



SMART 7

Introduction to Home Security Locks

A guide for those installing or selecting a security lock

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Warsaw University
of Technology



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SMART

MODULE 7

Introduction to home security locks

This module provides an overview of rudimentary home security locks that has been publicised by policing agencies to minimise crime directed at older persons. There is no reliance on high technical solutions, but smart creative strategies that can be easily and modestly implemented in most properties. Certain types of keys can make it difficult for the older person to gain entry, or secure their property when they are inside. Knowing what alternatives are available could make life easier and permit the older person retain their independence and confidence for longer.

Intended audience

This module has a specific focus. It is aimed at those who could provide a service to adapt and install doors and locks to make spaces more accessible and secure. The material presented here therefore provides an initial insight of a possible business opportunity for those who have the skills install doors and locks.

Although there is a fairly high level of detail, those who are interested in being informed about this impactful topic please join us in this module!



Security and Accessibility

As we age, it can become increasingly difficult to ensure our homes remain safe but accessible.

Burglary and crime statistics have shown that homes with secure locks and improved lighting reduce the likelihood of opportunistic crime such as burglary.

The emergency services have also identified that with the introduction of secure locks, it can be difficult for residents to exit their home promptly in the event of fire or crime.

Accessible home security fittings are encouraged by policing forces and have been proven to increase security, as well as making life easier around our homes as we age in place.



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What will you learn in this module

- 1 Describe locking mechanisms available on the market and their appropriate uses.
- 2 Function of keyed alike mechanisms.
- 3 Classify different types of door furniture.
- 4 Explain the operation and benefits of door openers and door closers.
- 5 Describe keyless entry using combination locks and key cards.



Chapters in this module

1 Locking mechanisms and their uses.

2 Keyed alike mechanisms.

3 Door furniture.

4 Door openers and closers

5 Keyless access.



SMART

MODULE 7

CHAPTER 1

Locking mechanisms and their uses.

So you want to invest in a new lock. But which one? The range of locking mechanisms and options that are available on the market may be daunting at first. This chapter examines the range of typical options, and explains some terms so you can compare the options in order to make a choice that is right for you.

Introduction to locking mechanisms

The phrase 'a lock is to keep an honest man out' is very apt, because if somebody wants to get in, they will, the lock will just slow them down.

This chapter will look at some effective locking mechanisms



What will you learn in this chapter

- 1 Handed door mounting and door swing.
- 2 Door roller latch, lock, door-bolt, deadbolts and chains.
- 3 Combined locks, night latches, cylinder locks, keyways, biting cuts and dimples.
- 4 Multi point locking.



Handed Door Mounting

Before getting into the detail of lock mechanisms, some terminology about doors is worth mentioning.

The term 'handed' actually refers to the hand you would use to open the door and hold the door while you pass through it from the outside. In essence it is the side of the door frame the hinges are on when standing outside the door entering a space.



RIGHT-HANDED DOOR

Hinges located on the right side when standing outside the door.

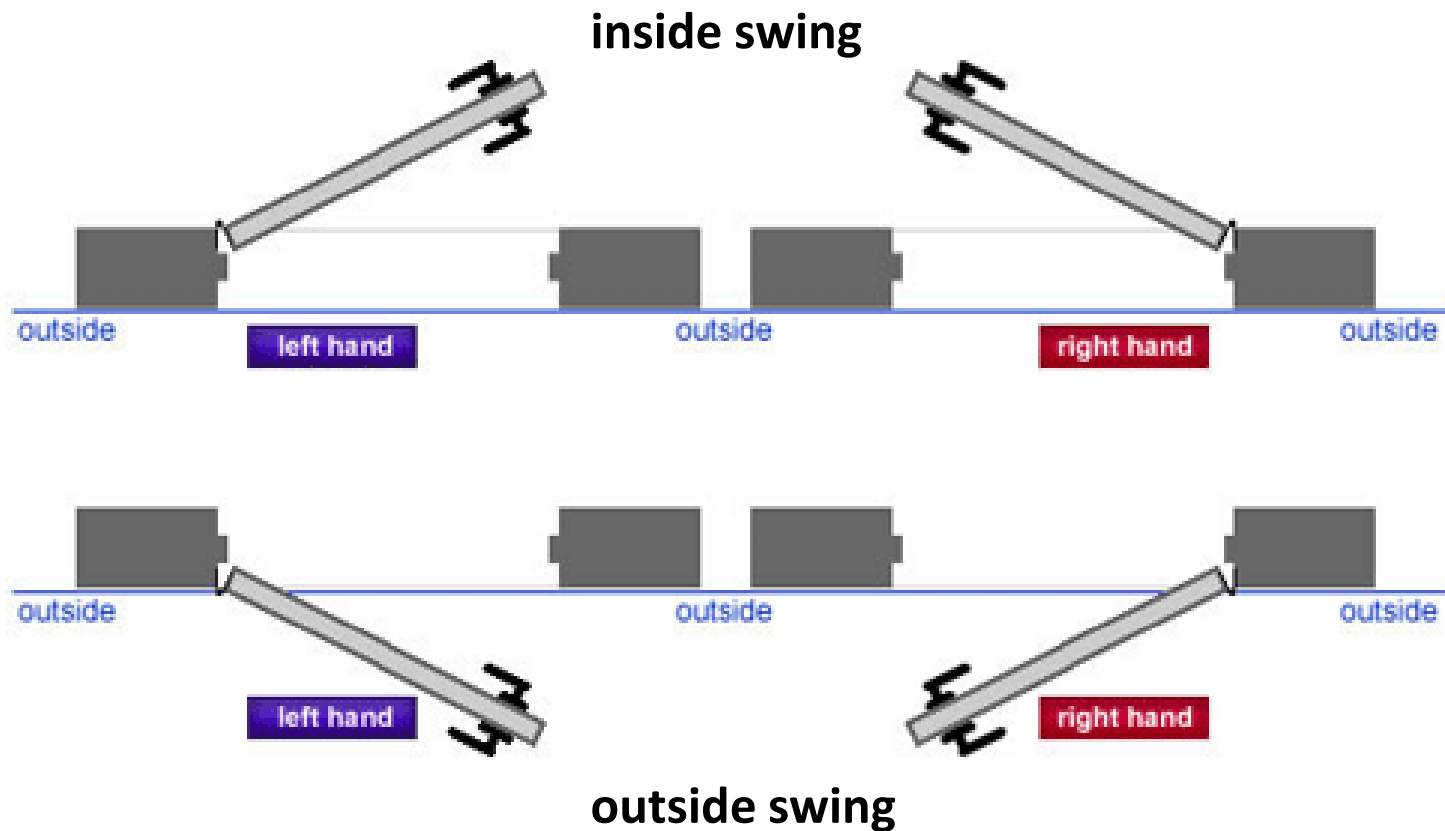
LEFT-HANDED DOOR

Hinges located on the left side when standing outside the door.

Door “swing”

Another term related to installing doors is “door swing”.

The term ‘swing’ refers to the direction the door opens. Does the door swing to the outside of the space (i.e. outswing) or does it swing into the space (i.e. inswing)?




Meet António

António lives with his girlfriend in a specially designed barrier free home.

How could "handed-door" and door swing impact on António?

The bathroom is quite large to facilitate access for his wheelchair. Also, as António is a wheelchair user, the registered installer who configured his bathroom installed a left-handed outswing bathroom door so that the door does not impede António's access to the bathroom.





Did you know?

Built module 7 Mobility at Home. gives special consideration to the challenges associated with designing or adapting the home with mobility and falls prevention in mind.

Please check it out when you finish this module!

Door Swing and Disability

From the example with António, it is clear that wheelchair users need to consider door swing. This is true of other persons with limited mobility as well.

Just like in Antonio’s case, persons who are not agile or who rely on different types of mobility aids need more clearance to rotate and access a toilet or shower.

Also in an emergency the lock can be over ridden and the door opened without hurting the occupant who may be on the ground.



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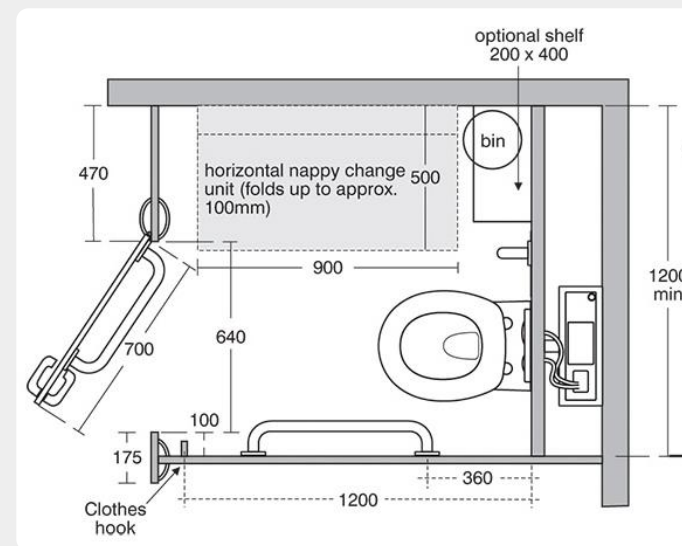
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Door Roller Latch

Does your home have a door or cabinet that swings open in a breeze, causing an obstruction for people of limited mobility passing through the home?

A door roller latch of the type shown here can help with this annoying problem.

If a door to a room or cupboard needs some assistance to remain closed, but does not need to be locked, a roller latch can be a useful choice.

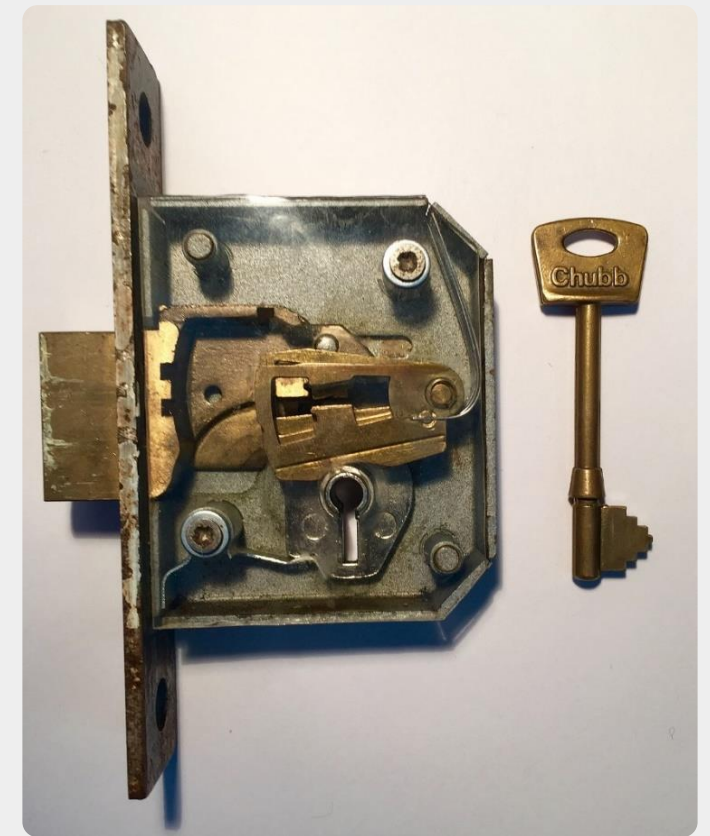
This mechanism also reduces the rattling or banging of some doors as air passes through the home.



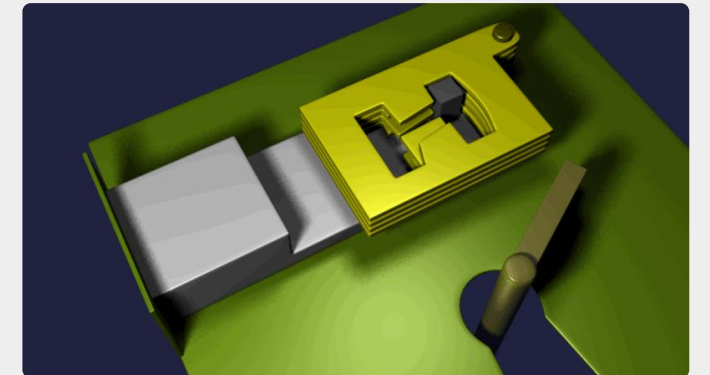
Lever Tumbler Mortice Lock

This is a very common type of lock. The lever tumbler refers to inner workings of the locking mechanism. When the key is entered into the lock and turned, the lock levers are lifted so the horizontal bolt can move. If the pattern on the key does not lift the correct levers the lock will not open.

The mechanism is available in 2 to 6 lever versions. The two lever is often used for inside doors in a house for basic security. Perhaps a toilet or bedroom. The four lever version provides modest security and the six lever provides the highest security.



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Door Bolt or Dead Bolt

A door bolt is very easy to understand and is commonly used on storage presses and toilets. On the other hand, when a bolt of this type is in locked position, the door is secure on the side that the lock is mounted, and there is no access from the other side of the door. This is both good and bad.

If emergency assistance is required, for example where someone has collapsed behind a toilet door that has been locked with a bolt, it is not easy to gain entry from the outside.

The dead bolt is a more sophisticated type of bolt. This type of bolt is found on doors where keys are used and it adds in some additional security not available on the simpler latch type locks as well as emergency access from both sides of the door through use of a key.



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Remember António?

António is a wheelchair user who lives with his girlfriend in a specially designed barrier free home. Lately his diabetes has become increasingly unstable and he has been referred to the diabetic day center for review. Antonio experienced a hypoglycaemic episode while washing and in this case access from this bathroom was a challenge despite his bathroom having been adapted for his wheelchair use. As a result, António was unable to leave the bathroom by himself.

How a well designed lock system can help António

Fortunately in his home redesign, a deadbolt lock with a key on the outside was installed in place of the previous latch. This meant that António's girlfriend was able to find the key and get him out to receive medical care without needing to call fire services to break the bathroom door.



Deadbolt Options

Other alternatives to deadbolts are security chains, door guards and dead bolt bars.

Both the security chain and door guards allow the door to open slightly so items such as identification, or documents for signing can be passed. If fitted correctly the door would need to be closed before the mechanism can be disengaged. But if a person in need of assistance and a key is used, this mechanism will prevent entry.

One option of the chain has a key access. So if the chain is engaged by a person inside, the person outside with a key can gain entry.

A deadbolt bar spans the width of the door and when fitted provides two anchor points. This door can only be opened from the inside.



Security Chain [Copyright by](#)



Door Guard [Copyright by](#)



Security Chain [Copyright by](#)
with key access



Deadbolt Bar [Copyright by](#)

Multi Deadbolt Options

To prevent the deadbolt being easily cut by a thief, some manufacturers have divided the deadbolt up into sections. This slows down dramatically the ability to cut through the deadbolt.



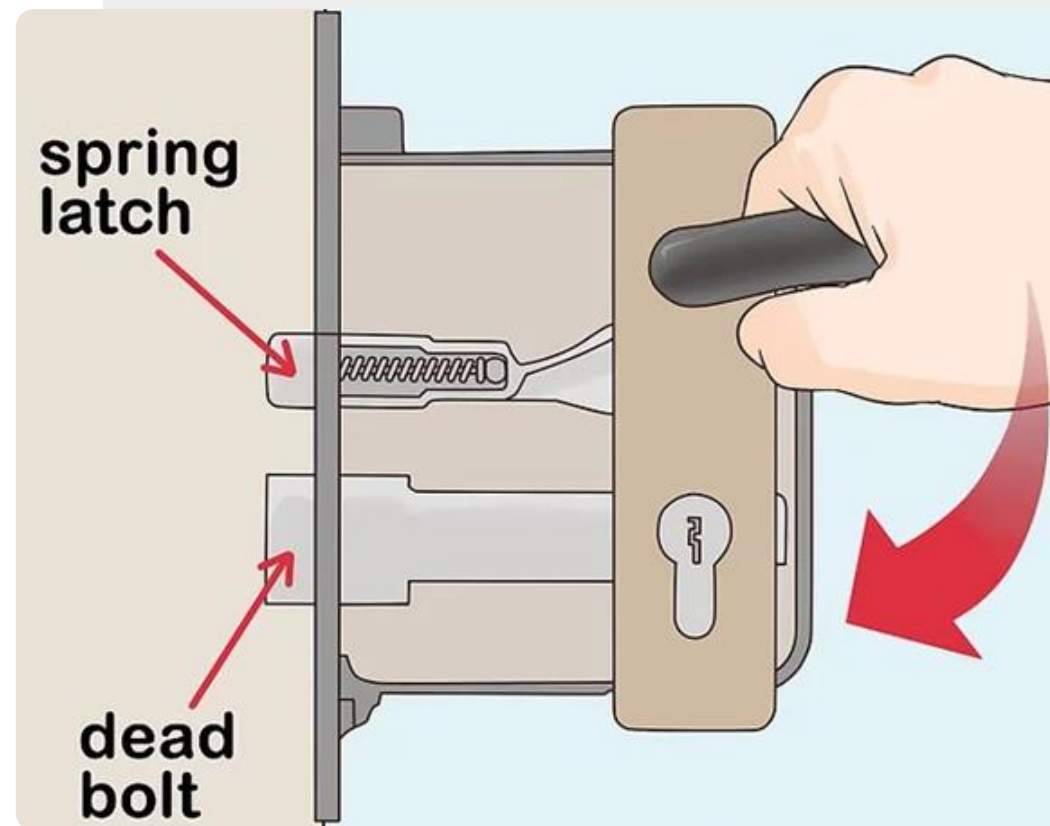
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Combined Spring Latch and Dead Bolt

In some locks a combination of both the spring latch and dead bolt are used. The spring latch permits the door to be open and closed easily. But for certain uses such as using a toilet or locking a house up for a night the dead bolt is used.



Front Door Latch With Night Lock

Similar to the operation of the Mortice latch tubular. These commonly used locks use a cylinder lock on the outside of the door, rather than a handle. When the key is inserted and turned the latch is pulled back into the mechanism allowing entry.

There is no key on the inside of the lock only a thumb turn. To open the door from the inside the thumb lock is simply turned.

An additional night latch or 'Snib' is included. This is a pin which prevents the latch being pulled back into the mechanism. When the night latch engaged the key access outside will not work.

Furthermore, the thumb turn inside will also not operate, making it difficult to exit the building in an emergency.



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Meet Teresa

Teresa lives with her husband who is in poor health. Her son lives nearby and provides support for his parents.

Teresa is a confident user of technology and uses Skype to contact family members. Teresa is also concerned about security in the home and there have been some suspicious callers at the door.

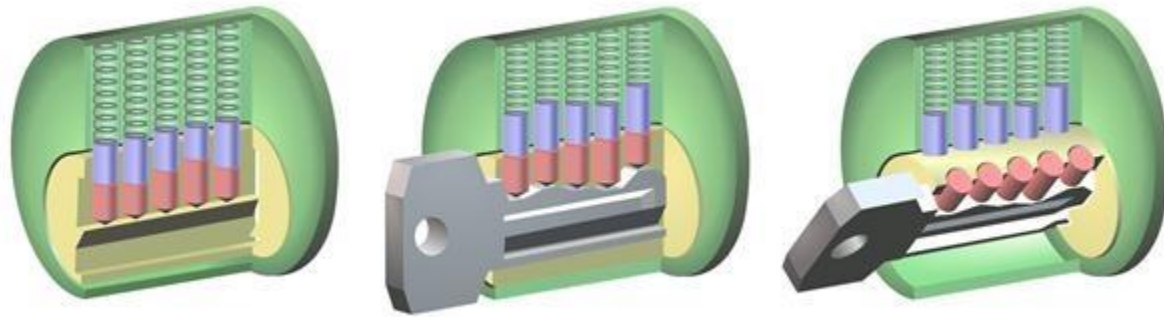
How can a door latch with a night lock help Teresa?

When her son offers to install new front door latch with a night lock, Teresa is delighted and she feels more secure at night.

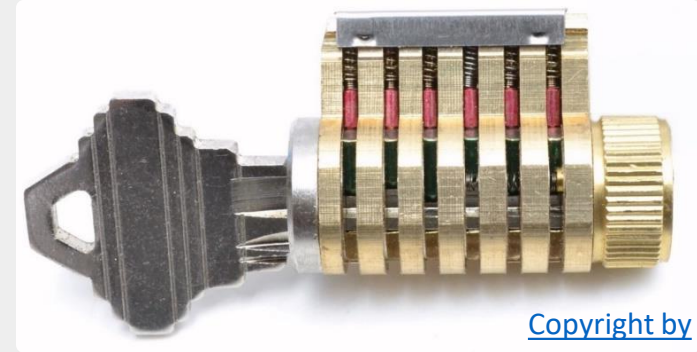


Cylinder Lock

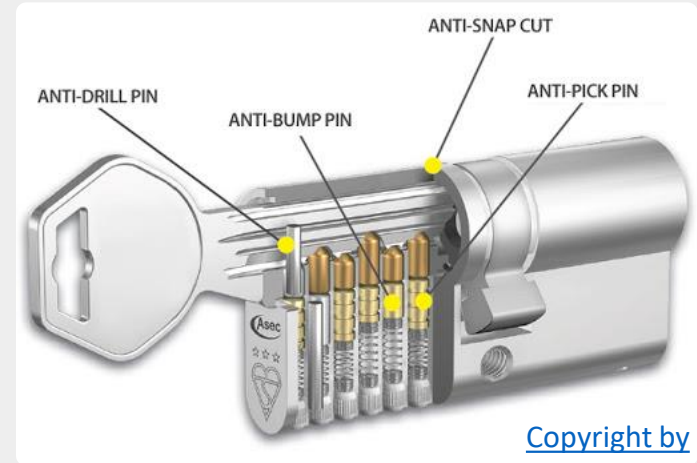
Similar to the lever lock the key lifts pins in the locking mechanism. When all the pins are at the correct level, linked to the profile of the key, the lock cylinder is free to rotate.



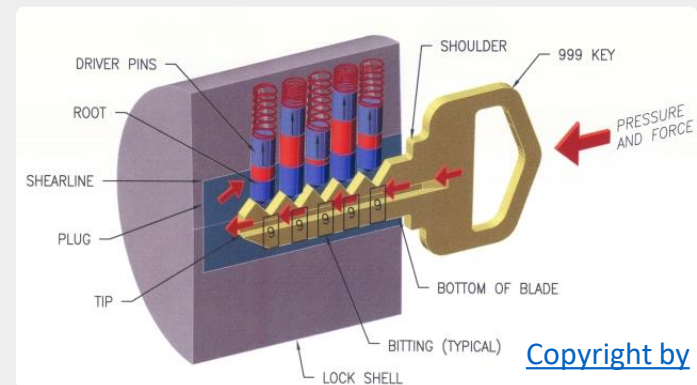
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Cylinder Lock

The fundamental operation of the cylinder lock is reused in many versions of lock.



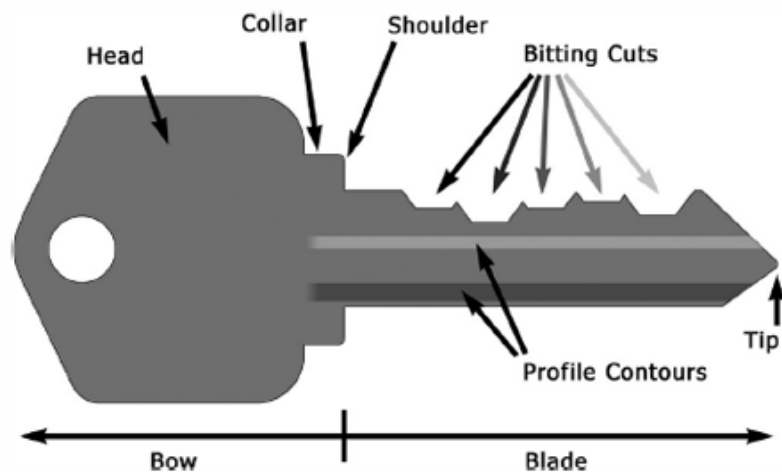
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Common Keyway Profiles

To increase the number of key combinations variations can be made in the keyway width, keyway profile contours and blade length, in addition to the 'bitting' cuts.



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LEVER BIT KEYS & KEY BLANKS

ASEC		ASSA		BANHAM	
B182 L373	Genuine Blank KBASS5 XGL005	TS308P XL036		R102 DOOR BOLT L376	
MATERIAL: STEEL GAUGE: 5 FINISH: N/P	MATERIAL: STEEL GAUGE: 4.5 FINISH: ZINC	MATERIAL: STEEL GAUGE: 4.5 FINISH: ZINC			
BASTA				BB	
For 2-lever Mortise locks FOR DIFFERS		For 63W M1 63/70mm Deadlocks		For 1353W M5 63/70mm Sashlocks	
9-16 B560/1 L175	1-8 B560/2 L176	K560 PRE-CUT KEYS 18 DIFFERS 1-16, 6A, 14A		B575 L178	B576 L179
MATERIAL: ALLOY GAUGE: 5.5 FINISH: N/P	MATERIAL: ALLOY GAUGE: 5.5 FINISH: ZIP	MATERIAL: STEEL GAUGE: 7 FINISH: N/P	MATERIAL: STEEL GAUGE: 5.5 FINISH: N/P		

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Common Keyway Sections

AA Arrow 1179	NA Composite R1064E	CA Corbin 60 1001EH
CB Corbin 67 1001EN	CC Corbin 77 R1001EN	XE Dexter 67 D1054K
UA ILCO [®] X1054K	KS Kwikset 1176	LA Lockwood 1004
ME Medeco [®] Level 1 1515	RA Russwin 5981R N1011P	RB Russwin D1 1011D1
GA Sargent LA 1007LA	GS Sargent S 1010N	GU Sargent U 01010
SC Schlage C 1145	SX Schlage C-K 1145	SE Schlage E 1145E
FA Segal 9 (1022)	WA Weiser E Falcon 1054WB 1054WC	YA Yale 8 999

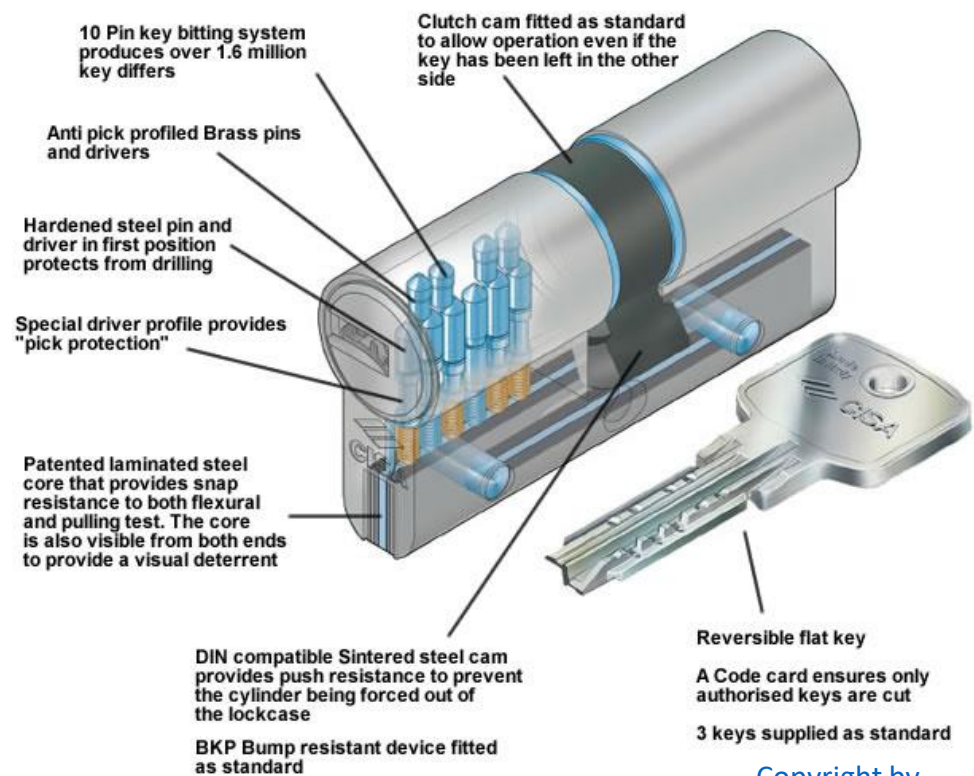
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Dimple Key

The dimple key operates on a similar principle to the cylinder lock, but different manufacturers have added in multiple pins arrays and patterns.

This can make picking the lock increasingly difficult.



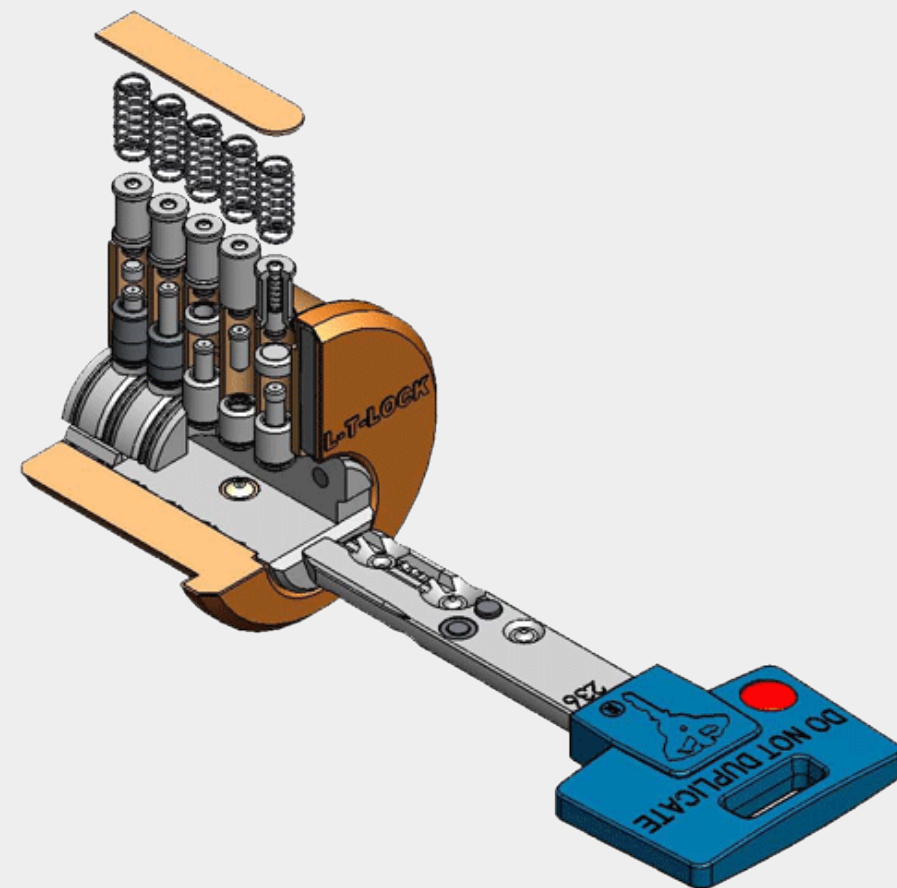
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Reversible flat key
A Code card ensures only authorised keys are cut
3 keys supplied as standard

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Multi Point Locking



Multi point locking refers to an appliance that engages other locking points on the door when the deadbolt is engaged.

On this example, the vertical bar at the side of the door engages three points of locking on the door. This provides an additional point of anchoring should there be an attempt to force the door open.



Quiz

Click the **Quiz** button to edit this object

 **SMART** | **MODULE 7** | **CHAPTER 1** Locking mechanisms and their uses

A lock delays somebody breaking into your house.

- True
- False

Chapter summary

1

Handed door mounting and door swing.

2

Door roller latch, lock, door-bolt, deadbolts and chains.

3

Combined locks, night latches, cylinder locks, keyways, bitting cuts and dimples.

4

Multi point locking.

Chapter completed!

Congratulations! You have successfully completed this chapter!

Summary of acquired skills

1

Identify aspects of door mounting and swing that helps describe your specific needs accurately to a trades person.

2

Discuss and compare different types of locks and keys.

3

Identify multipoint locking.

What is next?

Now you can either repeat this chapter or follow our study recommendation by clicking on one of the buttons below:

[Restart](#)[Next](#)



SMART

MODULE 7

CHAPTER 2

Keyed alike mechanisms

Here's a nice way to reduce the number of keys and make key rings and life much simpler. This chapter explains about keyed alike mechanisms, where all locks, have been coded to use the same key pattern.



Introduction to keyed alike mechanisms

It is common to have a handful of keys on a key ring. However, handling and choosing a particular key gets progressively difficult as we age. In addition to handling the keys, some keys look similar and so a few keys need to be tried to operate the lock.

A workaround is to get the locks modified, so a single key can operate them. This prevents the need to carry a large bunch of separate keys.



Keyed Alike

What will you learn in this chapter

- 1 Describe what the term keyed a like means.
- 2 Explain when and were keyed a like would be used.



Keyed Alike – one key, many doors

The principle of keyed alike is to reuse the same key to open many similar locks. For example, your front door lock, and back door lock can be coded so the same key can be used in both locks.

The locks can be purchased keyed alike or in some cases the locks might be adjusted by a professional locksmith.

This reduces the amount of keys you may need to carry.



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Keyed Alike



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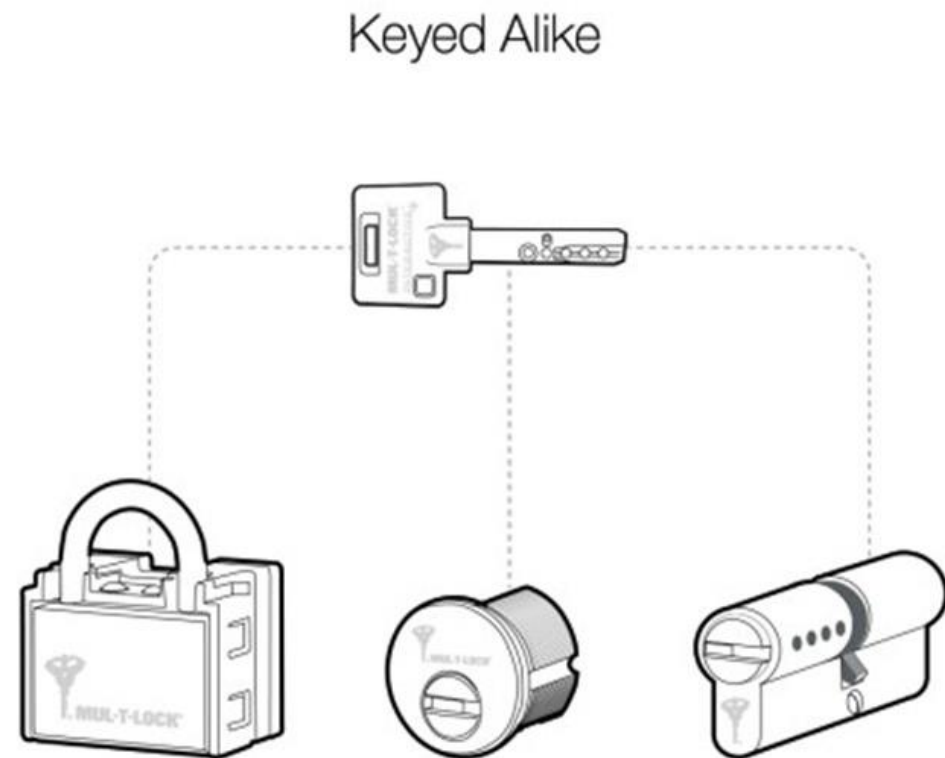


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Keyed Alike Systems

Some manufacturers offer a range of lock types that can use the same key.

In this example, this manufacturer can use the same key to operate a padlock, cylinder lock and Euro profile locking device.



Quiz

Click the **Quiz** button to edit this object

 **SMART** | **MODULE 7** | **CHAPTER 2** Keyed alike mechanisms

Only one type of "Keyed alike" lock is available.

- True
- False

Chapter summary

1

Describe what the term keyed a like means.

2

Explain when and where keyed a like would be used.

Chapter completed!

Congratulations! You have successfully completed this chapter!

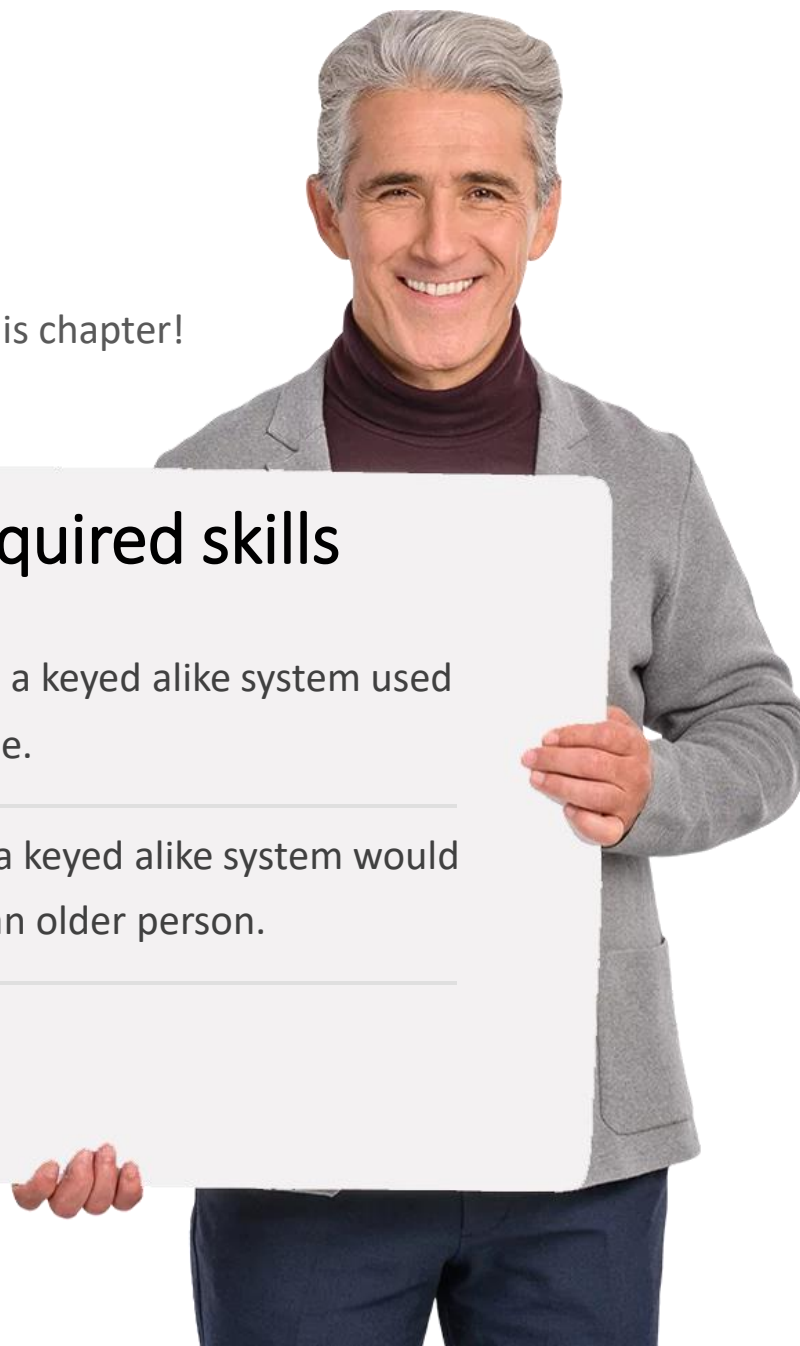
Summary of acquired skills

1

Describe what a keyed alike system used for in the home.

2

Explain when a keyed alike system would be helpful to an older person.



What is next?

Now you can either repeat this chapter or follow our study recommendation by clicking on one of the buttons below:

[Restart](#)[Next](#)



SMART

MODULE 7

CHAPTER 3

Door Furniture

Knobs, knockers, hinges and handles all help to customise a door to an individual's taste and need. This chapter walks you through some of the door furniture options available.



Introduction to Door Furniture

Door furniture is the term given to the items that are added or fitted to the door itself.

These are items such as: door stops, door numbers, door handles, door closers and hinges.



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What will you learn in this chapter

- 1 To describe push plates and pull bars.
- 2 To explain spy holes and peepholes.
- 3 To explain the operation of leverage on door knobs and the weakening our ability to grip as we age.
- 4 To describe door handles and compare some of the common shapes.
- 5 To explain the use of thumb locks and how they can be useful in an emergency and for security.



Push Plate

The push plate is commonly used on doors that only need to be pushed to open. The lack of the handle indicates to the user that a push is all that is need to gain entry.

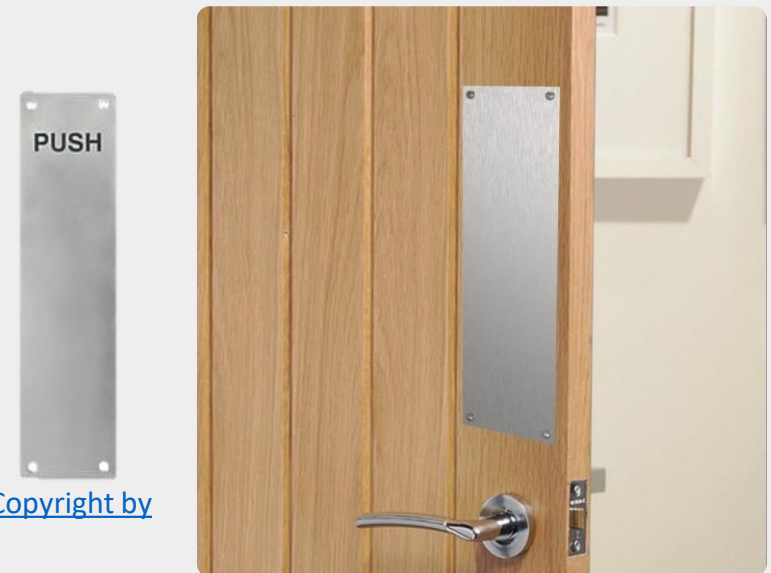
This would be common on hospital and school doors. If a plate is fitted to both sides the door is a swing door and can open in both directions.

On occasion the work push is etched onto the plate.

On doors with strong closing mechanisms or places with high 'wear and tear' additional push plates can be added to assist on the opening of the door.



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Push Plate combined with Pull Bar

The push plate combined with pull bar is commonly used on doors that only operate in one direction. There is no locking mechanism. The handle indicates a pull action to the user, whilst the push plate indicates that a push is all that is need to gain entry.

This would be common on hospital and school doors.



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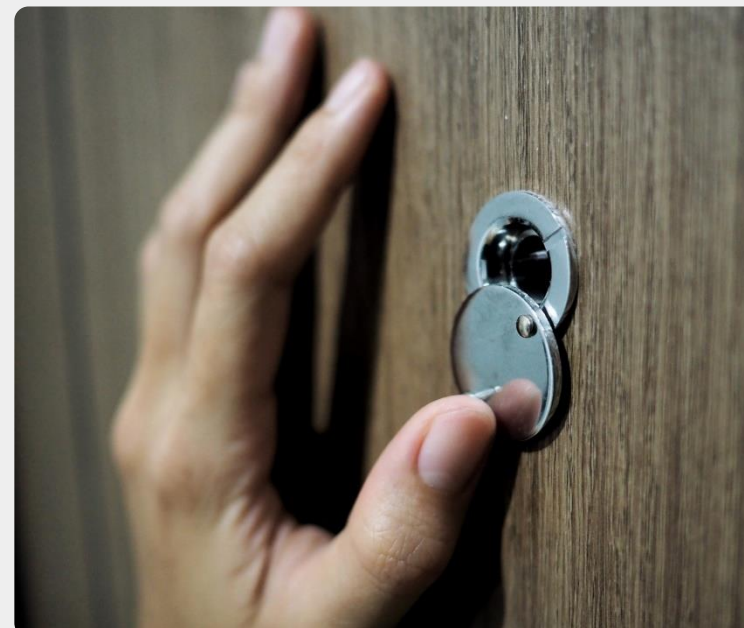
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Spy holes and peepholes

Some doors do not have any glass or other aspect that aids in identifying a caller at the door. A good idea is to install a peephole, so you can identify the person on the other side before opening the door.



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A camera doorbell and intercom is also available. Some can be connected to a mobile phone.



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Door Knobs

Door knobs are a minimalist form of door furniture. A simple rotation of the knob permits entry. But in countries where the user cannot gain purchase on the smooth circular surface these doors can be difficult to use.

As we get older our ability to grip and rotate our hands diminishes, resulting in an inability to use door knobs.

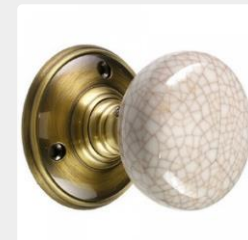


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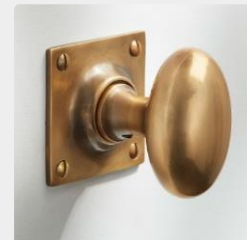


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Remember Teresa?

Teresa lives with her husband who is in poor health. Her son lives nearby and provides support for his parents.

Teresa is a confident user of technology and uses Skype to contact family members. Teresa is also concerned about security in the home and there have been some suspicious callers at the door.

How can door furniture help to ease Teresa's security concerns?

When the night lock is installed she asked about a camera doorbell, so she can see on her TV who is at the door when the doorbell rings.

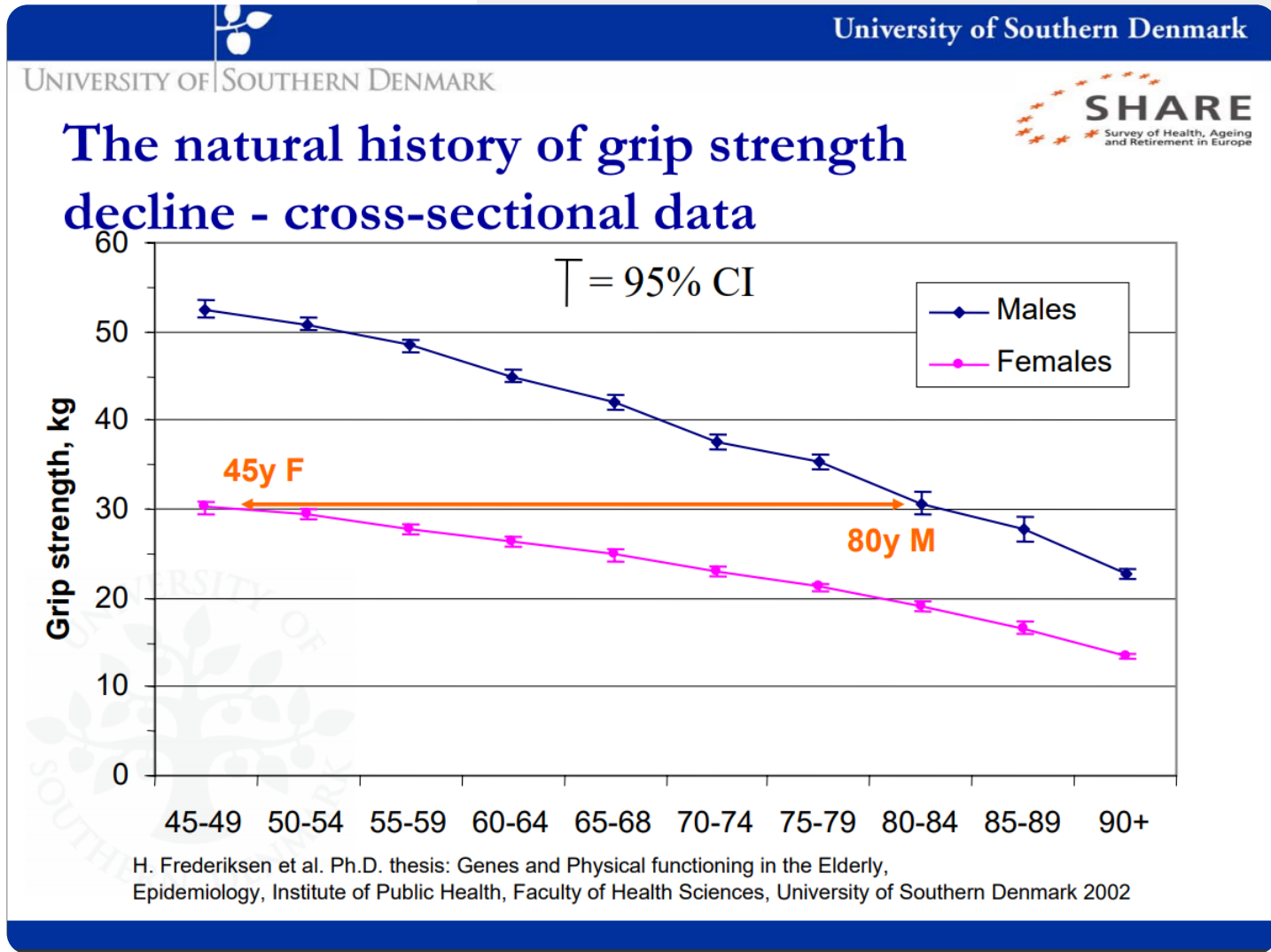
When the night lock is installed she asked about a camera doorbell, so she can see on her TV who is at the door when the doorbell rings.



Door Knobs and Grip

As back up evidence to grip relating to age. The grip test is a measure of fitness and is an indication of functional, capable living. The hands and forearms are the point of contact for multiple upper body movements, making them an important area of focus for healthy, proficient living. A higher score means a greater ability to generate force with these muscles.

This graph produced EU funded Share Project clearly shows the decline in grip strength in both males and females as they age.



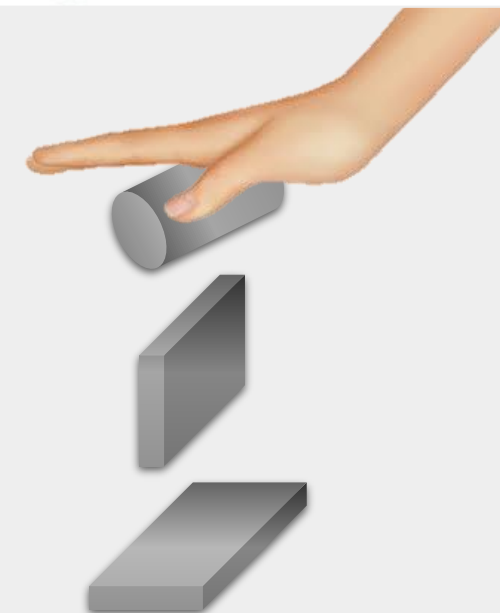
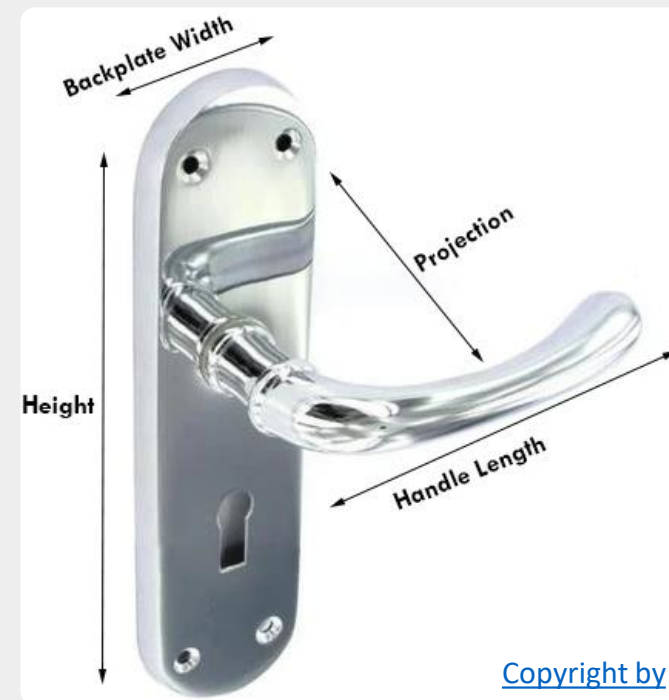
Door Handles

Door handles are important aspects of door furniture. They are daily tactile interfaces between the person and the door operation.

There are many styles available to match the preference of the user.

But there are **three** principle aspects that are important to consider.

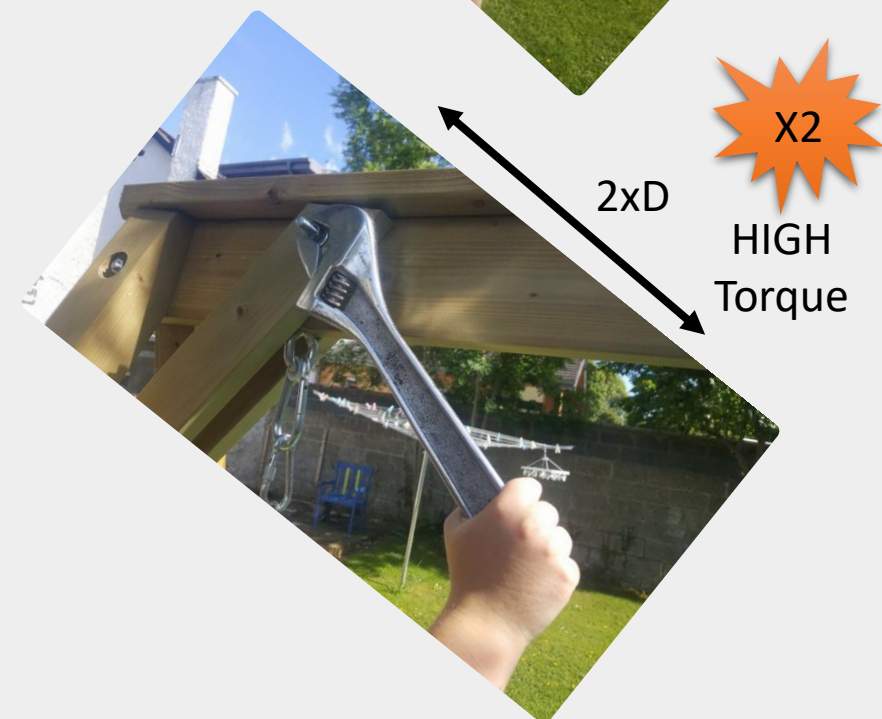
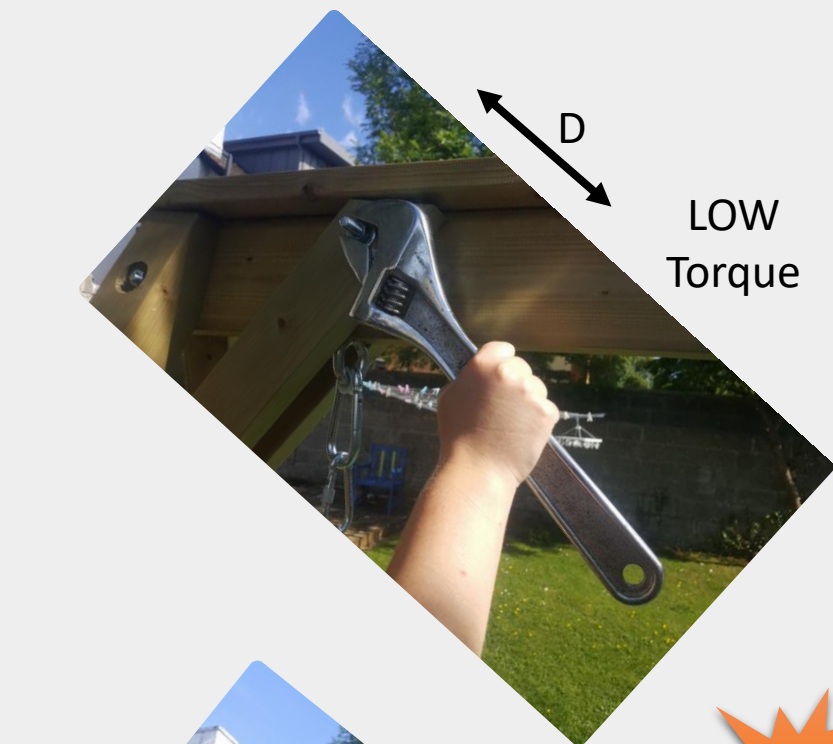
- **Projection.**
The distance of the handle from the door.
- **Handle Length**
The length of lever arm of the handle.
- **Shape of Handle**
The physical shape of contact between the hand and the handle.



Door Handle Length.

Door handle lengths can improve the ability of the person to turn the handle when compared to a door knob.

The science is simple. If you double the distance of the applied force from the pivot the resultant torque is doubled.

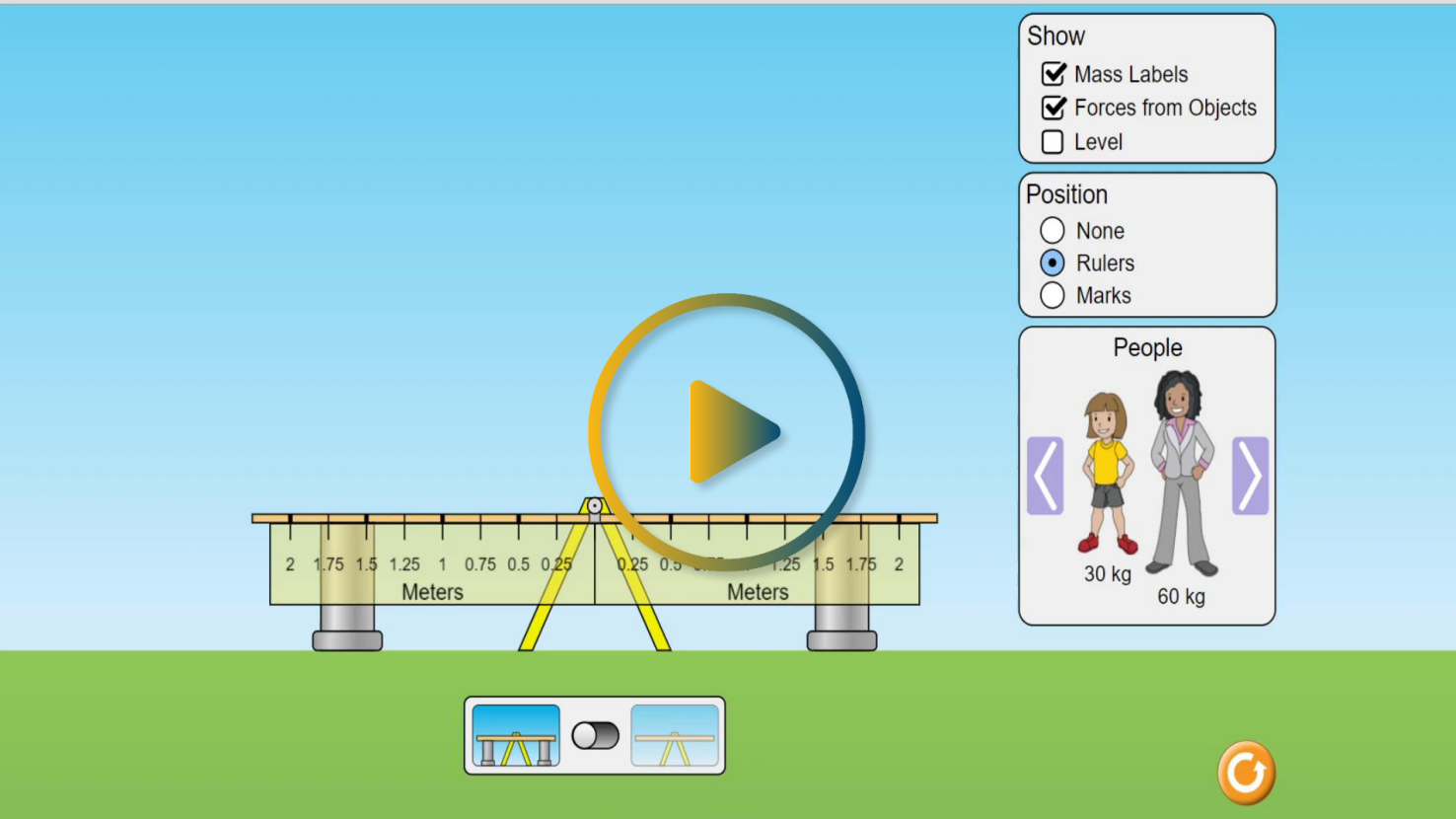


Torque Fun

In this video a see-saw is shown. If we place a 60kg woman on the left hand side, 1 meter away from the pivot. To balance the see-saw we need another 60kg woman on the right hand side 1 meter away from the pivot.

But we could also place a 30kg girl 2 meters away from the pivot and the see-saw is balanced.

Similarly for door handles. If the person is weaker the length of the lever can help in the opening of the door.



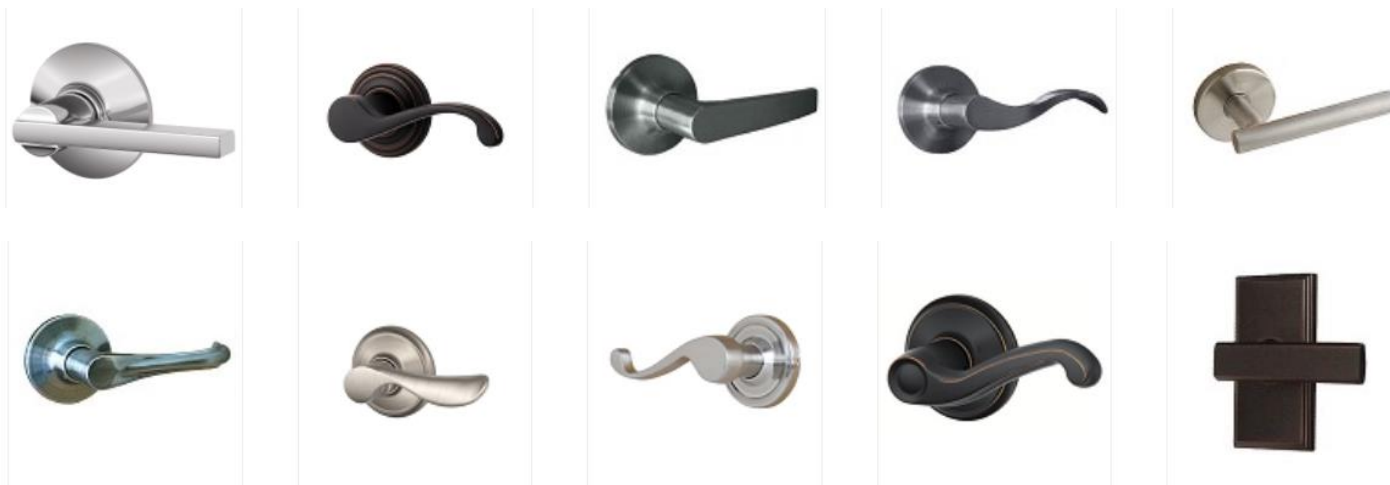
The image shows an interactive simulation of a see-saw. The see-saw is a horizontal beam supported by a central pivot on a yellow stand. The beam has a ruler scale in meters, ranging from 0 to 2 on both sides of the pivot. A large play button is overlaid on the see-saw. To the right of the see-saw are three control panels:

- Show**:
 - Mass Labels
 - Forces from Objects
 - Level
- Position**:
 - None
 - Rulers
 - Marks
- People**:
 - 30 kg (represented by a girl icon)
 - 60 kg (represented by a woman icon)

At the bottom of the simulation, there is a small control panel with two icons of the see-saw and a toggle switch, and a circular refresh button in the bottom right corner.

Door Handle Shapes

There are a large selection of different handles available. They are in different colours, finishes, patterns, styles and materials.



Thumb Locks

Some security locks require a key to unlock and lock the door on both the inside and outside. Only one key can be used at any one time. So if a key remains in the inside part of the lock a person cannot get into the house.

A thumb lock is where there is no key on the inside, it has been replaced by a thumb turning lever. So when the door is locked on the inside a person outside can lock the door as they leave and unlock the door as they try to get in uninhibited.

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Key Access Both Sides

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Key Access outside side
With thumb lock on inside



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Remember António?

António is a wheelchair user who lives with his girlfriend in a specially designed barrier free home.

António is enthusiastic about technology and concerned about leaving his home quickly in the event of a fire.

Can thumb locks be helpful for António?

For the above reasons, when his home was being remodelled he requested that thumb locks would be installed at wheelchair accessible height on all main exit doors.



Thumb Locks in an Emergency

In the event of a fire there is no searching for keys. The occupant simply turns the thumb lock and gets out quickly.



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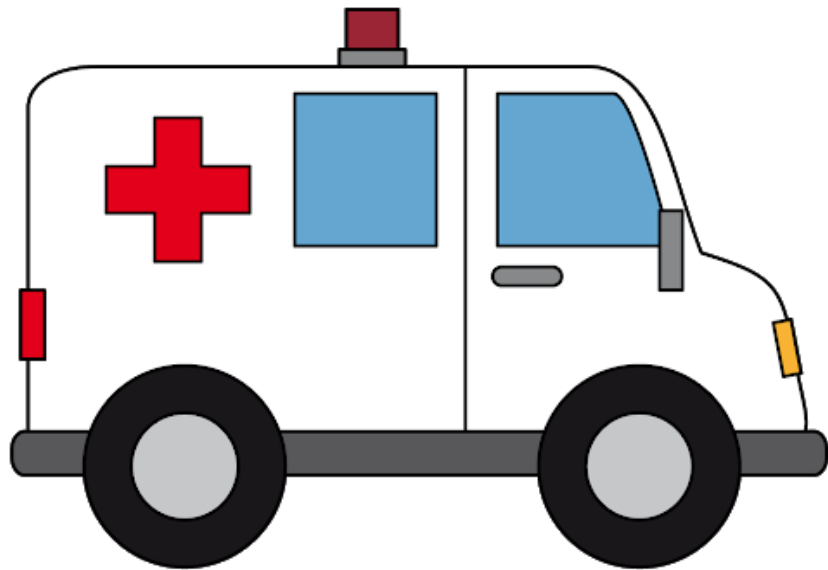
Key Access outside side
With thumb lock on inside



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Thumb Locks in an Accident

In the event of an accident the family or friend can simply unlock the door to check on the person.



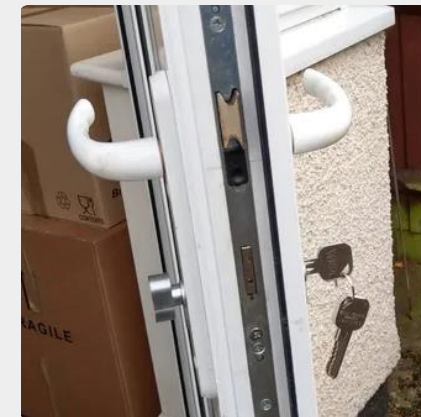
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Did you know?

Healthy eating and regular exercise are part of falls prevention. Did you know that you can continue turning your house into an age-friendly home?

Head over to BUILT module 7 “Mobility at home” and HEALTHY module 1 “Basic Information on Health and Wellbeing” to learn more.

Thumb Locks for Security

Sometimes having to find keys to lock the inside of the house can be a hassle.

It is something that needs to be remembered.

So the use of thumb locks helps the person secure their home quickly and easily without looking for keys.



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Quiz

Click the **Quiz** button to edit this object

  **SMART** | **MODULE 7** | **CHAPTER 3** Door furniture

Door furniture is a term given to _____

- fittings to the doors.
- shape and contour of the door.
- furniture constructed using a door theme.

Chapter summary

1

To describe push plates and pull bars.

2

To explain spy holes and peepholes.

3

To explain the operation of leverage on door nobs

4

To describe the weakening our ability to grip as we age.

5

To describe door handles and compare some of the common shapes.

6

To explain the use of thumb locks and how they can be useful in an emergency and for security.

Chapter completed!

Congratulations! You have successfully completed this chapter!

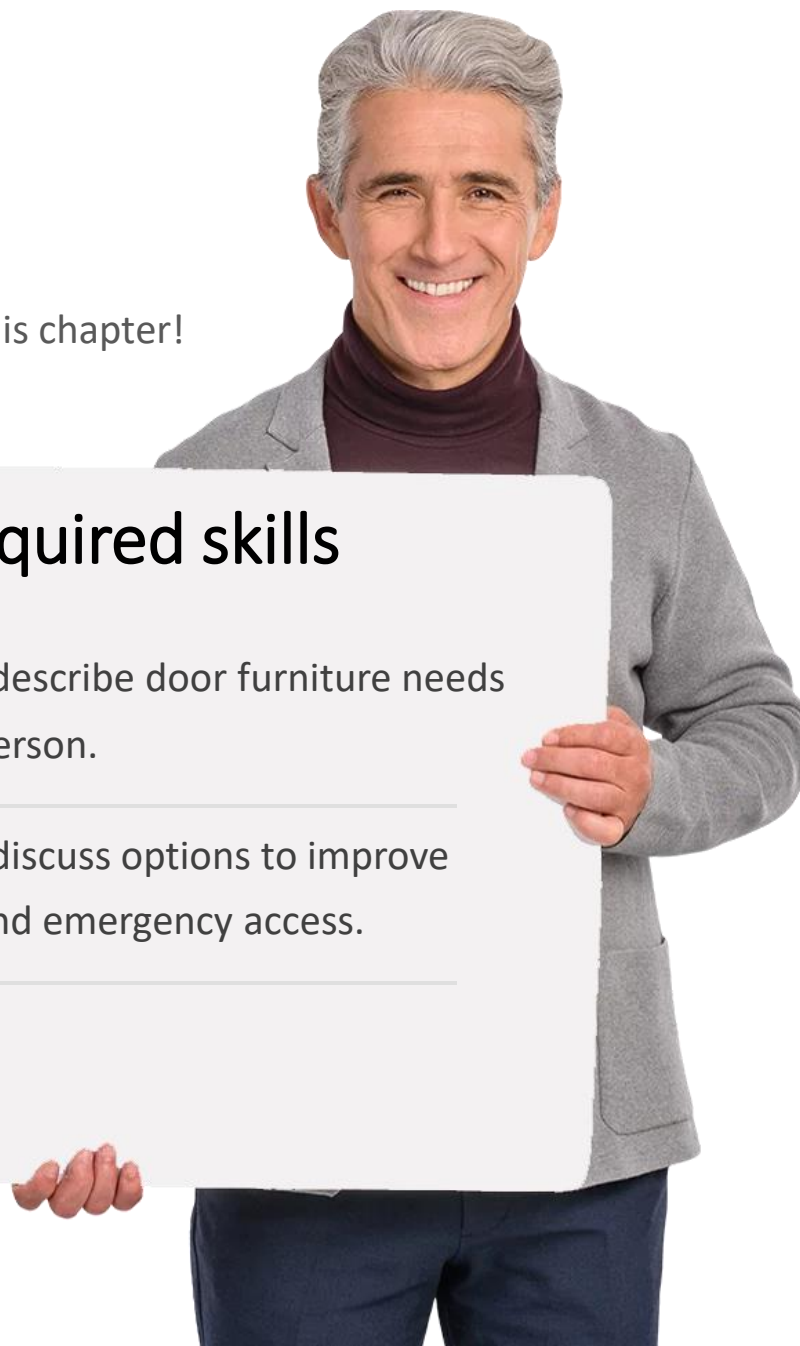
Summary of acquired skills

1

The ability to describe door furniture needs to the older person.

2

The ability to discuss options to improve the security and emergency access.



What is next?

Now you can either repeat this chapter or follow our study recommendation by clicking on one of the buttons below:

[Restart](#)[Next](#)



SMART

MODULE 7

CHAPTER 4

Door openers and closers

For some people the ability to be able to open and close doors in their home can make the difference between being able to live independently or not. This chapter discusses some of the options available.

Introduction to door openers and closers

As our mobility reduces as we age, assistance to close or open a door can be very beneficial to our activities of daily living.

As we walk through a door, we may want the door to automatically close behind us. Alternatively, it may be very help full to have a device to assist us in opening the door.



What will you learn in this chapter

- 1 To compare different types of mechanical (non electric) door closers and openers.
- 2 To describe automated electronic door openers and closers.



Mechanical door closers

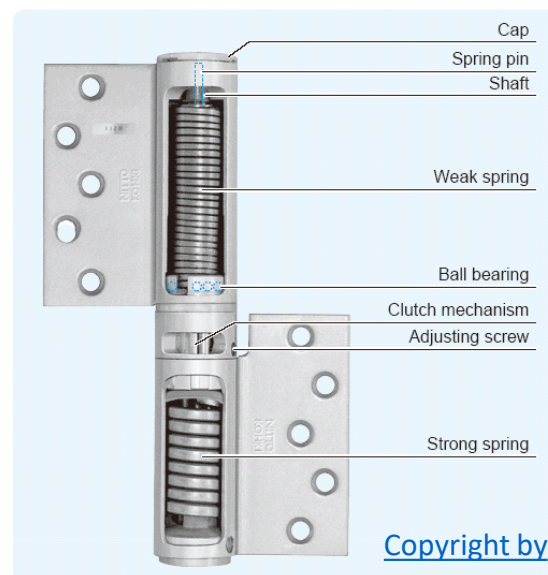
There are many variations of door closers on the market. Some solutions are fitted to the door and others like mortice spring closer or self closing hinge are very discrete.



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Self closing spring hinge



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High Efficiency CAM Action Concealed Door Closer



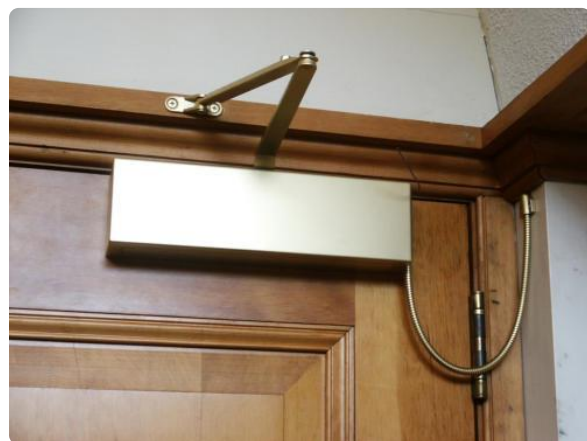
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Door openers

Many variations of door openers are available. Some solutions are non powered assisted appliances and some others are power assisted. Power assisted devices include an electrical motor is added to the door to assist with door opening.



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Electrical Powered door open



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Hands Free Door Opener



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Electronic automated door openers



This video illustrates the operation of a remote controlled front door to a domestic dwelling.

It help show some of the features a fully automated door opener would include. It is important to emphasis the freedom and independence this type of installation provides.



Quiz

Click the **Quiz** button to edit this object

  **SMART** | **MODULE 7** | **CHAPTER 4** Door openers and closers

Power assisted electric door openers use an electric motor.

True

False

Chapter summary

1

To compare different types of mechanical (non electric) door closers and openers.

2

To describe automated electronic door openers and closers.

Chapter completed!

Congratulations! You have successfully completed this chapter!

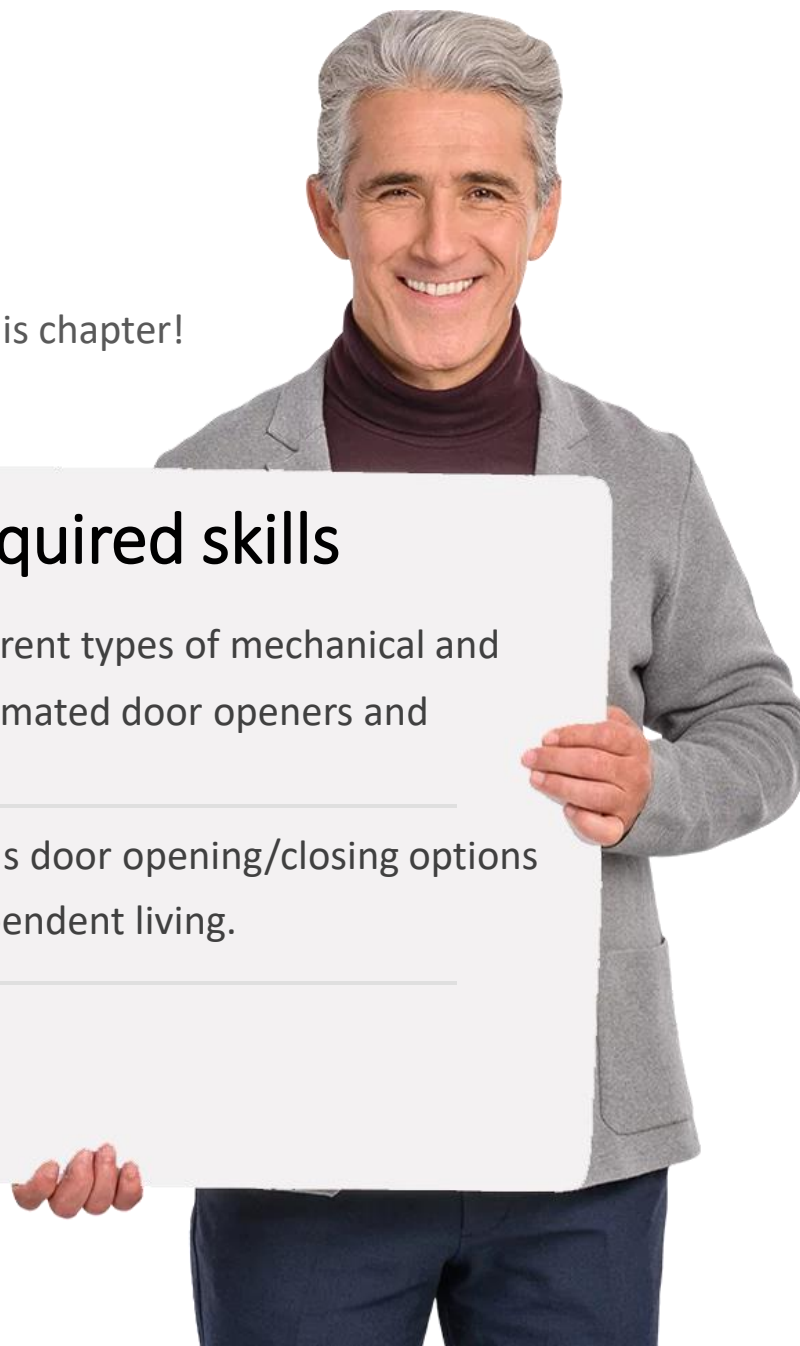
Summary of acquired skills

1

Compare different types of mechanical and electrical automated door openers and closers.

2

Discuss options door opening/closing options to assist independent living.



What is next?

Now you can either repeat this chapter or follow our study recommendation by clicking on one of the buttons below:

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SMART

MODULE 7

CHAPTER 5

Keyless access

For some individuals keys are not an option and can inhibit independent living. This chapter discusses a number of keyless options may help a person remain at home for longer.

Introduction to Keyless Access

Some locking options use alternatives to keys.

Mechanical and electronic combination locks, NFC key incorporating fobs, cards or phones and remote controls are all lock solutions.

Some solutions may also have a key as a backup option too.



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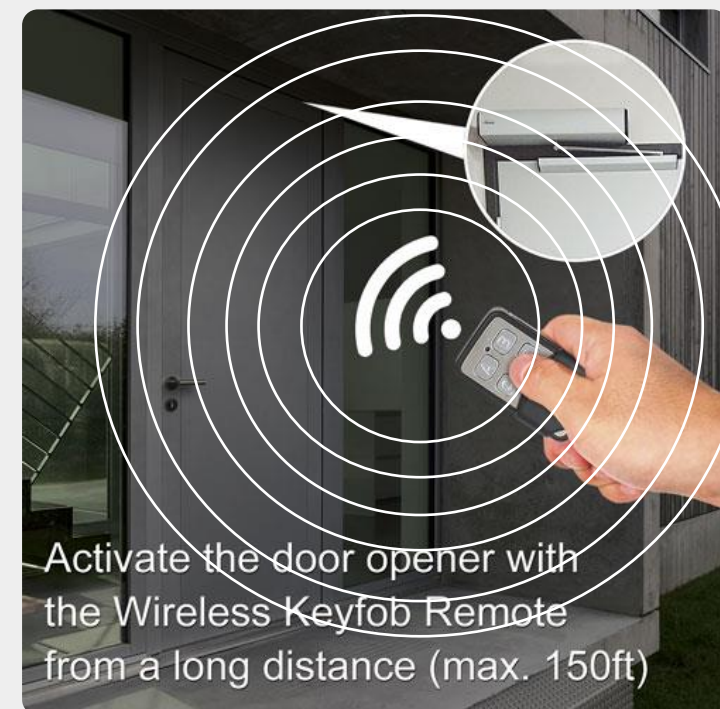
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What will you learn in this chapter

- 1 Explain the use of mechanical (non electrical) combination lock options.
- 2 To describe electronic NFC (Near Field Communications) technology.
- 3 To discuss radio controlled features.
- 4 To describe other helpful life hacks.



Mechanical Combination Locks

This lock does not use any electronics or battery. So there is no need to replace a battery over time.

The handle is separated from the locking latch using a cam. When the correct buttons are pressed or the correct dial rotation combination is completed the handle and the locking latch are engaged, allowing the door to be opened.

The lock then resets itself.



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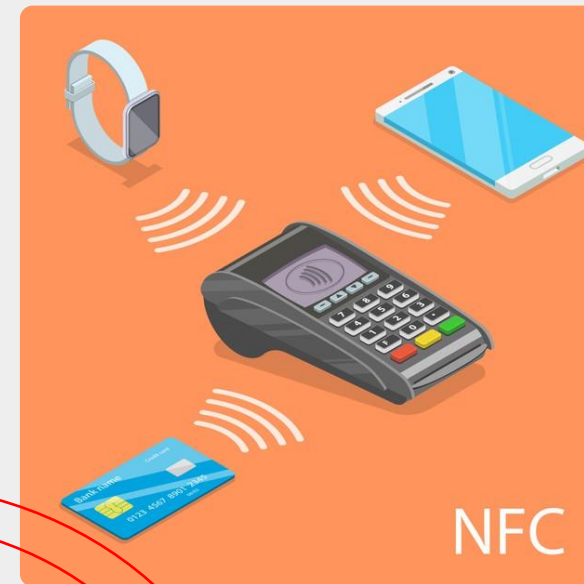


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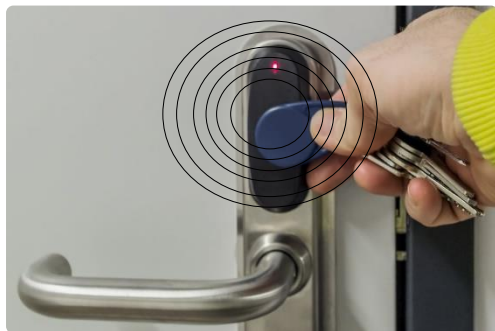
NFC (Near Field Communications)

This approach has been employed in payment transactions, where the payment device, being the card, fob or phone is brought close to the reader. Data is then exchanged between the two devices.

The reader has been programmed to accept or reject certain device identification patterns. Distance is less than 200mm.



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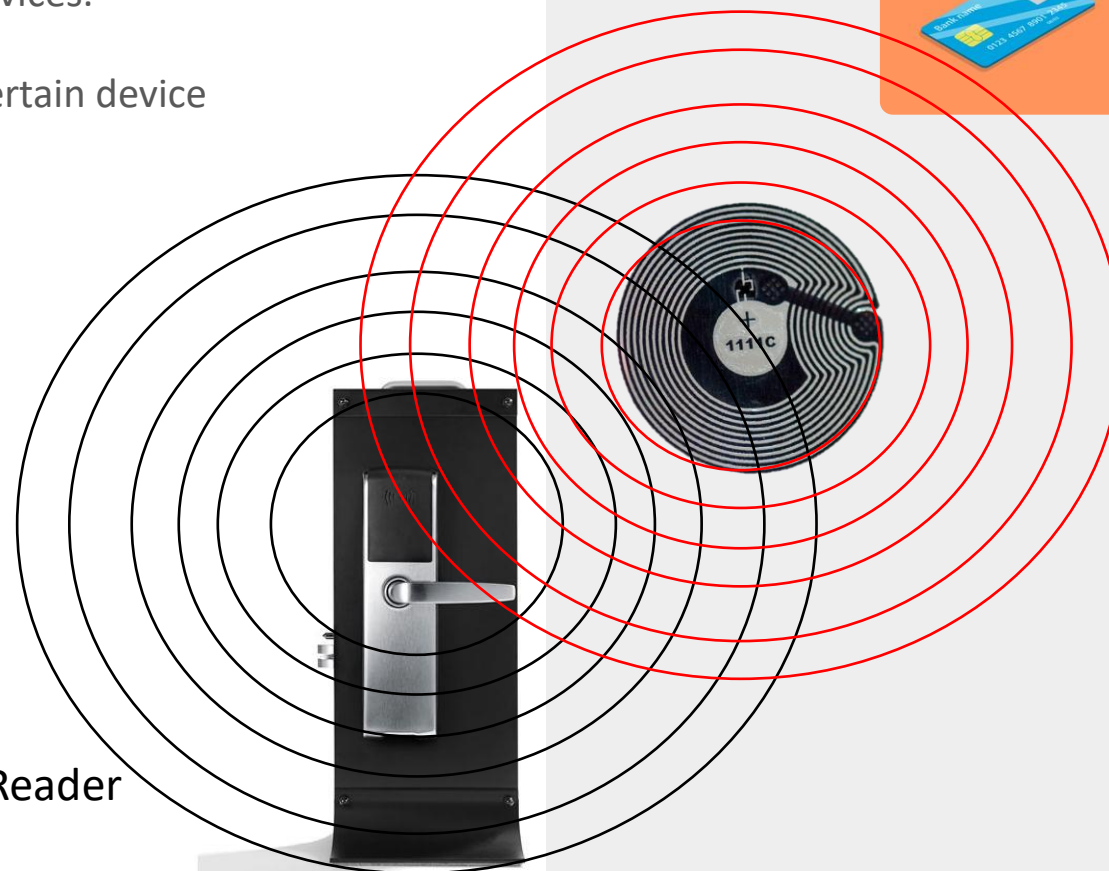


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Reader

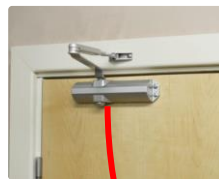


Radio Remote Controls

This type of control system can use a radio fob similar to a car key remote control linked to a relay receiver. The relay receiver can be used to perform many different tasks, for example open doors, arm alarms or turn on water sprinklers.

When the correct signal is received, the device operates. There is security encryption in the signal to ensure the correct remotes are being used.

Door Open/Close



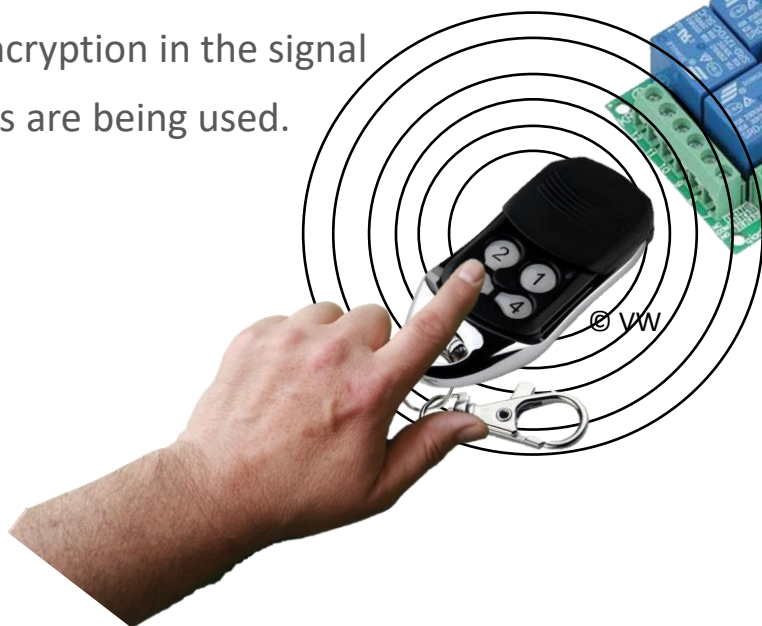
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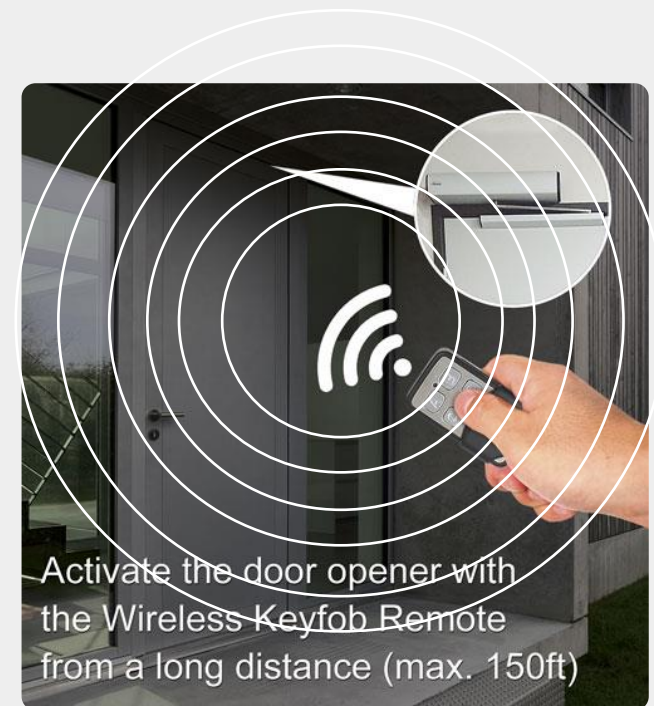


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Arm/disarm Alarm



Activate the door opener with the Wireless Keyfob Remote from a long distance (max. 150ft)

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Other helpful ideas

A key safe allows the secure storage of a spare key outside the house. The visitor uses the combination to retrieve the key, then opens the door and returns back the key to the safe.

With so many similar keys it is useful to use the colour sleeve to identify certain keys. Perhaps blue is the front door key.

As we age it may be increasingly difficult to be able to hold and turn the key with the key head alone. So additional devices referred to as 'key turners' or 'key wings' can assist the person to get increased grip and leverage. This simple, low cost addition can aid an older person retain their independence.



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Quiz

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  **SMART** **MODULE 7** **CHAPTER 5** Keyless access

A key safe can be used to store keys outside the house.

True

False

Chapter summary

1

Explain the use of mechanical (non electrical) combination lock options.

2

To describe electronic NFC (Near Field Communications) technology.

3

To discuss radio controlled features.

4

To describe other helpful life hacks.

Chapter completed!

Congratulations! You have successfully completed this chapter!

Summary of acquired skills

1

To describe mechanical combination lock options.

2

To explain NFC technology

3

To discuss some simple life hacks to help with independency.

What is next?

Now you can either repeat this chapter or follow our study recommendation by clicking on one of the buttons below:

[Restart](#)[Next](#)

Module summary

1

Describe locking mechanisms available on the market and their appropriate uses.

2

Function of keyed alike mechanisms.

3

Classify different types of door furniture.

4

Explain the operation and benefits of door openers and door closers.

5

Describe keyless entry using combination locks and key cards

Module completed!

Congratulations! You have successfully completed this module!

Summary of acquired skills

1

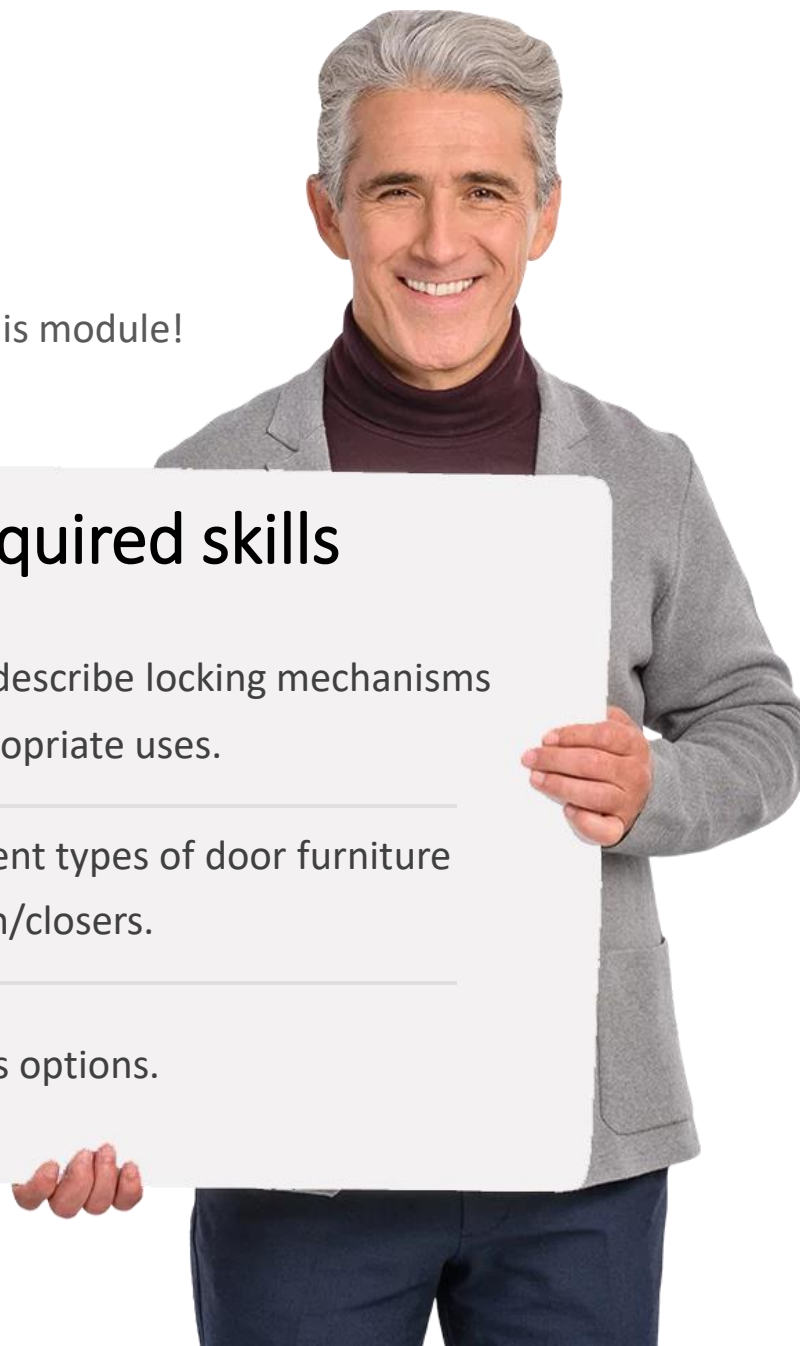
The ability to describe locking mechanisms and their appropriate uses.

2

Identify different types of door furniture and door open/closers.

3

Explain keyless options.



What is next?

Now you can either repeat this module or follow our study recommendation by clicking on one of the buttons below:

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