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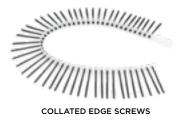
DRIVE™ Systems

DRIVE



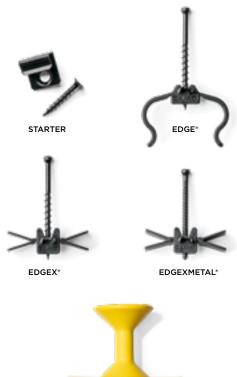
CLIPDRIVE**

COLLATED SCREWS





UNIVERSAL DECK CLIPS





MARKSMAN[®] System

MARKSMAN TOOLS





MARKSMAN PRO*

MARKSMAN PRO*-X1

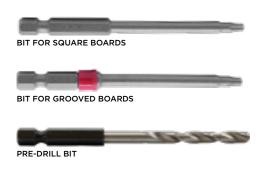


MARKSMAN PRO*-NB

EDGE SCREWS

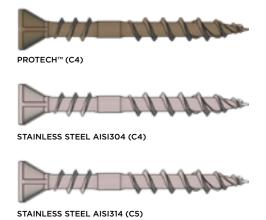


MARKSMAN ACCESSORIES



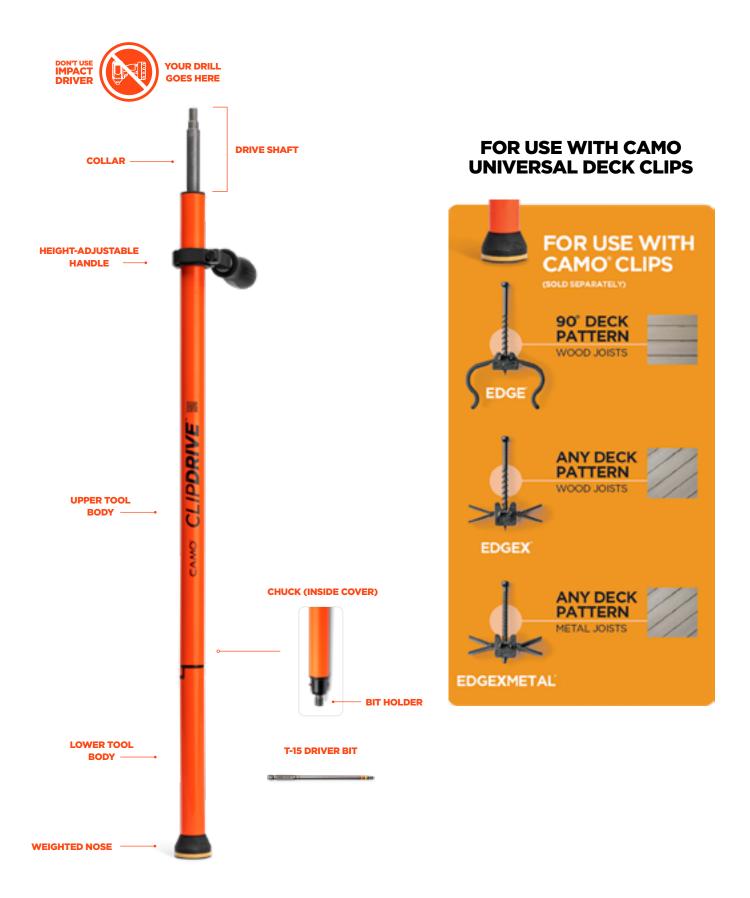


Face Screws





Get to know your CLIPDRIVE tool



Setup for Clip fastening







INSTALL T-15 DRIVER BIT



Separate the tool by turning the upper tool body counter-clockwise and sliding the locking pins out of the notches.



Pull back the collar, then insert the T-15 bit and release the collar to lock the bit in place.

В

CONNECT TOOL BODY



Align the notches in the upper tool body with the locking pins and push down while turning to lock into place.



Turn the upper tool body clockwise to lock it into place.

C

INSTALL THE HANDLE



Loosen the handle by turning it counter-clockwise and slide the clamp onto the tool.

Position the handle on the upper tool body and tighten by turning the handle clockwise.

D

ATTACH YOUR DRILL

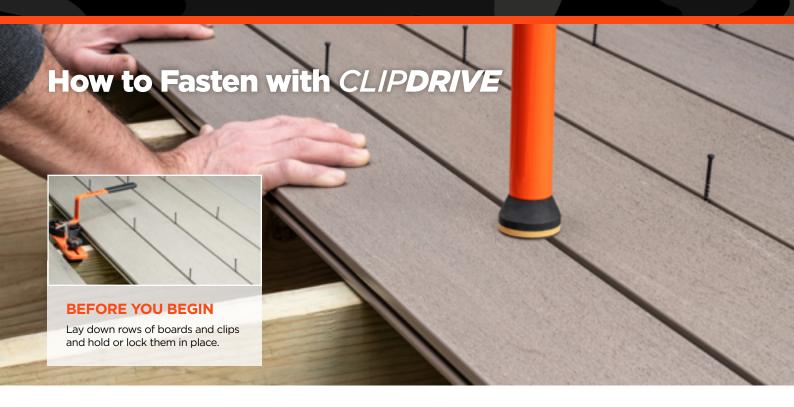


Make sure the drill is set in the forward position. Insert the large collar of the drive shaft into the drill chuck and tighten.



If your drill has a drill and clutch mode, set it to clutch mode. Set your drill to 30% of maximum torque.







POSITION NOSE OVER CLIP

Starting at the outermost board, place the nose over the exposed screw.



ENGAGE DRILL

With the nose flat on the surface of the board, and pressure on the handle, run the drill at full speed, and push the driver drill down to engage the bit and screw.



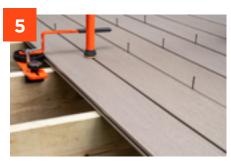
FASTEN THE BOARD

Apply steady pressure and continue to drive until the drill clutch releases.



LIFT UP TOOL

After fastening, lift up on the tool to return your drill to starting position.



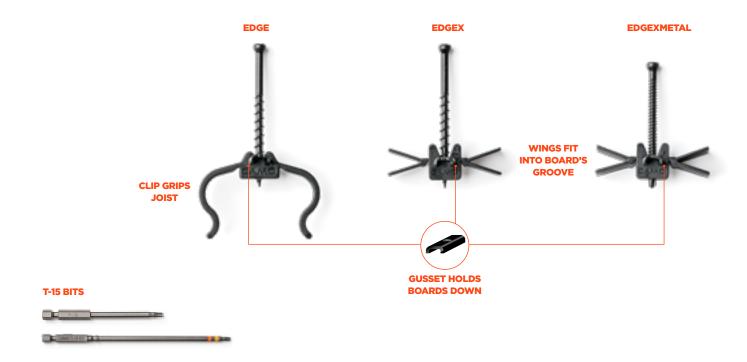
FASTEN EVERY JOIST

Fasten all of the remaining clips at each joist.

*FIND MORE SPECIFIC INFORMATION ABOUT EACH CLIP TYPE ON PAGES 10-19.



Get to know your Clips



WHICH CLIPS SHOULD I USE?

CLIP TYPE	90° PATTERNS	ANY PATTERN
STARTER CLIPS	✓	✓
EDGE CLIPS	✓	X
EDGEX CLIPS	✓	√
EDGEXMETAL CLIPS	✓	✓

GROOVED BOARD TYPE	77
COMPOSITE	√
PVC	✓
CAPPED COMPOSITE	√
HARDWOOD	✓

CLIPS INTRODUCTION STARTER EDGE EDGEX EDGEXMETA

Setup for STARTER Clips









Insert the T-15 driver bit into your drill. Do not use an impact driver.

B ADJUST DRILL



If your drill has a drill and clutch mode, set it to clutch mode. Set your drill to 30% of maximum torque.





FASTEN CLIP ON JOIST

Place clip on the joist, centered with the cross joist, and fasten.



REPEAT

Install a STARTER Clip at every joist.



PLACE BOARD

Tilt board up slightly to set it in the clips.



LAY BOARD DOWN

Gently push the board down to lock it in place.

CLIPS

Setup for EDGE Clips ()











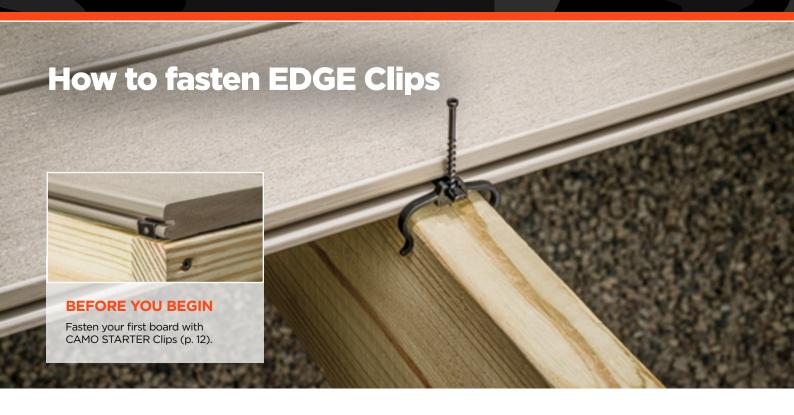
Insert the T-15 driver bit into your drill. Do not use an impact driver.





If your drill has a drill and clutch mode, set it to clutch mode. Set your drill to 30% of maximum







PLACE CLIP ON JOIST

Place a clip on the joist with the gusset in the groove. Clips stay in place until you're ready to fasten.



REPEAT ALONG THE BOARD

Place a clip at every joist along the length of the board.



SLIDE ON NEXT BOARD

Place the next board up against the clips, and repeat until you have multiple rows of boards and clips.



LOCK-IN YOUR BOARDS

Hold the boards tightly, or lock them in place with CAMO® LEVER®.





FASTEN WITH NEVER-MISS GUIDE

Starting at the outermost board, place the NEVER-MISS Guide (included) over the screw head, connect the bit to the head and drive. Repeat until all inner boards are fastened.



OR FASTEN WITH CLIPDRIVE (OPTIONAL)

To fasten with ClipDRIVE, starting at the outermost board, put the nose over the screw head and drive at full RPM while applying downward pressure. Repeat until all inner boards are fastened. See full instructions on page 9.

CLIPS

Setup for EDGEX Clips ()











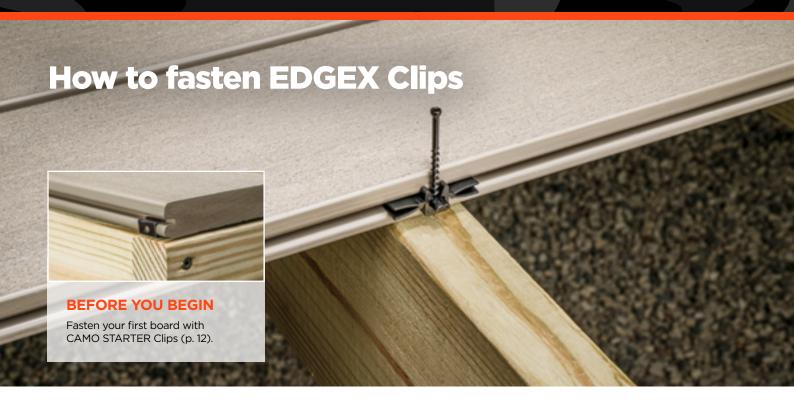
Insert the T-15 driver bit into your drill. Do not use an impact driver.

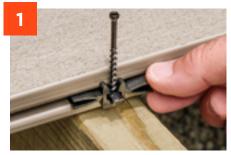




If your drill has a drill and clutch mode, set it to clutch mode. Set your drill to 30% of maximum torque.







PLACE CLIP IN GROOVE

Pinch the wings of clip together and slide the clip into the groove. The wings of the clip will expand, holding the clip in place until you're ready to fasten.



LOCK-IN YOUR BOARDS

Hold the boards tightly, or lock them in place with CAMO® LEVER®.





REPEAT ALONG THE BOARD

Place a clip at every joist along the length of the board.



FASTEN WITH NEVER-MISS GUIDE

Starting at the outermost board, place the NEVER-MISS Guide (included) over the screw head, connect the bit to the head and drive. Repeat until all inner boards are fastened.



SLIDE ON NEXT BOARD

Place the next board up against the clips, and repeat until you have multiple rows of boards and clips.



OR FASTEN WITH CLIPDRIVE (OPTIONAL)

To fasten with ClipDRIVE, starting at the outermost board, put the nose over the screw head and drive at full RPM while applying downward pressure. Repeat until all inner boards are fastened. See full instructions on pages 9.

Setup for EDGEXMETAL Clips ()











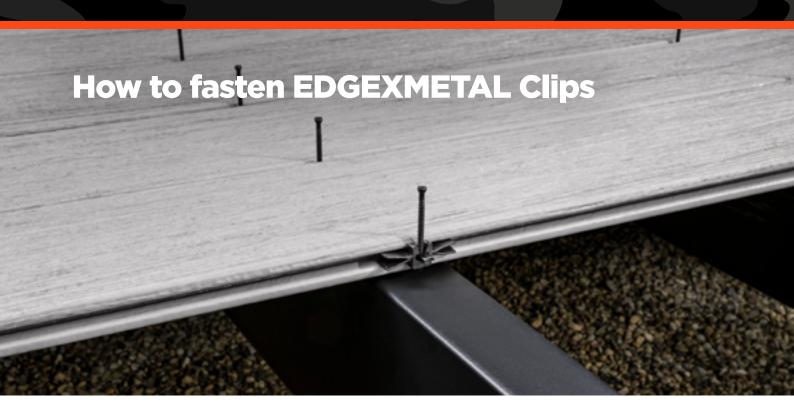
Insert the T-15 driver bit into your drill. Do not use an impact driver.





If your drill has a drill and clutch mode, set it to clutch mode. Set your drill to 30% of maximum torque.

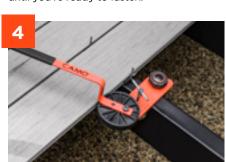






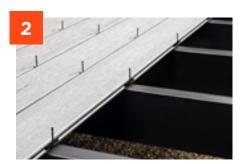
PLACE CLIP IN GROOVE

Pinch the wings of clip together and slide the clip into the groove. The wings of the clip will expand, holding the clip in place until you're ready to fasten.



LOCK-IN YOUR BOARDS

Hold the boards tightly, or lock them in place with CAMO® LEVER®.



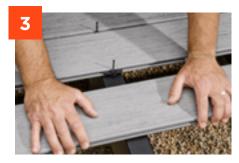
REPEAT ALONG THE BOARD

Place a clip at every joist along the length of the board.



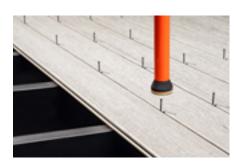
FASTEN WITH NEVER-MISS GUIDE

Starting at the outermost board, place the NEVER-MISS Guide (included) over the screw head, connect the bit to the head and drive. Repeat until all inner boards are fastened.



SLIDE ON NEXT BOARD

Place the next board up against the clips, and repeat until you have multiple rows of boards and clips.



OR FASTEN WITH CLIPDRIVE (OPTIONAL)

To fasten with ClipDRIVE, starting at the outermost board, put the nose over the screw head and drive at full RPM while applying downward pressure. Repeat until all inner boards are fastened.

See full instructions on pages 9.



DRIVE INTRODUCTION EDGE SETUP EDGE USE FACE SETUP CLIP SETUP CLIP USE

Get to know your DRIVE tool



SELECT A NOSE PIECE

	EDGE	CLIP	FACE
Nose Piece	P	Ē	Ť
How It Works		***************************************	
Compatible Board Profiles	Square	Grooved	Square
Compatible Deck Boards	Pressure Treated Composite PVC Cedar Redwood	Composite PVC Capped Composite Hardwood	Pressure Treated Composite PVC Capped Composite
Compatible Fasteners	Collated Edge Screws	Universal Deck Clips	Collated Wood and Composite Screws

^{*}We do not recommend using the DRIVE tool to Edge fasten capped composites or hardwood as these boards need to be pre-drilled. Instead, use the MARKSMAN Pro* Tool and Edge Screws (p. 32).

ASSEMBLE THE TOOL



INSTALL HANDLE

Attach the handle by screwing it onto the bolt at the top of the tool. You can reverse the handle for right or left-handed use by simply loosening the bolt and reinstalling it on the other side of the tool. DRIVE EDGE SETUP EDGE USE FACE SETUP FACE USE CLIP SETUP CLIP SETUP

Setup for Edge fastening









A INSTALL T-15 DRIVER BIT



Using a bit, press the release button in the channel and remove the lower body of the



Position the tool body so the large collar of the drive shaft is on a stable surface.



Pull the body of the tool back with one hand to reveal the bit holder. Continue to hold in place.



Put the T-15 bit in your other hand, pull down on the bit holder, and set the bit in place.



Pull up on the bit holder to ensure the bit is locked in.



Slide the lower tool body over the bit—it will click into position.

В

INSERT EDGE NOSE PIECE



Press the release button.



Insert the Edge nose piece. It will lock into place.

C

ATTACH YOUR DRILL



Make sure the drill is set in the forward position. Insert the large collar of the drive shaft into the drill chuck and tighten.



Set your drill to its highest torque setting.

D

INSERT SCREW STRIP



Slide the collated screw strip into the screw strip channel.



Push the strip through the nose piece.



Slide the picker up.



Push the end of the strip into the picker teeth.



TEST & ADJUST SCREW HEIGHT



Before fastening on the deck top, drive a few screws into a scrap piece of material and adjust the depth set dial accordingly. For Edge screws, sink them 0-6mm below the surface of the deck board.





POSITION NOSE PIECE

Starting on the outer edge of the board, line up the nose piece with the joist at least 1 in. from the board end.



ENGAGE DRILL

With the nose piece flat on the surface of the board, and pressure on the DRIVE handle, run the drill at full speed, and push the driver drill down to engage the bit and screw.



FASTEN THE BOARD

Apply steady pressure, but do not force the screw—it will auger the surface on its own. Continue driving until the drill is fully compressed and the depth release disengages.



LIFT DRIVE UP

After fastening, lift up on the DRIVE tool to return your drill to starting position. The screw will automatically advance.



FASTEN EVERY JOIST

Install a screw at every joist on the outer edge of the board.



REPEAT ON OTHER SIDE OF THE BOARD

Follow the same steps to fasten the inside edge of the board.

DRIVE INTRODUCTION EDGE SETUP EDGE USE FACE SETUP FACE USE CLIP SETUP CLIP US

Setup for Face fastening











INSTALL T-20 DRIVER BIT



Using a bit, press the release button in the channel and remove the lower body of the



Position the tool body so the large collar of the drive shaft is on a stable surface.



Pull the body of the tool back with one hand to reveal the bit holder. Continue to hold in place.



Put the T-20 bit in your other hand, pull down on the bit holder, and set the bit in place.



Pull up on the bit holder to ensure the bit is locked in.



Slide the lower tool body over the bit—it will click into position.

В

INSERT FACE NOSE PIECE



Press the release button.



Insert the Face nose piece. It will lock into place.

G

ATTACH YOUR DRILL



Make sure the drill is set in the forward position. Insert the large collar of the drive shaft into the drill chuck and tighten.



Set your drill to its highest torque setting.

D

INSERT SCREW STRIP



Slide the collated screw strip into the screw strip channel.



Push the strip through the nose piece.



Slide the picker up.

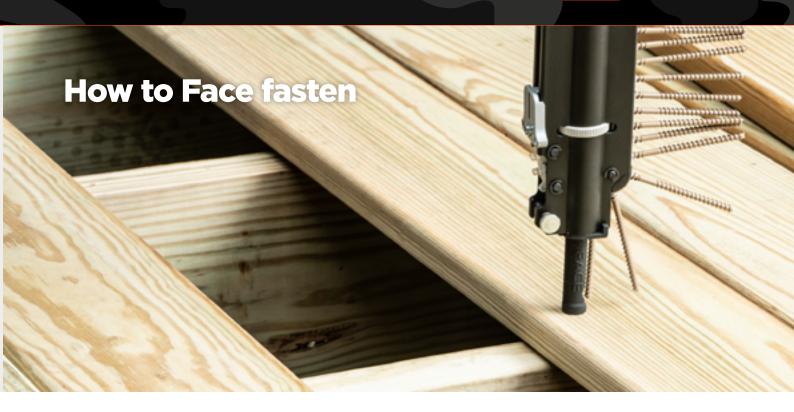


Push the end of the strip into the picker teeth

TEST & ADJUST SCREW HEIGHT



Before fastening on the deck top, drive a few screws into a scrap piece of material and adjust the depth set dial accordingly. For Face screws, you can drive them flush or countersink them.





POSITION NOSE PIECE

Starting on the outer edge of the board, line up the nose piece with the joist at least 30mm from the board end and edge.



ENGAGE DRILL

With the nose piece flat on the surface of the board, and pressure on the DRIVE handle, run the drill at full speed, and push the driver drill down to engage the bit and screw.



FASTEN THE BOARD

Apply steady pressure, but do not force the screw—it will auger the surface on its own. Continue driving until the drill is fully compressed and the depth release disengages.



LIFT DRIVE UP

After fastening, lift up on the DRIVE tool to return your drill to starting position. The screw will automatically advance.



FASTEN EVERY JOIST

Install two screws at every joist until the entire board is installed.

DRIVE INTRODUCTION EDGE SETUP EDGE USE FACE SETUP FACE USE CLIP SETUP

Setup for Clip fastening









A INSTALL T-15 DRIVER BIT



Using a bit, press the release button in the channel and remove the lower body of the



Position the tool body so the large collar of the drive shaft is on a stable surface.



Pull the body of the tool back with one hand to reveal the bit holder. Continue to hold in place.



Put the T-15 bit in your other hand, pull down on the bit holder, and set the bit in place.



Pull up on the bit holder to ensure the bit is locked in.



Slide the lower tool body over the bit—it will click into position.

В

INSERT CLIP NOSE PIECE



Press the release button.



Insert the Clip nose piece. It will lock into place.

G

ATTACH YOUR DRILL

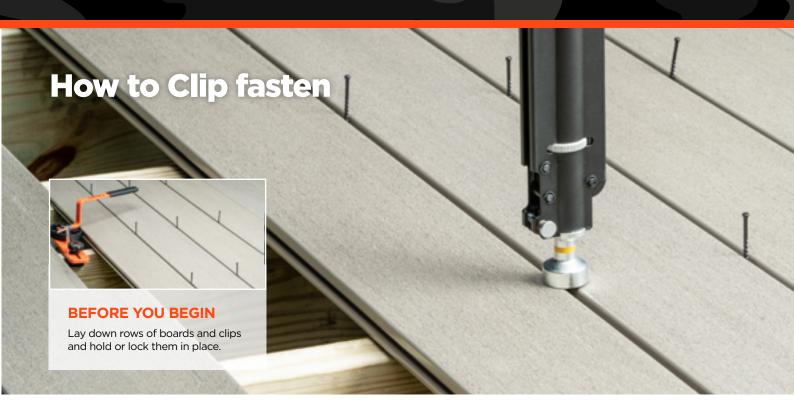


Make sure the drill is set in the forward position. Insert the large collar of the drive shaft into the drill chuck and tighten.



If your drill has a drill and clutch mode, set it to clutch mode. Set your drill to 30% of maximum torque.

DRIVE INTRODUCTION EDGE SETUP EDGE USE FACE SETUP FACE USE CLIP SETUP CLIP USE





POSITION NOSE PIECE

Starting at the outermost board, place the Clip nose piece over the exposed screw.



ENGAGE DRILL

With the nose piece flat on the surface of the board, and pressure on the DRIVE handle, run the drill at full speed, and push the driver drill down to engage the bit and screw.



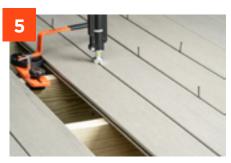
FASTEN THE BOARD

Apply steady pressure and continue to drive until the drill clutch releases.



LIFT DRIVE UP

After fastening, lift up on the DRIVE tool to return your drill to starting position.



FASTEN EVERY JOIST

Fasten all of the remaining clips at each joist.

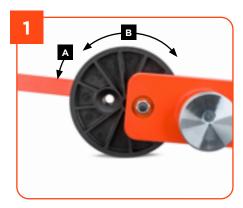
*FIND MORE SPECIFIC INFORMATION ABOUT EACH CLIP TYPE ON PAGES 10-19.



Get to know your LEVER tool



ASSEMBLING YOUR TOOL



ALIGN

A) Straighten the handle.
B) Align both holes by rotating the board cam.



INSERT SCREW

Insert flathead screw from the bottom of board cam.



TIGHTEN

Use supplied hex key to securely tighten the screw.

Setup for bending boards



SET THE JOIST TYPE—WOOD OR METAL



Loosen joist knob until the stop block disengages.



Rotate the stop block to the desired side, align the block with the holes, push back into place, and tighten the joist knob.

SET THE JOIST WIDTH

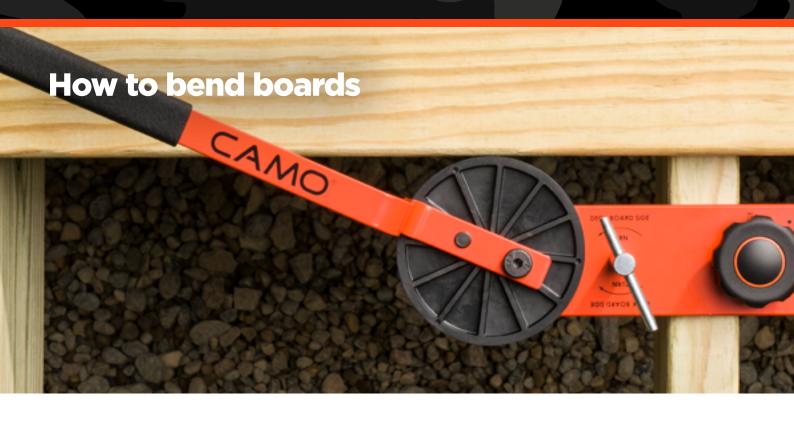


Adjust the stop block to the proper joist width and tighten the knob.



LEVER suits joists from 35mm to 85mm.







SECURE BOARD

Get your board in place and fasten one end.



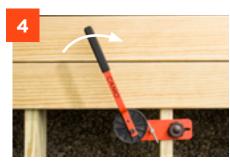
POSITION

Place LEVER on the joist at the opposite end of the board and tighten the joist cam with the pivot pin.



BEGIN BENDING

Apply pressure by moving the handle towards the deck board.



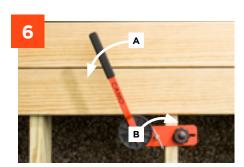
CLOSE THE GAP

Keep turning until the board is in desired fastening position.



FASTEN

Fasten the board.



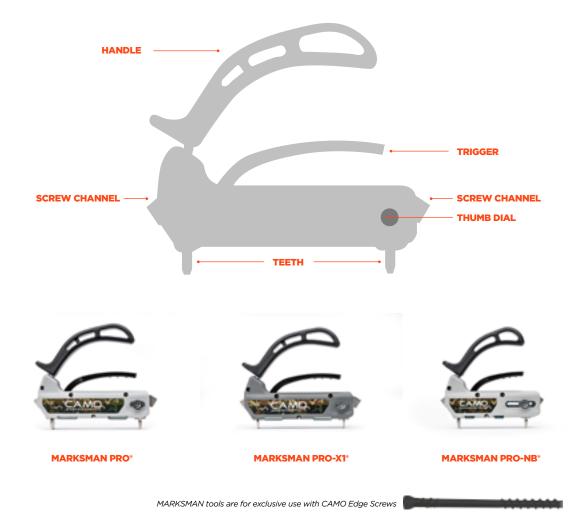
RELEASE & REMOVE

A) Release pressure by moving the handle away from the deck board.

B) Loosen the joist cam and remove LEVER.



Get to know your MARKSMAN® tools



WHICH TOOL SHOULD I USE?

	MARKSMAN PRO	MARKSMAN PRO-X1	MARKSMAN PRO-NB
Tool	E	6	E
Gap	5,0mm	1,6mm	1,6mm, 3,2mm, 5,0 mm
Board Width	133-148mm	133-146mm	83-127mm

1,6mm. 3,2mm and 5,0mm spacers are available for all Marksman tools - which makes them compatible with all diffrent board types. Always follow the decking supplier's recommendations about lenghts and materials.

MARKSMAN

Setup for MARKSMAN Pro Tools















INSERT T-15 BIT



Insert the T-15 driver bit into your drill. Do not use an impact driver.



IF YOU'RE PRE-DRILLING*, INSERT THE PRE-DRILL BIT



Speed up the job by attaching the pre-drill bit to another drill.*



ADJUST DRILL



The recommended fastening speed for Edge fastening is 2500 RPM.



ADJUST SPACER TEETH



Adjust the spacer teeth on the tool with the thumb dial to fit your board.

*Pre-drilling is required for capped composite and hardwoods.







PLACE TOOL

Place the tool on the board so it's in line with the joist. If you are NOT pre-drilling, skip to step 3.



DRILL HOLE*

If pre-drilling, run the pre-drill bit through both screw channels*.

*Pre-drilling is required for capped composite and hardwoods.



LOAD SCREWS

Load an Edge screw into both screw channels.



DRIVE

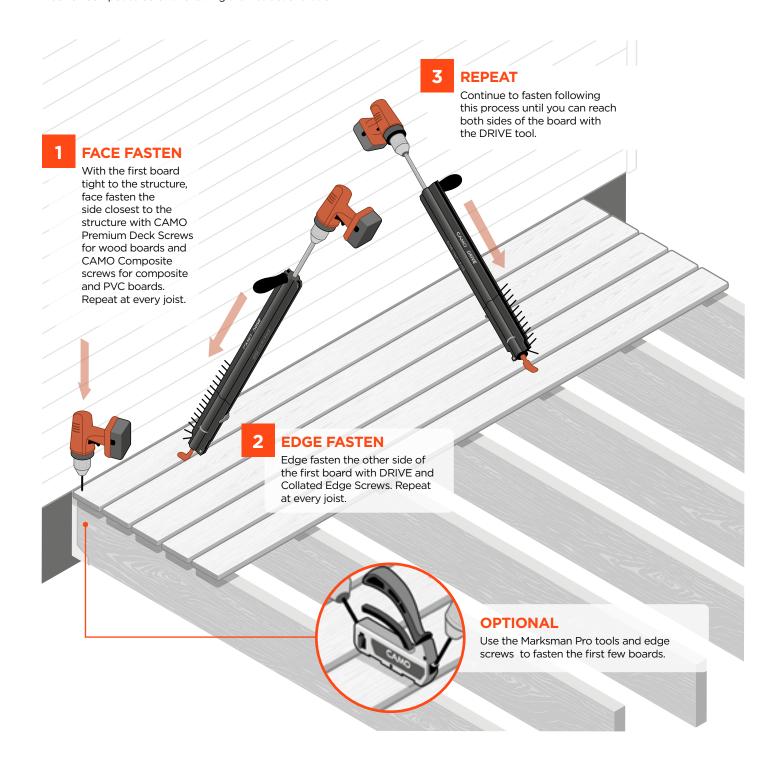
Drive the screw in on both sides letting the screw do the work. The shoulder on the bit will stop the screw from overdriving.



Edge Fastening Against a Structure

BY HAND & WITH DRIVE

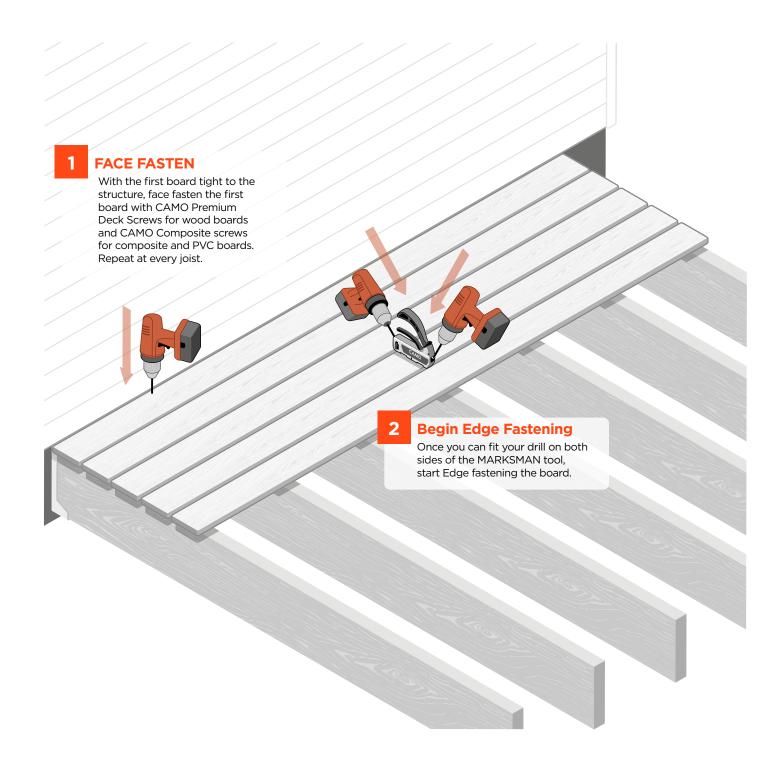
Given the length of the DRIVE tool and the angle required for installation, you will not be able to Edge fasten both sides of the first few rows of boards next to a structure. In these instances, use CAMO Premium Deck or Composite Screws following the instructions below.



Edge Fastening Against a Structure

MARKSMAN TOOLS

Given the drill angle required for installation with the MARKSMAN Pro Tools, you will not be able to Edge fasten both sides of the first board next to a structure. In these instances, use CAMO Premium Deck or Composite screws, following the instructions below.



Best Practices for Edge Fastening



Failure to install CAMO Edge Screws in accordance with this installation guide may affect fastener performance and void product warranty.



CAMO Edge Screws are intended for attaching deck boards directly to deck substructure using CAMO tools. Any other use is not recommended or covered by warranty.

CHECK THE DECK SUPPLIER'S RECOMMENDATIONS

It is important to choose decking screw according to where, how and with what timber you intend to build the deck of. CAMO screws come in 3 different types of qualities: ProTech, Stainless Steel 304 (A2) and Stainless Steel 316 (A4). Here are a few tips to help you choose the correct screw for your project.

Always make sure you follow the deck supplier's recommendations.

- 1. Where are you building the deck?
- 2. Does the decking board require a specific corrosivity class of the screw?
- 3. How big will the deck be and on which height?
- 4. Which space beetween the decking boards does my timber require?
- 5. Must the timber be pre-drilled before installed?

	PRO TECH	304 STAINLESS STEEL	316 STAINLESS STEEL
INLAND ENVIRONMENTS where the amount of salt and air pollution is low or moderate and where the deck is built near to the ground but not directly on the ground.	\checkmark	\checkmark	✓
FRESH WATER Decks that are installed close to lakes and/or fresh water require a screw of stainless steel.		✓	✓
NEAR THE SEA & POOL DECK Use a stainless steel A4 screw when installing pool decks or decks close to the sea. CAMO SS A4 screw has corrosivity class C5.		5	✓
LARGE DECKS, FENCES, STAIRS & DECKS ON HIGH HEIGHTS When installing large decks or other constructions with a lot of movement, we recommend A2 or A4. Screws of stainless steel is softer than hardened steel and therefor manages the movements in the construction better.		✓	✓
CORROSIVE WOOD & TROPICAL WOODS often requires acid-proof stainless screws. Always make sure you follow the decking supplier's recommendations.			✓

Installing at Butt Joints



ALWAYS INSTALL A DOUBLE JOIST AT THE BUTT JOINTS

Use a separate clip to secure each board end. Please follow your deck board manufacturer's instructions for end-to-end board gapping distance to allow for expansion and contraction at this joint.

EDGE CLIPS



REMOVE LEGS ON EDGE CLIP

You will need 4 clips for each butt joint. Remove the legs of the Clip so that they can sit side-by-side on the double joists.



FASTEN SCREWS

With boards positioned correctly, place the clips in the groove, centered on joists on both sides of the boards. Partially fasten the screws to hold them in place until next board is set, then fully fasten the screws.

EDGEX & EDGEXMETAL CLIPS



PLACE 4 CLIPS

Place 4 Clips centered on joists on both sides of the boards.



FASTEN SCREWS

Place the next board up against the clips, then fasten the screws.

Replacing Boards If Needed



BACK OUT SCREWS

Back out all of the screws from the joist on both sides of the board.



PULL UP BOARD

Pull up on the board to easily remove it.



LAY NEW DECK BOARD

Clean away any clips remaining on the joists and lay the new deck board in position without any clips in place.



REMOVE LEGS OR WINGS

Count the number of clips needed and snap off the legs or wings on each clip.



SLIDE CLIPS DOWN GROOVE

Slide the clips (screws and gussets) down the groove positioning one over each joist on both sides of the board.



FASTEN AT EACH JOIST

Fasten clips securely in place using the NEVER-MISS™ Guide.

Troubleshooting

REMOVING COLLATED SCREWS FROM DRIVE



SLIDE PICKER

Slide the picker up to the nose piece to release tension.



REMOVE STRIP

The strip should easily pop free, or you can pull it out.

UNJAMMING COLLATED STRIPS



RELEASE STRIP

Slide picker up to release the strip from the picker.



BACK OUT OR TEAR STRIP

If possible, back out the strip from the nose piece. If you can't back it out, tear the strip away from the jammed fastener.



REMOVE NOSE PIECE

Remove the nose piece to ensure it's clear of fasteners.



REATTACH

42

Insert the nose piece again.



RELOAI

Load a new strip of screws.

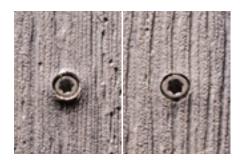
WHEN TO CHANGE THE BIT



Driver bits and the bit holder will wear over time.

If you hear a grinding sound while driving, the bit may be slipping in the bit holder

- Check the bit tip for wear and replace it if it's worn.
- If the bit tip is fine, check the bit at the top where it locks into the bit holder.
- If there is a wear line at the top of the bit, it's time to change the bit holder.



If you're experiencing screws not driving fully flush:

- Check the depth dial—it's possible it was bumped.
- Make sure you're using the correct bit.
- · Check the bit tip for wear and replace it if it's worn.
- If there is a wear line at the top of the bit, it's time to change the bit holder.



We do not recommend the use of impact drivers as they will cause driver bits to wear quickly and even crack.

BOARDS ARE CRACKING WHEN FASTENED



Edge Fastening

- If you are applying too much pressure on the drill it prevents the screw from boring the material. This can cause screw slipping and mushrooming with PVC and composite boards, or cracking and splitting of wood boards.
- Solution: let the rake tip on the screw auger the material out—do not force it.

Composite Face Fastening

- If you are applying too much pressure, the composite boards can mushroom and crack.
- Solution: let the sharp point of the screw do the work of biting into the board—do not force it. Additionally, the trilobular shank will reduce torque and prevent mushrooming.

CLIP SCREWS ARE STRIPPING

Excessive torque can cause over-driving, resulting in screw spin-out or stripping. Be sure your drill (not impact driver) is set to 30% of maximum torque. Also, be sure to check the tip on your bit for wear if screws continue to strip and replace it if it's worn.

