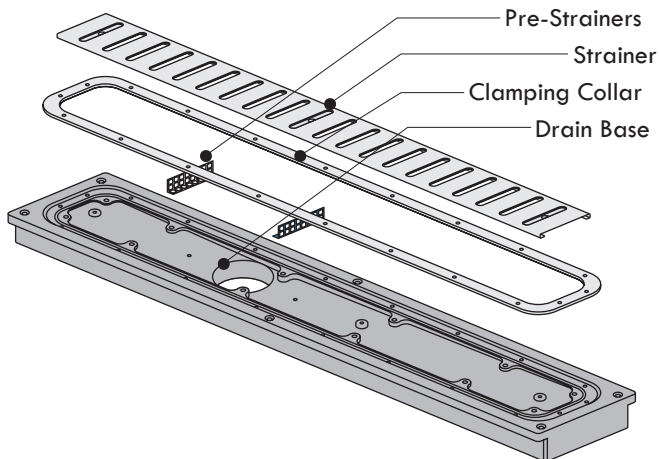





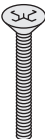


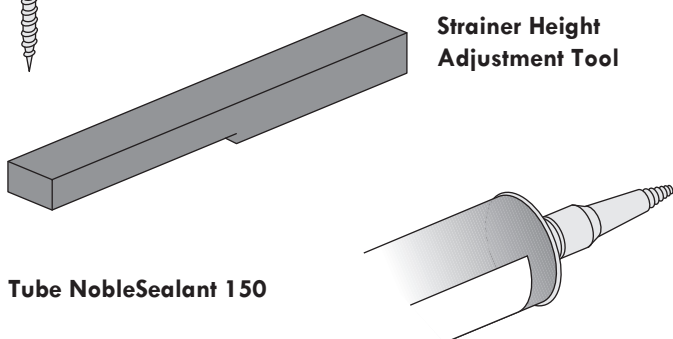
FreeStyle Linear Drain™ Instructions Patent Pending

Carefully review all installation options and instructions before proceeding.

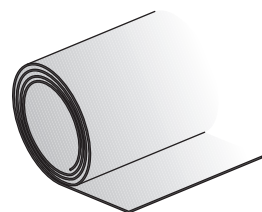
FreeStyle Linear Drain Includes:



Hardware and Materials

- 
Pre-Strainer Screw
 #8 1/2" Phillips Pan Head Screws
- 
Clamping Collar Screw
 #6 5/8" Phillips Flat Head Screws
- 
Strainer to Base Screw
 #6 1" Phillips Pan Head Screws
- 
Strainer Height Adjustment Screw
 #10 1-1/4" Phillips Flat Head Screws
- 
Base to Sub-Floor Screw
 #8 2-1/2" Phillips Course Deck Screws
- 
Base to Sub-Floor, Concrete Anchor
 1" Long 1/4" Hole
- 
Strainer Height Adjustment Tool

Tube NobleSealant 150



NobleSeal®
Flashing

Note: If NobleSeal membrane will be used to waterproof entire shower, this flashing will not be needed.

Pre-Planning

Be certain to gather all required tools and materials required prior to installation.

Sub Floor

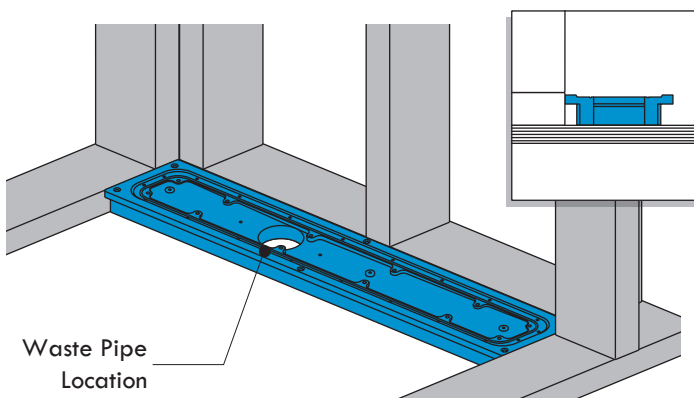
Caution: Sub floor must meet local code requirements and Tile Council of North America (TCNA) guidelines.

Clean sub floor and check that it is smooth and level.

Sloped Bed Requirements

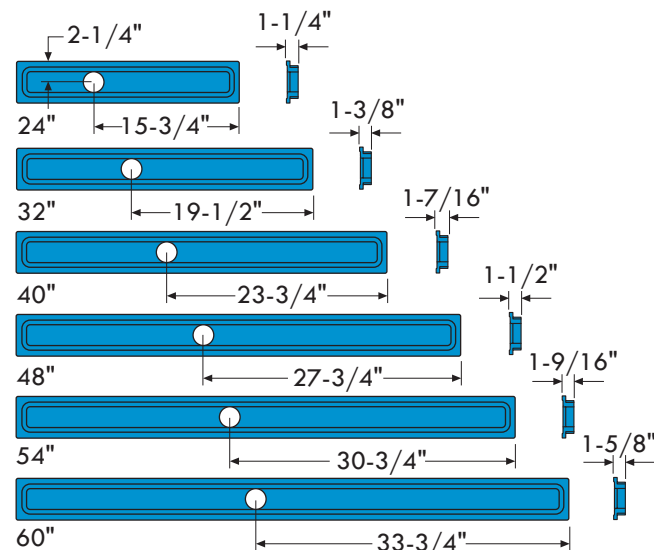
Carefully follow manufacturers instructions. Use products recommended for the type of sloped bed being installed.

FreeStyle Linear Drain assembly is intended to install tight to toe plate and studs within shower prior to installation of sloped mortar bed, backer board, waterproofing and tile.



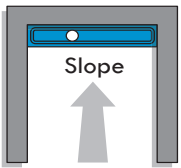
Confirm Drain Size, Waste Pipe Type and Waste Pipe Location

Drain hole is off-set to accommodate floor joist location. Size of shower determines size of drain to be used, which determines location of waste pipe through sub-floor. Match 2" I.D. schedule 40 pipe type (PVC or ABS) to drain base type.

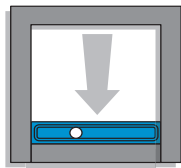


Pre-Planning Continued

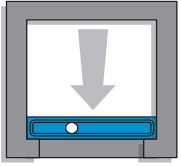
Drain Locations



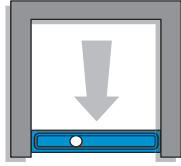
Back Wall
Flush to
back wall



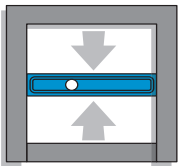
Full Curb
Flush to curb



Partial Curb
Flush to curb



Curb-less
Flush to both
side walls

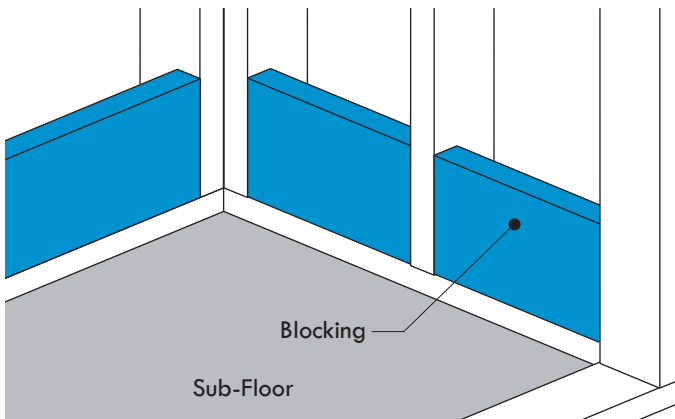


On Center
Flush to both
side walls

1 Wall Preparation

Blocking

Blocking between studs may be needed for flashing and membrane attachment prior to drain installation.

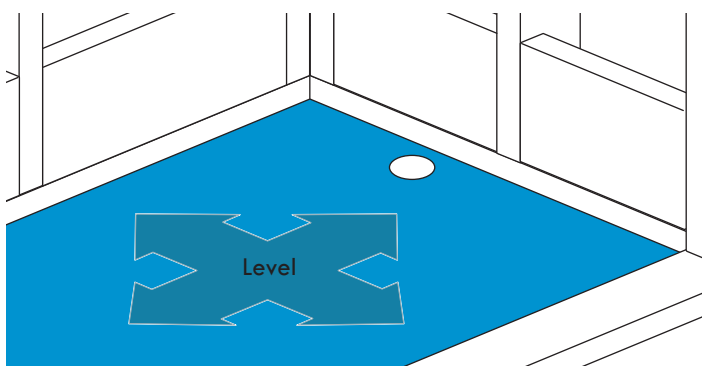


2 Sub-Floor Preparation

Caution: Confirm that sub-floor meets all local code requirements and the Tile Council of North America's (TCNA) guidelines.

Check for Level. Clean

Sub-floor must be smooth and level.
Clean sub-floor.

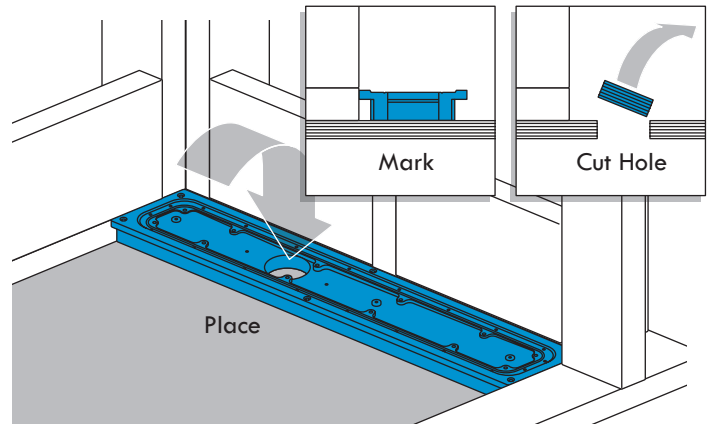


3 Waste Pipe

No Waste Pipe Installed

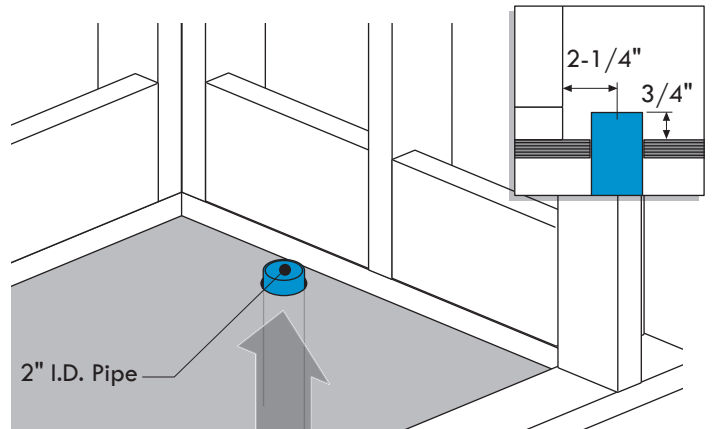
A Place, Mark and Cut

Place drain base in desired location on sub floor. Mark waste pipe location on sub-floor. Cut opening in sub-floor to access plumbing below.



Install Waste Pipe

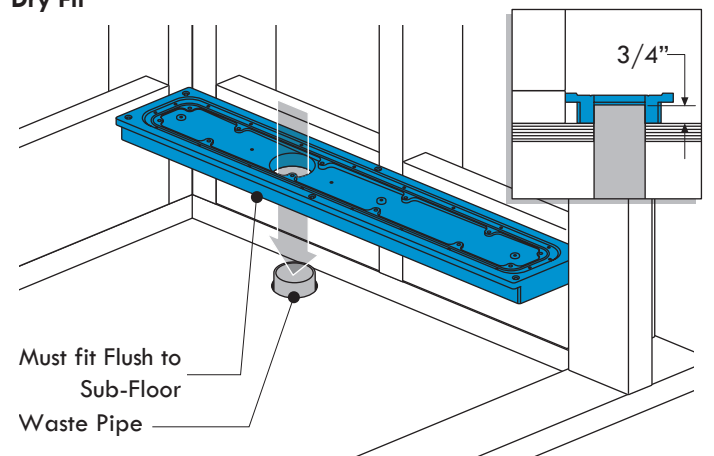
Follow local plumbing codes to properly install and secure 2" I.D. waste pipe 3/4" above sub-floor. **Note:** Waste pipe may be installed after fastening drain base if accessible from below.



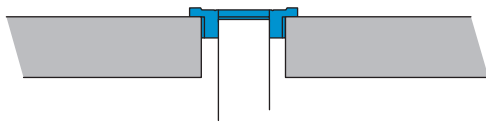
B Waste Pipe Pre-Installed

Dry fit drain base over location of existing waste pipe. If location does not allow drain base to fit flush against at least 2 shower walls, move location of plumbing to allow for proper installation. May also require moving existing studs and toe plate.

Dry Fit



Alternate Drain Mounting Methods



Concrete Substrate

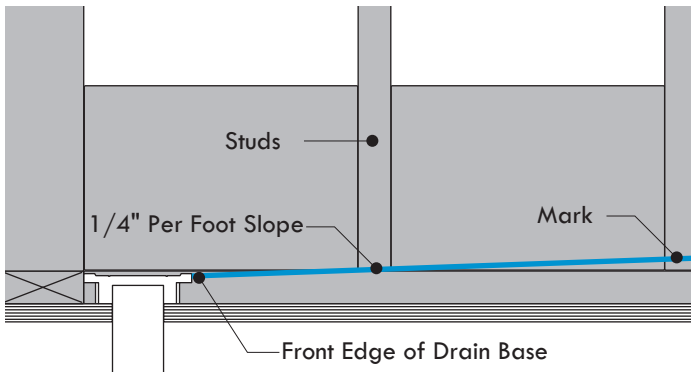


Wood Subfloor

4 Preparation for Sloped Mortar Bed

Mark Bed Slope

1/4" per foot slope to drain is required.



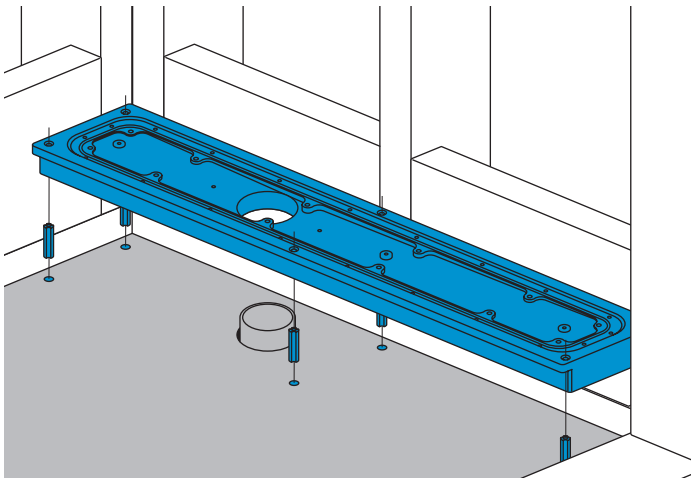
5 Fasten Drain Base to Sub-Floor

For Concrete Sub-Floor A & B

For Wood Sub-Floor B only

A Mark For Anchors

Dry fit drain base over waste pipe. Mark all holes in outside flange of drain base on concrete floor. Remove drain base. Drill 1/4" holes, 1-1/2" deep where marked. Drive plastic anchors flush in all holes.



5 Continued. Fasten Drain Base to Sub-Floor

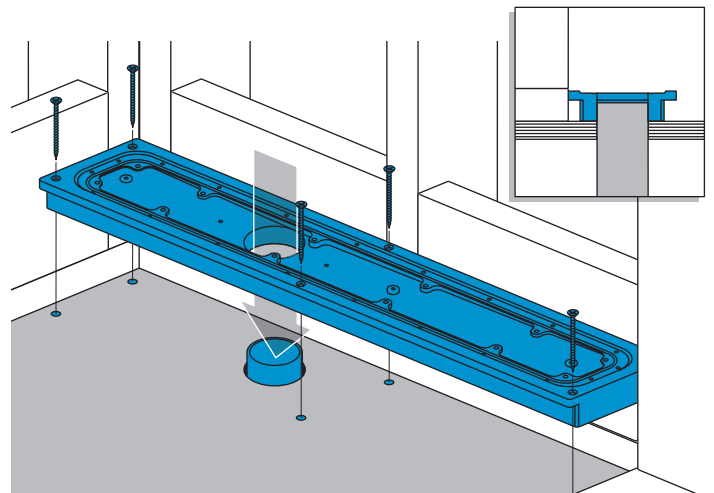
B Install Drain Base to Waste Pipe and Sub-Floor

Caution: Confirm proper plastic pipe cement and primer for drain base type (PVC or ABS). Check drain base label to confirm.

Apply appropriate plastic pipe cement and primer to drain and waste pipe following local plumbing codes and manufacturers instructions.

Fit and fully seat drain base onto waste pipe.

Fasten drain base to sub-floor by screwing 2-1/2" deck screws through all holes in outside flange of drain base into plastic anchors or directly into wood sub-floor. **Do not over-tighten.**

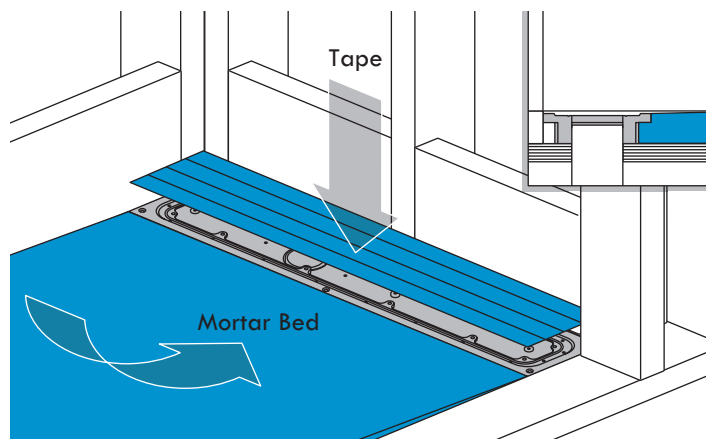


6 Sloped Mortar Bed Installation

Protect Drain Base. Install Sloped Mortar Bed

Apply tape over entire top surface of drain base.

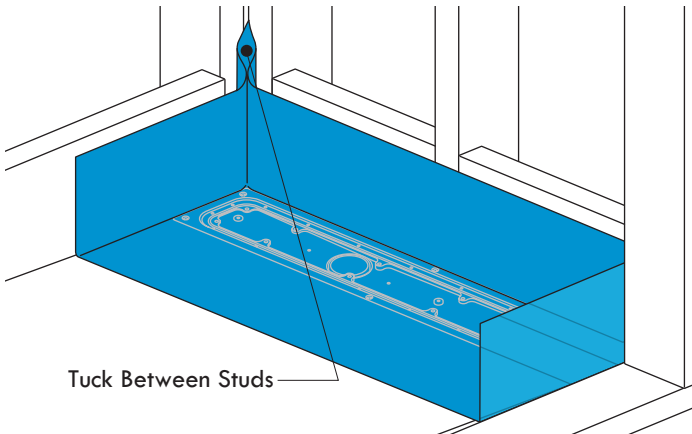
Follow industry standards to complete sloped mortar bed installation. Be certain mortar completely fills void below drain base flange. Allow to dry before proceeding.



Making Corners

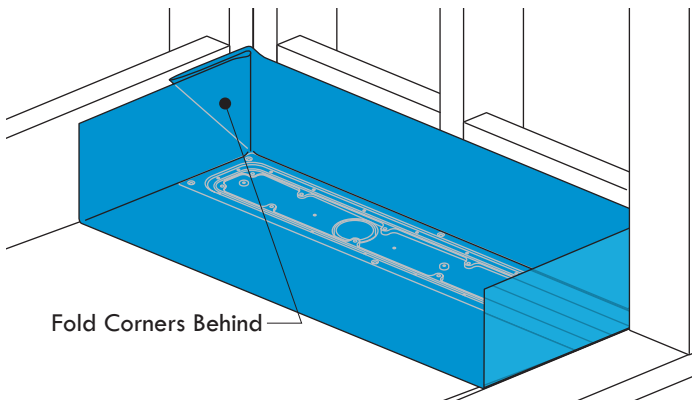
Tucked Corner (when space is available between studs)

Fold and crease to size. Tuck flashing into space between studs.



Folded Corner

Fold and crease to size. Fold corners behind flashing.



7 Prepare Flashing

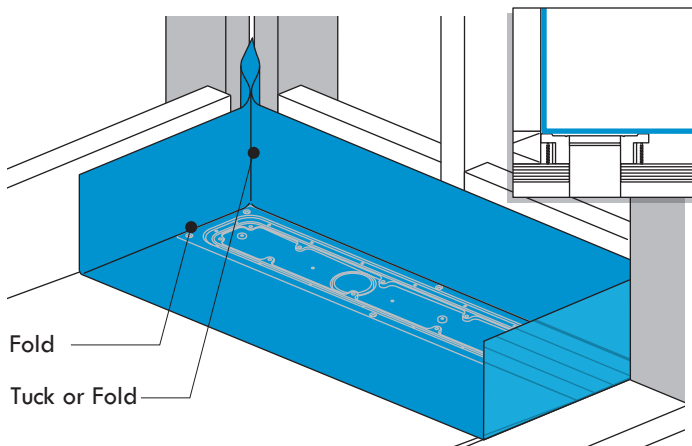


Drain at Back Wall

Flashing must turn up the walls a minimum of 3" above shower curb and 6" above floor in showers without curbs.

Measure width of shower floor across drain base. Lay flashing flat. Measure and mark flashing.

Fold and crease for upturns and create corners. **Note:** Do not secure flashing at this time.



7 Continued. Prepare Flashing



Drain at Full Curb Entry

Flashing must turn up the walls a minimum of 3" above shower curb and 6" above floor in showers without curbs.

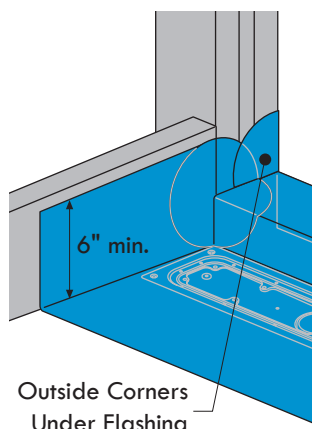
Prior to installing flashing, install pre-formed outside corners available separately from Noble Company following manufacturer's instructions. 2 per side.

Measure width of shower floor across drain base. Measure up and over curb. Lay flashing flat. Measure and mark flashing.

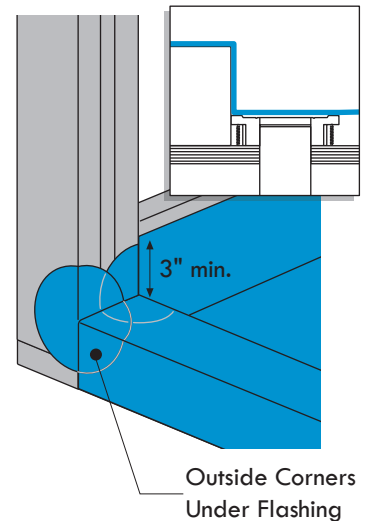
Cut, fold and crease to proper size and fit. **Note:** Do not secure flashing at this time.

Note: Noble Curb may also be used. See manufacturer's instructions.

Inside Shower



Outside Shower



7 Continued. Prepare Flashing



Drain at Partial Width Curb

Flashing must turn up the walls a minimum of 3" above shower curb and 6" above floor in showers without curbs.

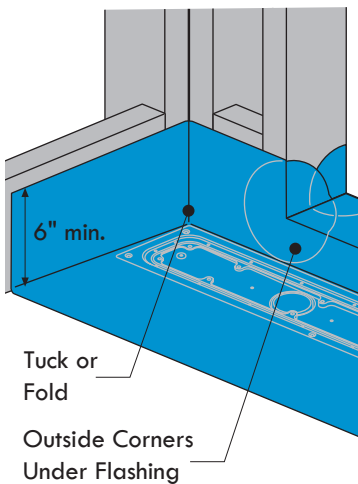
Prior to installing flashing, install pre-formed outside corners available separately from Noble Company following manufacturer's instructions. 2 per side.

Measure width of shower floor across drain base. Measure up and over curb. Lay flashing flat. Measure and mark flashing.

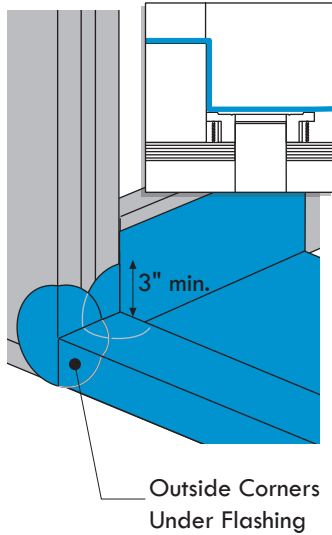
Cut, fold and crease to proper size and fit. **Note:** Do not secure flashing at this time.

Note: Noble Curb may also be used. See manufacturer's instructions.

Inside Shower



Outside Shower



7 Continued. Prepare Flashing



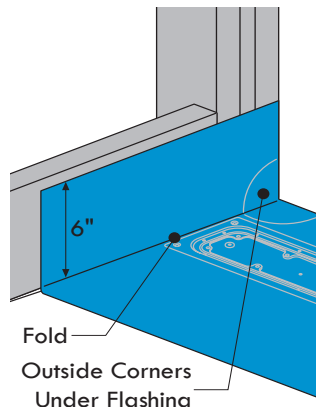
Drain at Curb-less Entry

Flashing must turn up the walls a minimum of 3" above shower curb and 6" above floor in showers without curbs.

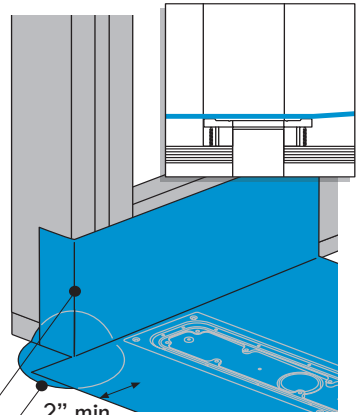
Measure width of shower floor across drain base. Lay flashing flat. Measure and mark flashing.

Cut, fold and crease to proper size and fit. **Note:** Do not secure flashing at this time.

Inside Shower



Outside Shower

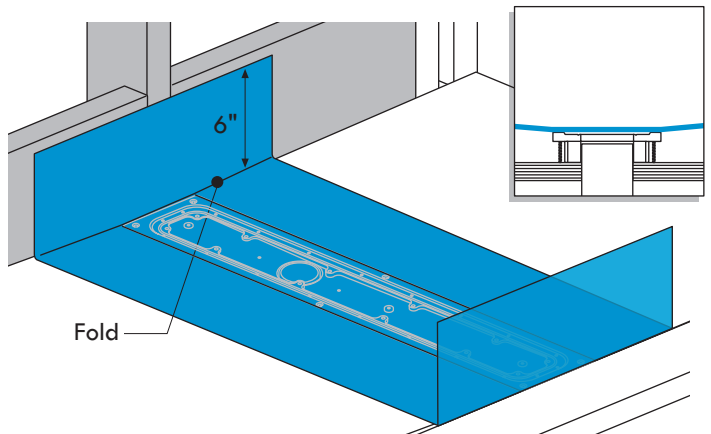


Drain On Center

Flashing must turn up the walls a minimum of 3" above shower curb and 6" above floor in showers without curbs.

Measure width of shower floor across drain base. Lay flashing flat. Measure and mark flashing.

Fold and crease for upturns. **Note:** Do not secure flashing at this time.

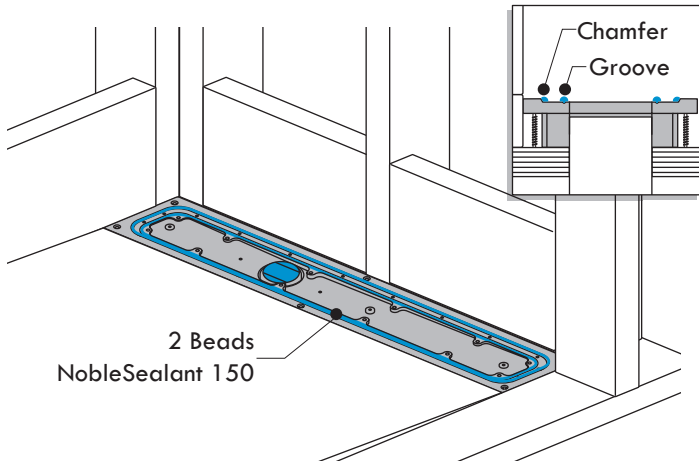


8 Secure Flashing

A Seal Drain Base

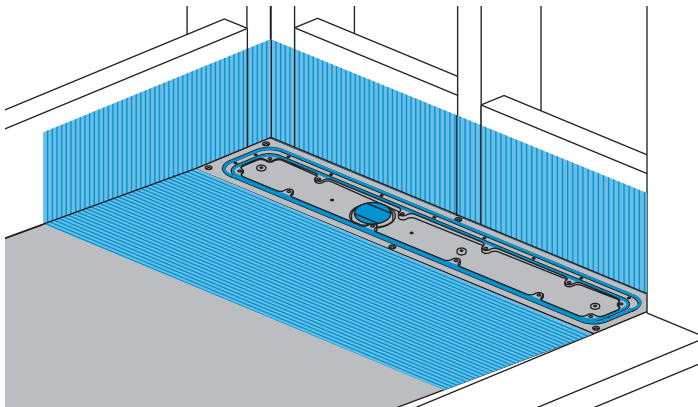
Lift out flashing. Remove tape, leaving tape over drain hole only.

Apply a 1/8" continuous bead of NobleSealant 150 around chamfer on base flange and another bead in groove on drain base.



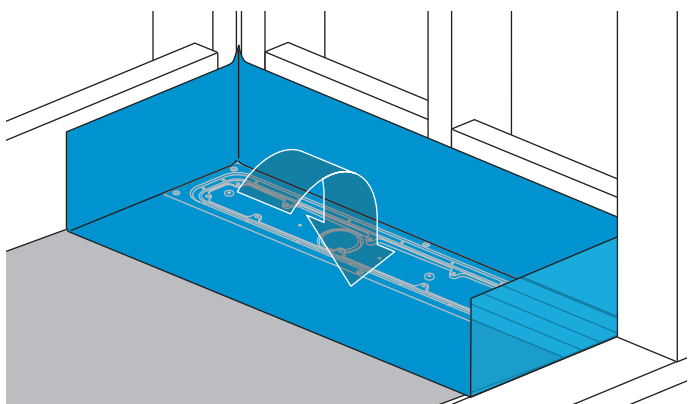
B Apply Adhesives

Apply NobleBond EXT or latex modified thin-set to mortar bed, walls, and curb as needed. Apply NobleSealant 150 to any pre-formed corners.



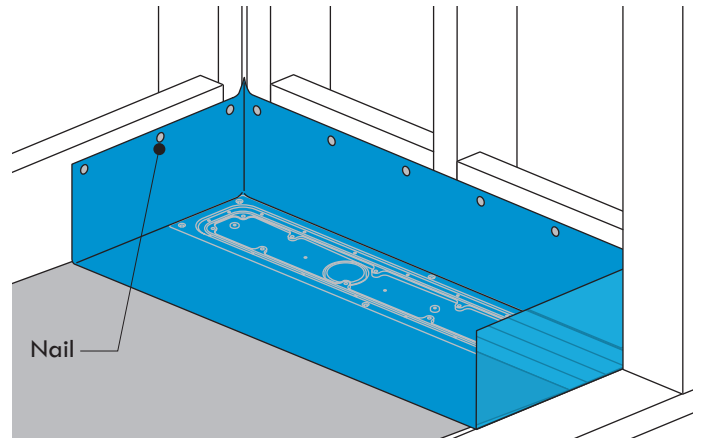
C Press into Sealant and Adhesive

Align membrane and firmly press all areas of membrane into adhesive on walls, floor, curb and sealant on drain base and any pre-formed corners.



9 Fasten Flashing

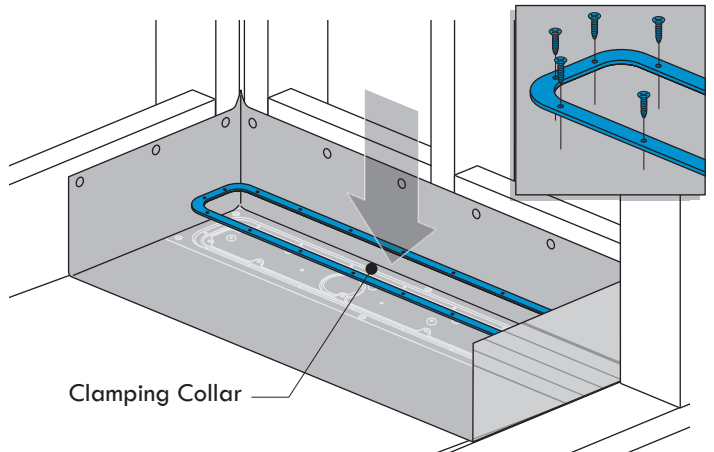
Nail through top 1" of flashing to studs and/or blocking.



10 Install Clamping Collar

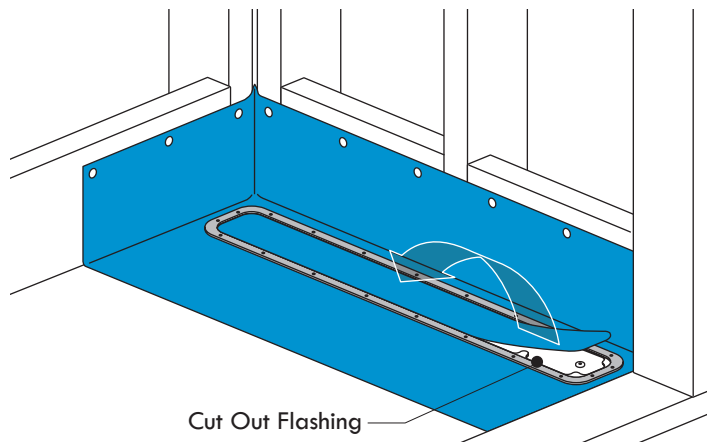
Align collar with drain base under flashing. Press firmly. Starting at one end, insert 5/8" screw through collar, punch through flashing and screw into base. Repeat for all screws.

Do not over-tighten.



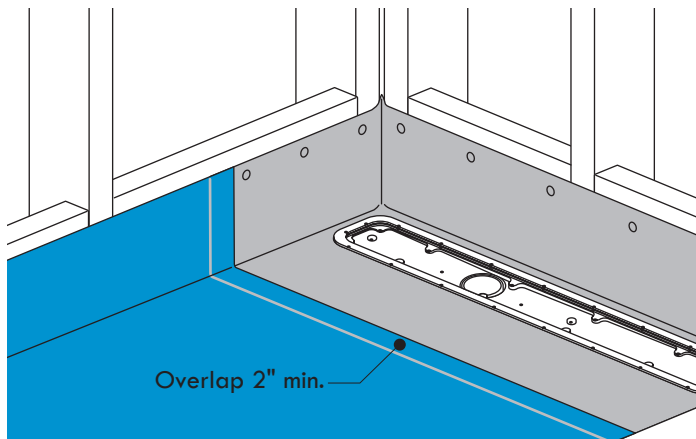
11 Cut Out Flashing

With a razor knife, carefully trim out flashing from center of collar. Remove tape from drain hole. **Caution:** Do not puncture flashing outside of collar.



12 Complete Floor Waterproofing

Complete installation of bonded waterproofing membrane (ANSA A118.10) on shower floor. NobleSeal TS is preferred.



13 Flood Test

Flood test as required by local codes.

14 Install Backer Board and Wall Waterproofing

Note: TCNA guidelines require waterproofing or a vapor barrier be installed on all walls.

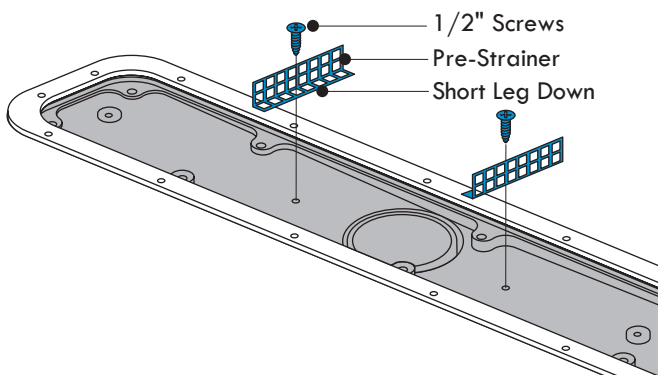
Install 1/2" backer board and wall waterproofing according to manufacturers instructions, local plumbing codes and TCNA guidelines.

Caution: Do not puncture flashing.

15 Install Pre-Strainers

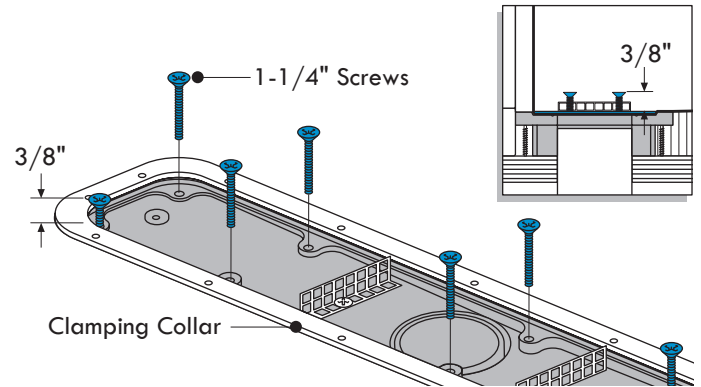
Place short leg of Pre-Strainer down, facing drain hole. Install 1/2" pan head screw, align strainer and tighten screw. Repeat for opposite strainer.

Note: On 24" drain, place long leg of Pre-Strainer down, facing drain hole.



16 Install Height Adjustment Screws

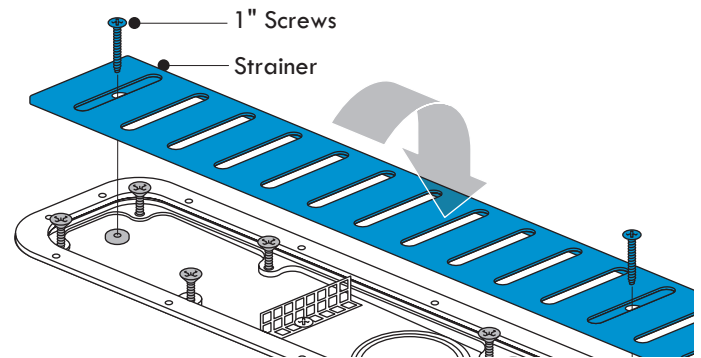
Screw in all 1-1/4" flat head height adjustment screws to 3/8" above the clamping collar.



17 Temporarily Attach Strainer

Note: Strainer attachment holes are not symmetrical. If screws do not align with holes in drain base, turn strainer end-to-end.

Place strainer over height adjustment screws. Temporarily fasten with three 1" pan head screws. **Do not over-tighten.**



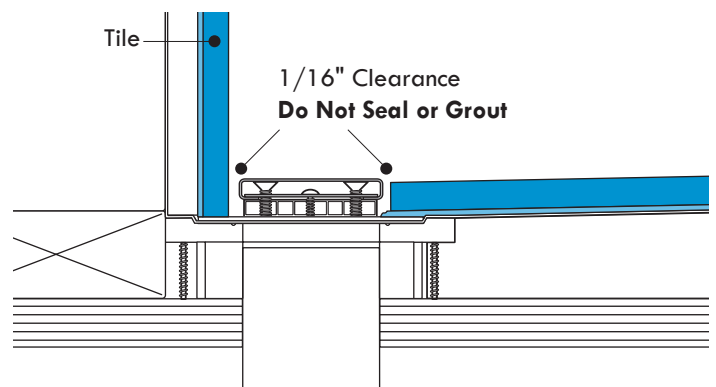
18 Tile and Grout

Protect strainer with tape.

Allow for 1/16" clearance between strainer and tile.

Caution: Do not grout or seal this space.

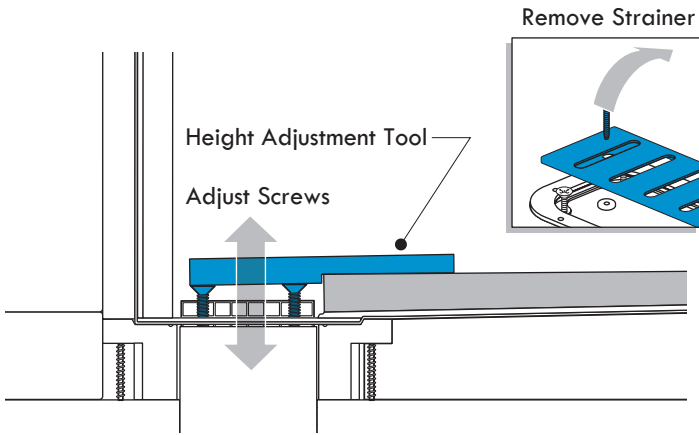
Tile and grout all surfaces following manufacturers instructions and TCNA guidelines.



19 Adjust Strainer Height

Remove strainer. Remove tape from strainer.

Place thin end of height adjustment tool on tile and rest other end on height adjustment screw. Adjust screw for level. Repeat for all height adjustment screws.

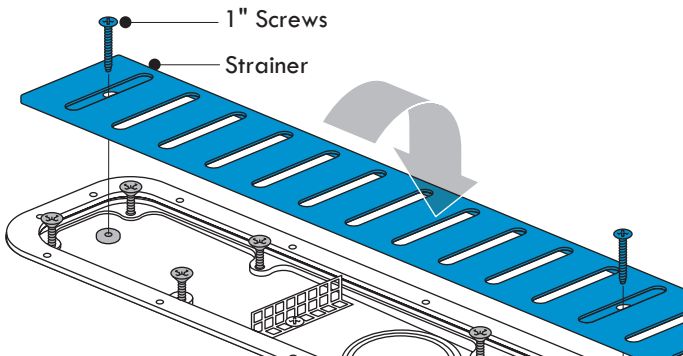


20 Re-Install Strainer

Note: Strainer attachment holes are not symmetrical. If screws do not align with holes in drain base, turn strainer end-to-end.

Place strainer over height adjustment screws. Confirm that strainer is flush with all tiles. Fasten with three 1" pan head screws.

Do not over-tighten.



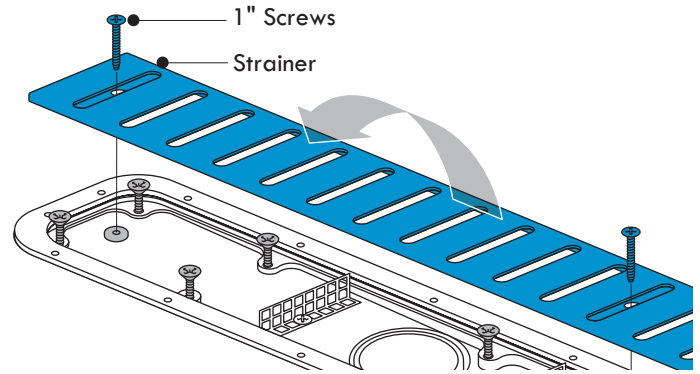
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NobleSeal TS waterproofing membrane
Noble CPE outside corners
WallSeal for vertical waterproofing
Noble Niches
Noble Benches
Noble Curbs

Cleaning Drain

To clean drain, remove 3 screws in top of strainer. Clear any hair or other obstructions from drain.

Remove Strainer

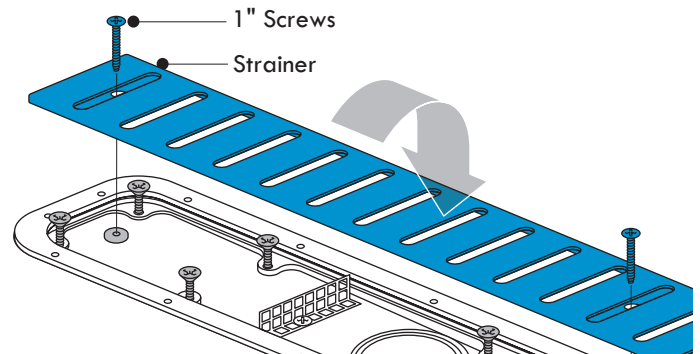


Re-Attach Strainer

Note: Strainer attachment holes are not symmetrical. If screws do not align with holes in drain base, turn strainer end-to-end.

Place strainer over height adjustment screws. Replace all three screws.

Do not over-tighten.



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PMG 1065 File No. 7249

Form FS LD INST 06/11
Supersedes 02/11