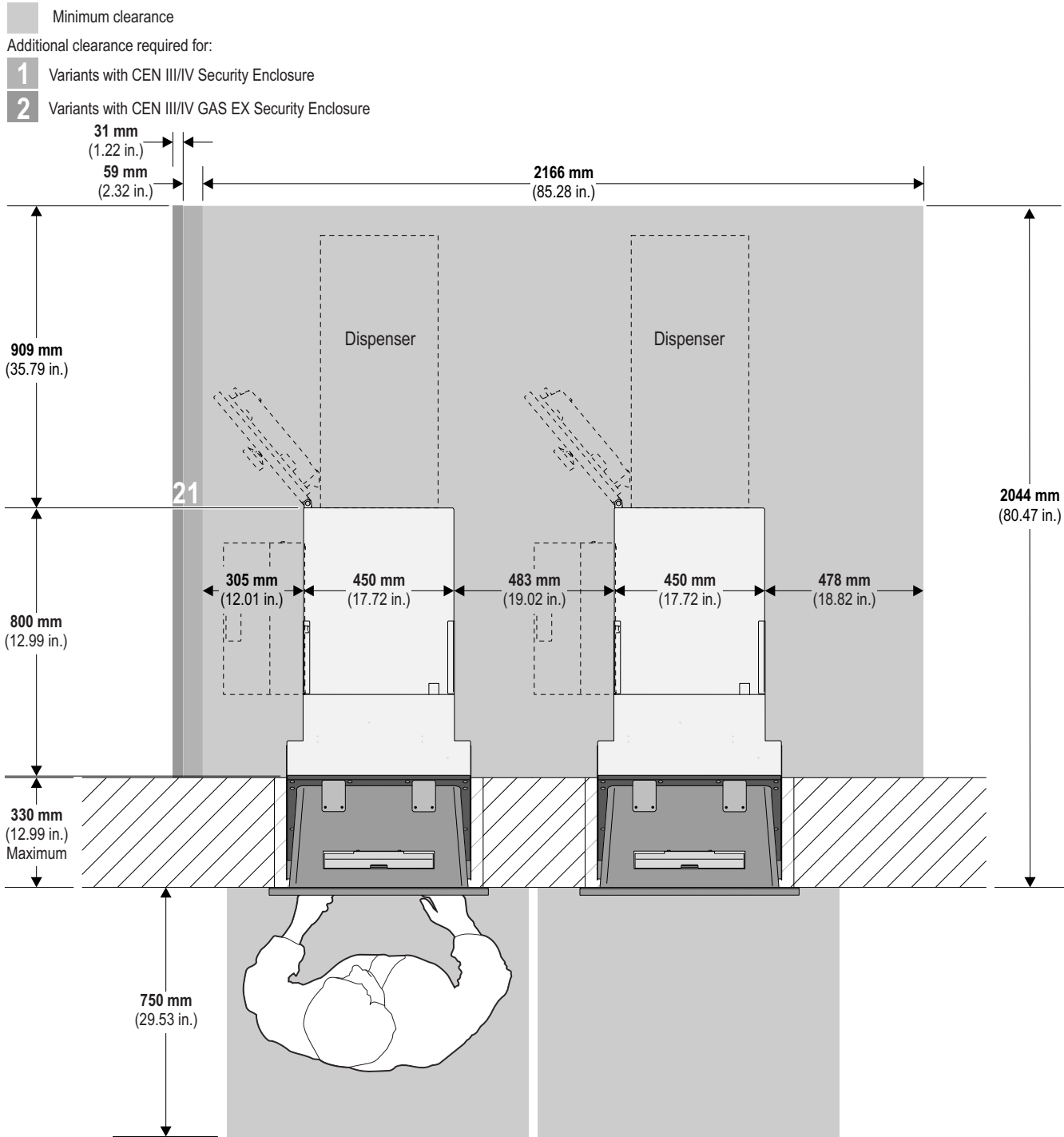
If the minimum area is not available then consult your local service representative. Every site is different and you may still be able to install the ATM but with further increases to servicing and/or upgrading time.

If you install in the minimum area then note that doors can open, and devices rack out, beyond the area shown. Always leave as much space as possible around the ATM to facilitate safe operation and servicing.

Single ATM



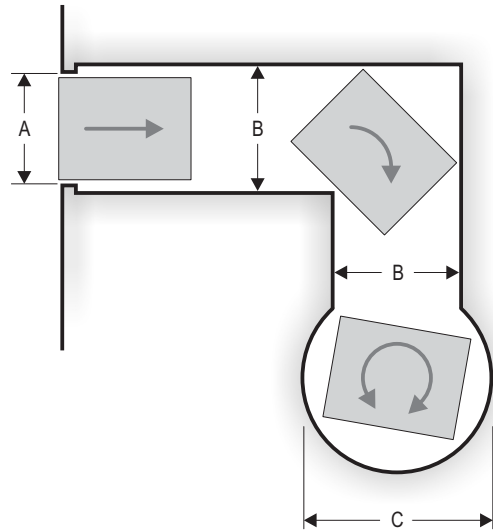
Side By Side



CLEARANCES - CORRIDOR

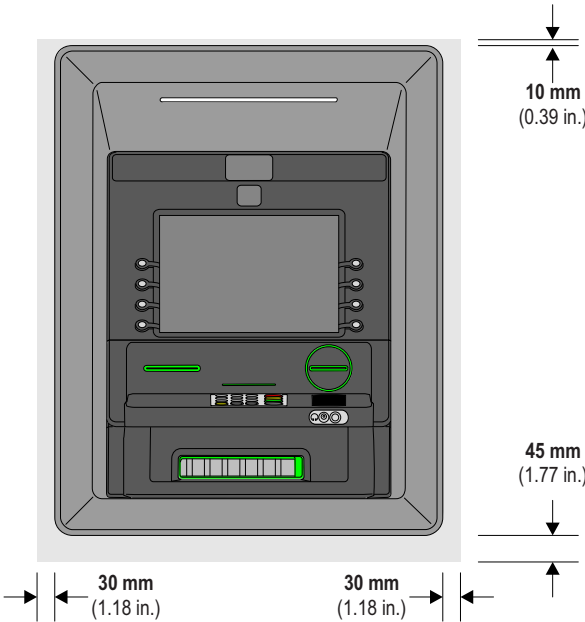
The dimensions shown assume the ATM is being moved using equipment that does not extend beyond the ATM or packaging.

A surrounding clearance of **6 mm** (0.24 in.) has been allowed in the dimensions.



		Packaged ATM (pallet, carton and lid)	Packaged ATM (pallet and carton)	Unpackaged ATM	
				CEN 1	CEN IV
A	Doorway or straight corridor	818 mm (32.20in.)	813 mm (32.01 in.)	562 mm (22.13 in.)	562 mm (22.13 in.)
B	Corridor with corner	1091 mm (42.95 in.)	1075 mm (42.32in.)	827 mm (32.56 in.)	836 mm (32.91 in.)
C	Rotation about centre	1662 mm (65.43 in.)	1629 mm (64.13in.)	1334 mm (52.52 in.)	1357 mm (53.43 in.)

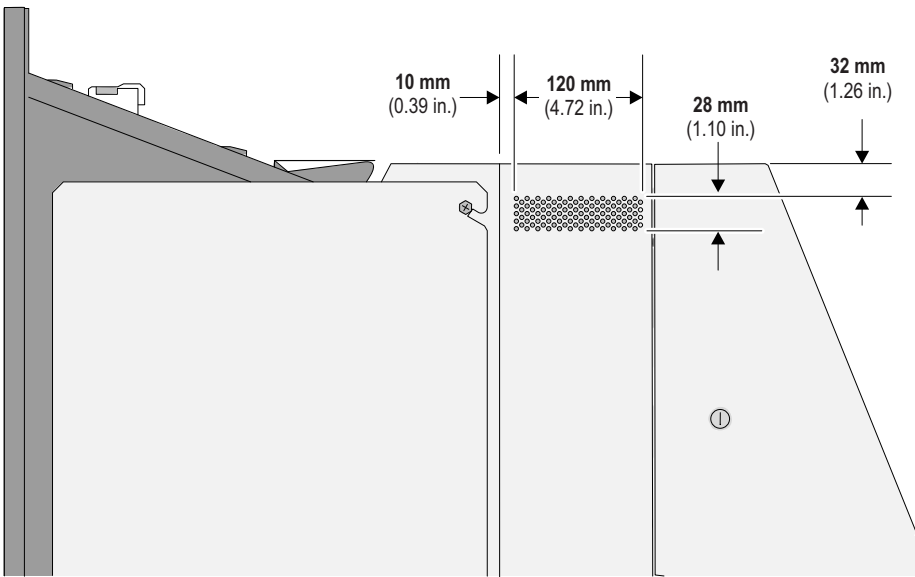
CLEARANCES - EXTERIOR WALL



CLEARANCES - HOT AIR OUTLETS

The illustration below shows the position of the hot air holes on both sides of the ATM.

Do not obstruct the hot air holes as this can cause the ATM to overheat.



Variant Details - Standard Sleeve

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