



FELLERT ACOUSTICAL PLASTER

INSTALLATION GUIDE 5.1



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TABLE OF CONTENTS

INTRODUCTION	3
GENERAL CONDITIONS FOR INSTALLATION	
Limitations & Guidelines	4
Job Conditions	4
Control Joints	5
Effects Of Lighting	5
MOCK UP CONDITIONS	6
STANDARD FINISHES	7
INSTALLATION TYPES	8
MATERIALS	9
TOOLS & EQUIPMENT	13
CHECKLIST	19
PRINCIPLES OF INSTALLATION OF FELLERT EVEN BETTER PLASTER SYSTEMS (EB1 & EB2)	
Fellert Acoustical Board & Substrate Preparation	20
A. GWB	
B. Plaster only (no Fellert Acoustical board)	
C. Ceiling Grid 400 mm c/c (16"o.c.) (no GWB)	
Coverage and Mixing Guide	30
Application of Standard Finishes	31
A. EB1 "Basecoat" Plaster	
B. EB1 "Finish" Plaster for Secern (formerly known as Natural)	
C. EB2 "Finish" Plaster for Sahara (formerly known as Troweled)	
D. EB2 "Finish" Plaster for Silk (formerly known as Ultra)	
Vertical Surfaces	39
Curved Surfaces	41
Custom Colors and Techniques	42
KEY INSTALLATION NOTES	43
HEALTH & SAFETY GUIDELINES	44
FINAL APPEARANCE	45
DRY STAINS - ALL FELLERT FINISHES	46
SOLUBLE STAINS - ALL FELLERT FINISHES	47
HOLES, DAMAGES, & WATER DAMAGED AREAS	48
CONSTRUCTION DETAILS	51

Fellert is a seamless acoustical plaster system with aesthetic design capabilities. The main components are acoustical board and acoustical plaster. Both these components individually contribute towards sound absorption.

The purpose of this installation guide is to provide the reader with the basic fundamentals of how to install Fellert. The guide consists of mainly pictures, descriptions, and notes.

This document serves as a guide and not a specific instruction manual. As almost no construction project is identical, each Fellert installation will have different circumstances; however, the basic principles of installing the product remain the same.

All Fellert applicators are required to attend a training class prior to purchasing materials and applying the Fellert system. Applicators are required to perform quality installations of the Fellert system on every project.

The Fellert specifications and policy documents state the requirement of a project mock up. Applicators need to obtain approval of a project mock up prior to commencing with the installation. The applicator is 100% responsible for the quality of the project installation.

Notice: Fellert retains the right to edit, modify, or delete the contents of this document and other related installation information without the consent or approval from any other party. Please contact Fellert to ensure you have the latest installation and/or technical information on the Fellert system.

LIMITATIONS & GUIDELINES

As with any hand-crafted plaster, the final appearance of the Fellert acoustical system may vary slightly throughout the expanse of the surface area especially under critical lighting conditions. The installer should always follow local building codes and regulations and is fully responsible for the quality of the installation.

JOB CONDITIONS

- All windows and exterior doors shall be in place and glazed. The building shall be water-tight prior to the start of the installation. This condition should be maintained during and after the installation. All GWB substrates must be “sealed air tight” to a level one finish. All HVAC, electrical, fire sprinkler and other penetrations shall be sealed with traditional drywall tape or a self-adhesive fire-tape to prevent air movement between the occupied space and the plenum. For direct attachment to ceiling grid applications ensure that the HVAC system in the occupied space is properly balanced.
- Fixtures such as MEP, lighting, sprinklers, ventilation, etc., should be in place prior to the start of the installation.
- The Fellert acoustical materials are for interior use only. The installation should be done within typical occupancy temperature ranges of 15–32 °C (60–90 °F) and at a maximum of 70% relative humidity.
- Acoustical boards shall be protected from exposure to sunlight. Keep the boards in the packaging until ready for use. Ensure that there are no delays in spraying the first coat of Fellert acoustical plaster to the boards.
- It is not recommended to have cold joints in the finish plaster. The final application of the Fellert acoustical plaster has to be completed in a single work step—done corner-to-corner or to a break stopping point.

GENERAL CONDITIONS FOR INSTALLATION

CONTROL JOINTS

Fundamentally speaking, the elastic nature of the Fellert plaster system means that there is no engineering requirement of control joints except when a building is under excessive structural stress. Structural expansion joints are observed however. There are practical limitations of how large of an expanse the Fellert contractor can complete in a single work day.

The following are guidelines:

- Up to 232 M2 (2,500 sqft) achievable with a Fellert contractor under normal working conditions.
- Up to 465 M2 (5,000 sqft) achievable with an experienced Fellert contractor; however, additional spray crews will be required. Additional working hours may be required.
- Over 465 M2 (5,000 sqft) achievable with an experienced Fellert contractor; however, additional spray crews will be required. Additional working hours will be required. Proper planning is required when attempting very large expanses.

EFFECTS OF LIGHTING

It is advisable to consider that the lighting selected be complementary to the ceiling finish. The most critical factor is the direction of the light source. A critical horizontal light that strikes any ceiling surface at an acute angle accentuates normal ceiling irregularities, affecting the final appearance of any finish. Exterior lighting from windows can highlight the natural variations of hand-crafted plaster.

MOCKUP CHECKLIST:

Per the Fellert specifications and installation guide a mockup must be approved by the architect or client prior to the commencement of the installation. The mockup can be part of the scope of work. The contractor is fully responsible for ensuring a quality installation of the Fellert system.

- Installer has attended a Fellert training seminar and is currently listed as an authorized installer with Fellert.
- Installer has contacted Fellert at least three weeks in advance if onsite labor assistance is needed for the mockup.
- Samples of the Fellert finish, color and thickness have been approved.
- Location of Fellert mockup has been confirmed with general contractor which should be at least 9m² (100sqft) in size. The mockup shall remain intact throughout the project.

Ensure the following site conditions have been met prior to mockup installation:

- All windows and exterior doors shall be in place and glazed. The building shall be watertight prior to the start of the installation. All GWB substrates must be “sealed air tight” to a level one finish. All HVAC, electrical, fire sprinkler and other penetrations shall be sealed with traditional drywall tape or a self-adhesive fire-tape to prevent air movement between the occupied space and the plenum. For direct attachment to ceiling grid applications ensure that the HVAC system in the occupied space is properly balanced.
- The installation should be done within typical occupancy temperature ranges of 15–32 °C (60–90 °F) and at a maximum of 70% relative humidity.
- All permanent fixtures such as lights, diffusers, speakers, etc. are to be included in the mockup.
- The intended lighting conditions for the building are to be used or simulated in the mockup.
- Ensure that the building is ventilated to assist with the drying process if the HVAC is not operational.
- Deliver materials to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture and other harmful conditions. Protect materials from freezing.
- Installer has recommended tools and equipment on site
- Installer has access to potable water.
- Install the mockup per the recommendations listed in the Fellert installation guide.
- Mockup approved by architect/client.

Any additional costs incurred to Fellert as a result of changes to the mockup schedule and/or scope of work will be borne by the installing contractor. The Fellert system must be installed per the specifications and manufacturer’s installation guide in order to qualify for the product warranty.

SILK (*Smooth*)

This finish resembles a smooth monolithic hand-crafted finish.

Two-coat application:

1 x EB1 (basecoat)

1 x EB2 (finish coat)



SAHARA (*Fine Textured*)

This finish resembles a lightly textured monolithic hand-crafted finish.

Two-coat application:

1 x EB1 (basecoat)

1 x EB2 (finish coat)



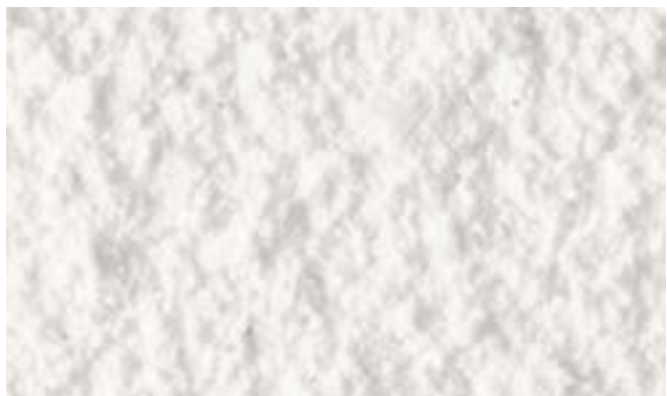
SECERN (*Textured*)

This finish resembles a textured monolithic hand-crafted finish.

Two-coat application:

1 x EB1 (basecoat)

1 x EB1 (finish coat)



A. New GWB (Fully Adhered System)

This is the predominant application method. The Fellert Acoustical Board is adhered to GWB substrate that must be “sealed air tight” to a level one finish. All HVAC, electrical, fire sprinkler and other penetrations shall be sealed with traditional drywall tape or a self-adhesive fire tape to prevent air movement between the occupied space and the plenum. Mesh tape and Fellert Primer are applied to the plastic C channel, GWB rippers, corner beads, etc. The Fellert Acoustical Board is then sprayed with the Fellert acoustical plaster.

Alternative substrates the Fellert may be applied to are: concrete, existing plaster, GFRG surfaces, and previously painted GWB. These substrates will need to be tested for bond strength, cleaned and sanded smooth. The Fellert Acoustical Board is attached to the substrates with the Fellert Adhesive and secured with a minimal amount of Fellert Spring Washers if required.

B. Ceiling Grid (Direct to Framing – No GWB)

The Fellert acoustical plaster system can be installed to 406 mm c/c (16” o.c.) drywall grid. The substrate is constructed without a layer of GWB. The Fellert acoustical boards are mechanically attached to drywall grid thereby eliminating the need and cost for a layer of GWB. There is an increase in sound absorption performance in the low frequency range with the direct-to grid installation method which is commonly referred to as the E-400 mount and/or air gap behind. There are limitations to what types of substrate designs that can be done with the Fellert direct-to-grid method. The following are guidelines:

- Flat shapes are achievable with the normal Fellert direct-to grid installation method. This includes angled ceilings and walls 1.82 M (6 ft) above FFL. This is the standard Fellert direct-to-grid application method and is expected from all trained installers.
- Barrel vaulted ceilings are possible providing the drywall grid is 406 mm c/c (16” o.c.). However, note that this installation method will be more time consuming as more Fellert Spring Washers will be needed. Consult with your local Fellert agent prior to specifying the Fellert direct-to-grid system on a barrel shaped ceiling.
- Domes and vaulted ceilings are not possible with the direct-to-grid system.
- Note that the HVAC system in the occupied space is to be properly balanced.

C. Plaster only (No Fellert Acoustical Board)

Fellert Primer is applied to a drywall substrate prepared to a level 4 standard. The primed surface is then sprayed with the Fellert acoustical plaster. Alternative substrates such as concrete, existing plaster and previously painted GWB will need to be prepped accordingly and ensure they are sound and free from cracking.

USE ONLY PROPRIETARY MATERIALS AND ACCESSORIES DISTRIBUTED OR RECOMMENDED BY FELLERT.

Plastic C Channel

This product is used to finish the Fellert Acoustical Board and Fellert Plaster to an adjacent surface. The product can be cut to flex and fit around gradual shapes and angles.

The C channel is not designed to be a self-finished exposed edge detail, e.g. clouds or exposed return angles: sold in 3 M (10 ft) lengths.



Fellert Acoustical Board

The 25 mm (1") or 39 mm (1.5") 122 x 122 cm (4' x 4') Fellert Acoustical Board is the main component of the Fellert system that absorbs sound. Do not remove from the packaging or expose to sunlight until ready to apply. Always apply the first layer of Fellert plaster within 24 hours of installing the acoustical board providing any application of Fellert primer has fully dried. Always store flat, do not stack on edge. The 25 mm (1") size has 8 boards per box and 39 mm (1.5") size has 6 boards per box.



Coverage: 1.5 M2 (16 sqft) per panel

Fellert Spring Washers

Only the Fellert Spring Washers and the 50 mm (2") Fellert Zincotec ZN screws are to be used to anchor the acoustical boards in the direct-to-grid application on 406 mm c/c (16" o.c.) drywall grid. The Fellert Spring Washers (and other flat disc-shaped washers) are also used to temporarily hold the fiberglass board in position on curved surfaces.



Coverage: approx. 8 washers per 1 M2(10 sqft)

Fellert Caparol Adhesive

Used for bonding the Fellert Acoustical Board to drywall, existing plaster, concrete or previously painted surfaces. Adhesive is applied on back of the Fellert Acoustical Board with 6.35 mm x 6.35 mm (1/4" x 1/4") notched trowel.

Coverage: 10 M2 (110 sqft)
Sold in 25 kg (55 lb) bags



Fellert Styrobond Adhesive - North America only

Used for bonding the Fellert Acoustical Board to drywall, existing plaster, concrete or previously painted surfaces. Adhesive is applied on back of the Fellert Acoustical Board with 6.35 mm x 6.35 mm (1/4" x 1/4") notched trowel.

Coverage: 7 M2 (75 sqft)
Sold in 23 kg (50 lb) bags



50 mm (2") self-adhesive mesh tape

The Grabber GMT 200 self-adhesive mesh tape or equivalent, is used to bridge the joining of the C channel and any drywall "rippers" to the Fellert Acoustical Board: sold in single rolls.

Use only white or clear colored mesh tape.

Coverage: 90 linear meters (300 linear feet)



Fellert Alcro Primer

The product is mixed with one (1) container of the sand additive. Used for priming the mesh tape joining of the wall channel trim and Fellert Acoustical Board and drywall in its entirety when doing non acoustical board installations. The primer is also used to coat plastic beads and any drywall rippers.

Primer coverage: 56 LM (185 lft) for trim transitions or 24 M2 (260 sqft) for general application



Fellert Sand Finish Additive

The Fellert Primer and sand additive are always purchased together.

Primer with sand coverage: 101 LM (366 lft) for trim transitions or 16 M2 (180 sqft) for general application



Fellert Sand Finish Additive - North America only

This product is mixed on site with one 4 L container of primer. The Fellert Primer and sand additive are always purchased together.

Primer with sand coverage: 101 LM (366 lft) for trim transitions or 16 M2 (180 sqft) for general application



Sanding Pads

Full sized (hook & loop) sanding pads and discs that are used with the #7800 orbital style vacuum sander. Used in the sanding of the acoustical board and the basecoat. Sold in five (5) sanding discs per pack. The power pads they stick to are sold individually.

80 grade: sanding the acoustical board
220 grade: sanding the basecoats



Fellert Even Better 1 (EB1)

Made from recycled cotton fibers and perlite. Use as basecoat for all the finishes. Use as the finish coat for the Secern finish. The plaster is sprayed on approx. 3 mm (1/8”) wet thickness: sold in 5 kg (11 pounds) bags.

Basecoat Coverage: 10 M2 (100 sqft) per bag
Secern Finish Coverage: 15-30 M2 (150-300 sqft) per bag
Calculated waste: 5%



Fellert Even Better 2 (EB2)

The Fellert EB2 plaster is made from recycled cotton fibers and perlite. This is the finish coat for the Silk and Sahara finish systems. It is sprayed on approx. 1.5 mm (1/16”) wet thickness: Sold in 5 kg (11 pounds) bags.

Silk Finish Coverage: 20 M2 (200 sqft) per bag
Sahara Finish Coverage: 40 M2 (430 sqft) per bag
- note that a higher consumption rate may occur when doing mid to dark colors.

Calculated waste: 5%



PROPRIETARY MATERIALS LISTED ABOVE ARE ONLY AVAILABLE TO ORDER VIA **FELLERT**.
USE ONLY MATERIALS LISTED IN MANUAL IN ORDER TO COMPLY WITH WARRANTY.

TOOLS & EQUIPMENT

Listed below are typically the tools and equipment you will need to install the Fellert system.
USE ONLY TOOLS AND EQUIPMENT AS DISTRIBUTED OR RECOMMENDED BY FELLERT.

Tools for attaching C channel:

- A. Screw gun
- B. Straight cutting snippers (below picture for example purposes only)



Tools for mixing and applying Fellert Adhesive:

- C. Bucket
- D. Paddle
- E. Drill
- F. 6 mm (¼") notched trowel
- G. Scoop



Tools for cutting Fellert Acoustical Board:

- H. Knife - Ideal for cutting and trimming Fellert Acoustical Board, sold by Fellert.



Tools for detailed cutting & installation of Fellert Acoustical Board:

- I. Tape measure
- J. T-square
- K. Scissors (not pictured)
- L. Small utility knife
- M. Spray adhesive (may use double-sided tape when applicable)
- N. Sanding sponge
- O. Putty knife
- P. Joint knife
- Q. Tape
- R. Chalk line reel



Tools for applying Fellert Primer:

- S. Paint Brush



Fellert Whisk

Only the Fellert Mixing Paddle can be used to mix the Fellert Plaster. The product must be mixed to an even consistency.

Do not leave the paddle in the Fellert Plaster after initial mixing, remove and rinse off.

Fellert Whisk is sold by Fellert.



Flat Base Mixing Container

Use white or natural colored plastic mixing containers with a flat base.

200 L (55 gal) containers sold by Fellert.



Graco RTX 1500

The only recommended spray machine for installing the Fellert system is the Graco RTX 1500. The unit is portable and relatively simple to use. This self compressing portable electric unit has a 55 L (15 gal) capacity hopper. The Graco RTX 1500 comes with 7.5 M (25ft) of hose length and a standard spray gun.

Graco RTX 1500 is sold by Fellert.

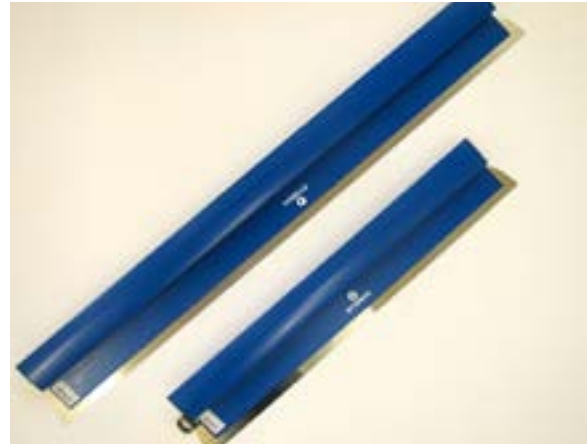


Flexogrip Trowel

Available in 800 mm and 1200 mm.

Used for applying the Fellert plaster. It is imperative that you only use the Fellert Flexogrip Trowel and/or the standard Fellert Trowel shown below.

The Flexogrip Trowel is sold by Fellert



Fellert Trowel

Used for applying the Fellert Plaster. The Fellert Trowel is also used in installing the Fellert Acoustical Board. Usually applicators have two sets of trowels: one for the board installation and one for the plasters.

The Fellert Trowel is sold by Fellert.



Flexible Finishing Trowel

This 1mm thick plastic trowel is a lot more flexible allowing the finishing trowel passes to close in the plaster surface with less effort on the finishing passes. These will be extremely helpful on curved and radius surfaces. The Fellert Trowel is still used to close in the plaster surface once sprayed and to remove the excess plaster on the surface.

280mm long x 120mm wide x 1mm thick



Festool Long-reach sander PLANEX LHS

Used for sanding the Fellert Acoustical Board substrate and the Fellert Acoustical Plaster basecoat. You must use the full size hook and loop sanding discs and compatible pads to ensure consistent sanding.

Sander and vacuum are sold by Fellert.



Porter Cable 7800 “Orbital” Vacuum Sander - North America Only

Used for sanding the Fellert Acoustical Board substrate and the Fellert Acoustical Plaster basecoat. You must use the full size hook and loop sanding discs and pads compatible for the 7800 model to ensure consistent sanding.

Sander and vacuum are sold by Fellert.



Used mixing drills that can operate at a minimum of 300 rpm.

Suitable drills:

Makita DA4031

DeWalt DWD460K

Milwaukee 1676 (Holehawg)

Flex R 500 FR

Festool MX 1000



Graco Spray Gun

Attach spray gun to spray machine for installing Fellert system. Six standard size orifices (*Sizes 3, 4, 6, 8, 10, & 12*) are included with the Graco spray gun.



Graco Fine Finish Kit

Consist of an extender nozzle, 4 outer spray tips (A, B, C, D), and a cover cap. The attachments are necessary to create a controlled fan spray pattern for the finish coats of Fellert plaster. Partial content of the kit is pictured right. The extender nozzle kit "Fine Finish Kit" screws on to the standard Graco spray gun, picture right below. Generally you will use the fine finish kit only when spraying the Fellert finish coat.



PRIOR TO STARTING ANY INSTALLATION VERIFY THAT YOU HAVE THE CORRECT MATERIALS, TOOLS AND EQUIPMENT FOR YOUR PROJECT.

Sold Only by Fellert

- Plastic C Channel
- Fellert Acoustical Board
- Fellert Spring Washers
- Fellert Board Adhesive
- Fellert Alcro Primer
- Fellert Even Better 1 - basecoat for all and finish coat for Secern
- Fellert Even Better 2 - finish coat for Sahara & Silk
- Fellert Mixing Paddle
- Flexogrip Trowel
- Fellert Trowel
- Flexible Finishing Trowel
- Knife

Available to order by Fellert

- Sanding Pads – 80 & 220 grit
- 6 mm (¼") notched trowel
- Fellert Mixing Paddle
- Porter Cable 7800 "giraffe" vacuum sander
- Makati DA4031 Drill with 300rpm
- 200 L (55 gal) white or natural plastic mixing containers
- Graco RTX 1500 Spray machine
- Fine finish spray kit
- 50 mm (2") Self-Adhesive mesh tape
- 122 cm (48") mesh (for vertical applications below 3 M (10 ft))
- Power pad

Sundry items

- masking tape
- plastic masking film
- floor protection if applicable
- rags (use white colored rags only)
- 400 grit sandpaper/sanding sponges
- brushes for primer
- dust masks and respirators
- trash bags
- drywall screws to attach plastic C channel to studwork

Typical tools and equipment

- Screw gun
- Straight cutting snippers
- Small plastic breakaway utility knives
- tape measure
- Chalk Line
- straight edge
- Measuring buckets
- Five gallon buckets

PRINCIPLES OF INSTALLATION

Fellert Acoustical Board & Substrate Preparation

1. GWB - The GWB substrate must be “sealed air tight” to a level one finish. All HVAC, electrical, fire sprinkler and other penetrations shall be sealed with traditional drywall tape or a self-adhesive fire tape to prevent air movement between the occupied space and the plenum.



Screw the plastic C channel trim into the perimeter wall 400 mm c/c (16" o.c.) studding and not the ceiling.

It's not recommended to use the C Channel trim on exposed edge details. (i.e. soffits)



Use the straight-edged snippers to bend the plastic C channel around any curves and angles.

For tighter curves a plastic flexible archway bead may be used.



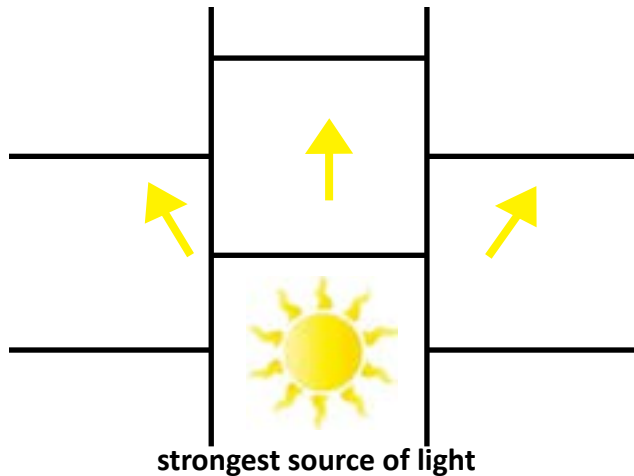
For the Fellert Caparol Adhesive, mix contents of bag with approximately 5 - 6 liters of water. Allow to set for 5 minutes and remix prior to use.

For the Fellert Styrobond Adhesive mix contents of bag with approximately 1.5 gallons of water. Allow to set for 5 minutes and remix prior to use.

You must remix the adhesive after the set time as with most cement based products.

PRINCIPLES OF INSTALLATION

Fellert Acoustical Board & Substrate Preparation



Wherever possible install the Fellert acoustical boards so the longest runs of joint lines flow into and away from the strongest source of light. This process is deemed a “best practice” only and not an absolute rule. It is a simple and a logical approach to help minimize any shadowing effects which can be exacerbated by critical lighting.

Mark a straight line for your starting point to ensure that the first run of acoustical boards will be straight as possible.



On any boards that will slot into the plastic C channel you need to bevel the edge by trimming the back edge of the fiberglass board as this will enable it ease into the channel; keep these slivers for joint preparation work.

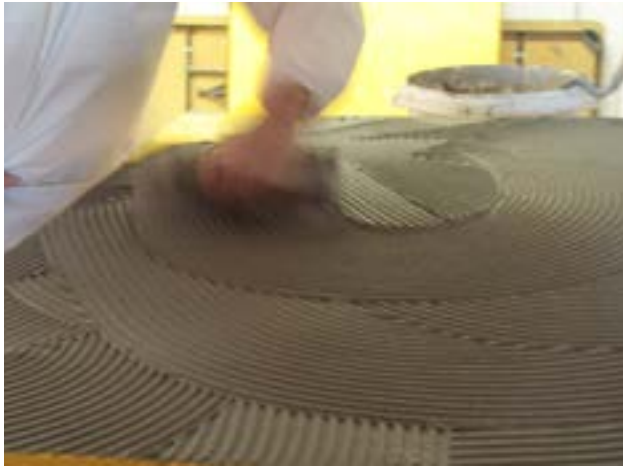
Ensure the press lines on the back of the Fellert acoustical board all flow in the same direction during the installation. These lines will flow perpendicular to the long runs of joint lines as depicted.



Apply the Fellert Adhesive to the back of the board evenly. Do not leave any spots uncovered and ensure you apply the adhesive all the way to the edges.

PRINCIPLES OF INSTALLATION

Fellert Acoustical Board & Substrate Preparation



Finish off the adhesive application by straightening the 6 mm ($\frac{1}{4}$ ") notched lines. This will ensure an even layer of adhesive on the drywall ceiling.

Ensure no adhesive gets onto the sides or the face of the acoustical board.



Slot the Fellert acoustical board into the C channel without exerting any significant pressure and use the Fellert Trowel to steady the board as you position it correctly.

Use the Fellert Trowel to apply firm pressure to secure the acoustical board into place for 1 - 2 minutes as the adhesive begins to set.



When applying adhesive to the board ensure not to get any Fellert Adhesive on the face of the board.

Use round temporary washers, as shown, to hold the board in place until adhesive cures. Washers are often used on site by applicators to temporary level off any unevenness in the joining of the Fellert Acoustical Board, especially on curved surfaces.

PRINCIPLES OF INSTALLATION

Fellert Acoustical Board & Substrate Preparation



As you progress with the installation of the acoustical boards you may have to periodically “straighten the line” as depicted. The Fellert Acoustical Boards are manufactured to a tolerance of 3 mm (1/8”); therefore, this straightening process is normal.

Use a straight edge to ensure a cut is straight as possible. This insures a good board installation.



Apply the 50 mm (2”) self-adhesive mesh tape to bridge the plastic C channel, plastic trims, drywall rippers and board transitions to other substrates.

Mix the Fellert Alco Primer with the sand additive. Ensure to cover all of the channel, plastic trim, drywall ripper or board transition including the mesh tape with the primer. It is recommended to brush apply the Fellert primer in a continuous direction. Remove any sand grains from the plaster stop flange of any trim pieces.

Important Fellert Alco Primer application instructions: Ensure that the Alco primer dries 12 hours prior to the plaster application.

For GWB or level 4 prepped substrate:

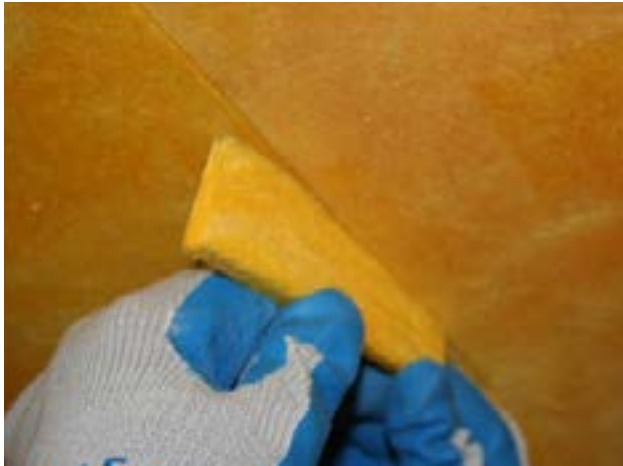
Use a ½” nap roller to apply the Alco Primer to the level 4 prepped substrate. Ensure the Primer covers 100% of the surface.

For trim/substrate transitions:

Use a 2” ½ nap roller or a 2” long bristle brush. When using a brush ensure to only brush in one direction to prevent the mesh tape from moving and bubbling. Cover the entire trim and mesh tape surface to ensure the plaster will bond adequately and provide a secure transition. Always wipe the sand additive off the plaster flange to provide a clean appearance when completed.

PRINCIPLES OF INSTALLATION

Fellert Acoustical Board & Substrate Preparation



Remove masking tape when complete. Leave the Fellert Primer to dry overnight. Never apply Fellert Plaster and Primer the same day.

Fill in where you have any gaps between the acoustical boards with waste off cuts. Any gaps between the Fellert Acoustical Boards that exceed 0.8 mm (1/32") should be spliced with acoustical board.



Ensure the spliced material is wedged very tightly into any gap and cut flush in preparation for sanding. You can use the beveled cut shavings from the boards that were inserted into the C channel. It is critical that the boards are installed and prepped correctly.



Remove the bristle guard from the vacuum sander so that the bristles do not restrict any sanding to the surfaces and prevents damage to the board and basecoat layers.

PRINCIPLES OF INSTALLATION

Fellert Acoustical Board & Substrate Preparation



Sand the entire surface of the acoustical board in a gradual circular motion to ensure the board joints are sanded flush and all variances are sanded out, i.e. eliminating valleys, “low points or lines” in the board substrate. Use 80 grit full size sanding disc pads. The completed board installation should appear to be consistent with no variances in thickness. Ensure the critical lighting is in place prior to sanding to ensure any variances are sanded.

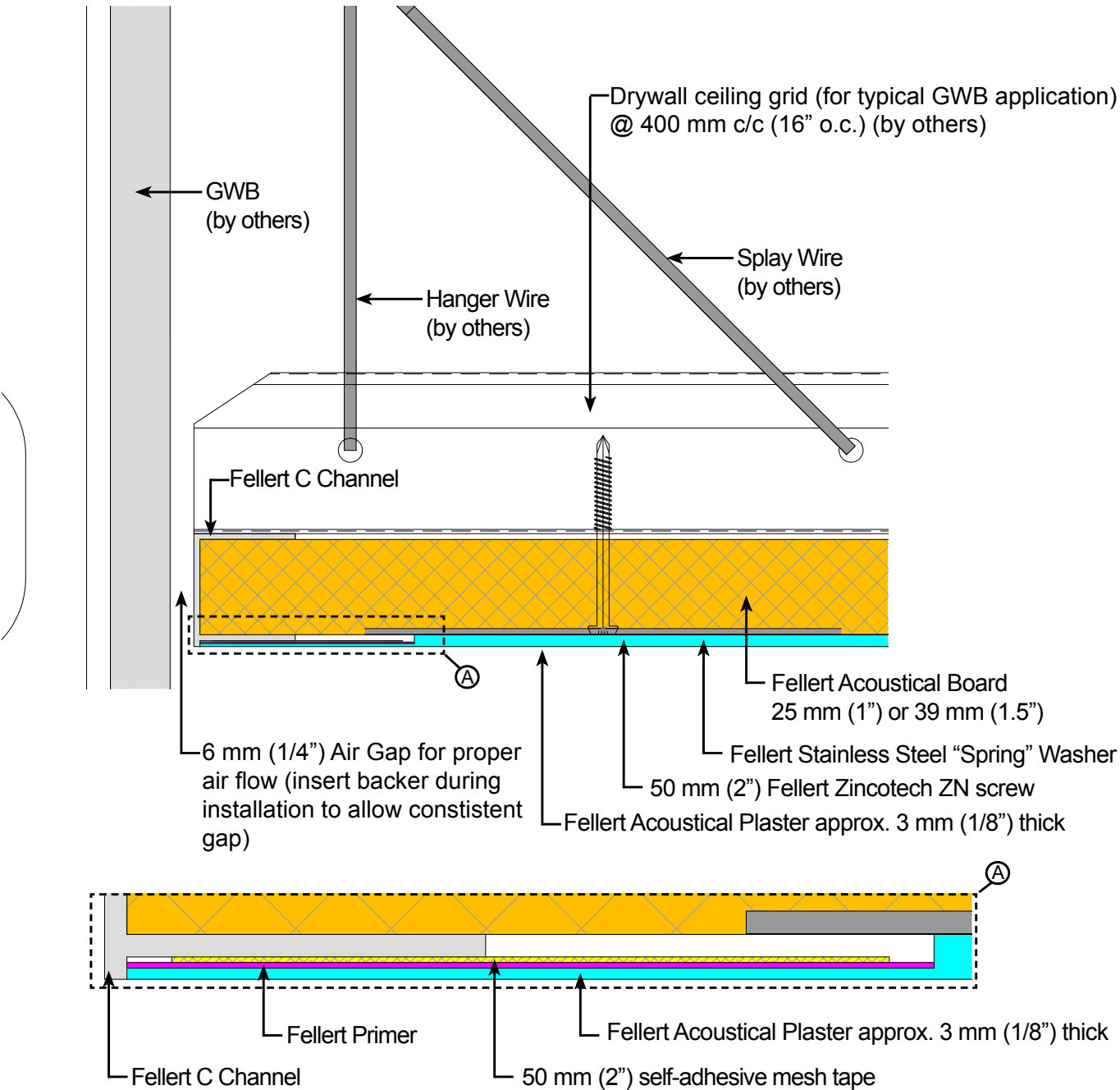
Always apply the first layer of Fellert plaster within 24 hours of installing the acoustical board providing any application of Fellert primer has fully dried.

PRINCIPLES OF INSTALLATION

Fellert Acoustical Board & Substrate Preparation

B. Ceiling Grid 400 mm c/c (16" o.c.) (no GWB)

This type of system is commonly referred to as the direct-to-grid application. You eliminate the requirement of a GWB substrate by attaching the acoustical board directly to the 400 mm c/c (16" o.c.) drywall grid.



*General Notes: Not to Scale. This detail should be included in the project mock-up.

PRINCIPLES OF INSTALLATION

Fellert Acoustical Board & Substrate Preparation

When installing the Fellert system direct-to-grid, it is recommended to leave a 6 mm (¼") air gap along the wall perimeter. This is accomplished by inserting a 6 mm (¼") solid spacer along the wall perimeter. Typically, a piece of 6 mm (¼") GWB (or wood trim) acting as a spacer, will create an consistent gap. Then attach the Fellert C-Channel to the ceiling framing against the spacer. Install the Fellert system and remove the GWB spacer when complete.

An alternative option to the C Channel, would be to use a self finished L trim after the board is installed. Reference Trim-Tex 3510 for 25 mm (1") board or 3650 for 39 mm (1.5") board.



Basic Installation Steps

1. Screw washer to grid so head is just below surface. Alternate board edges when screwing into framing at the board joints to keep tension consistent (not in the joint).



2. Cut around Fellert Spring Washer. Do not cut too deep or washers will lose tension.



3. Pull and tuck board flush to the surface.



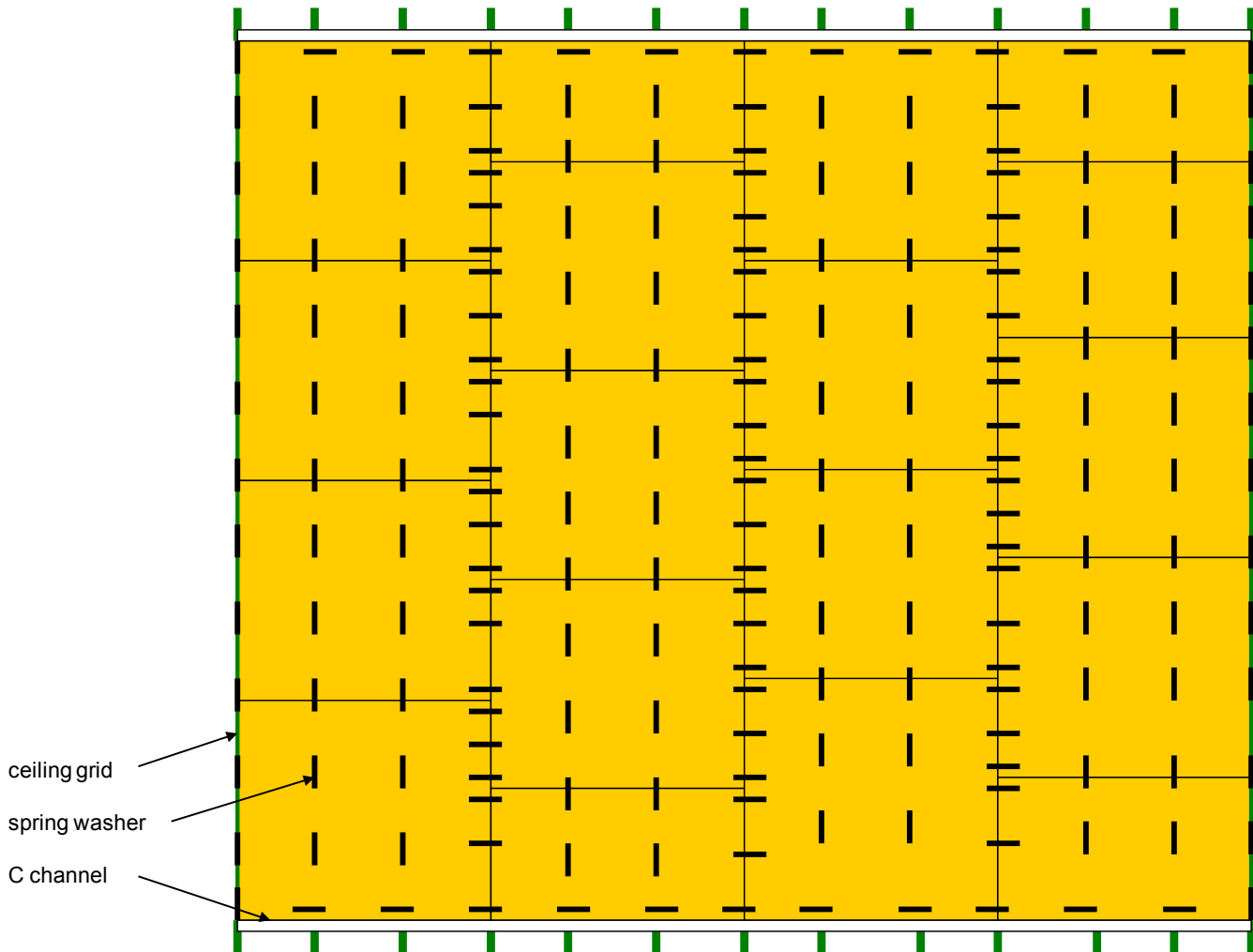
4. Apply a pre-fill of basecoat with a hand tool to the Fellert Spring Washer cut slits and leave to dry. Spray the basecoat as normal.

PRINCIPLES OF INSTALLATION

Fellert Acoustical Board & Substrate Preparation

Fellert Spring Washer Layout

(washer size enlarged for viewing purposes)



ceiling grid at 400 mm c/c (16" o.c.)

256 sqft (16' x 16')

24 M2 (4.9 M x 4.9 M)

206 washers used in 24 M2 (256 sqft)

1 washer every 0.12 M2 avg (1.24 sqft)

PRINCIPLES OF INSTALLATION

Fellert Acoustical Board & Substrate Preparation

C. Plaster only

No Fellert Acoustical Board

When you are applying the Fellert Even Better 1 directly to a drywall substrate there are following recommendations to note:

- Ensure the drywall substrate is prepared to at least a level 4 standard.
- Apply the Fellert Primer (with sand additive) with a brush and roller.
- Leave overnight to dry prior to applying the basecoat.
- Spray the next plaster layer as normal.



Apply the Fellert Primer to the drywall substrate with a short nap roller.

PRINCIPLES OF INSTALLATION

Coverage Rates & Mixing Guide

Product	Size	Coverage	Water
Fellert Caparol Adhesive	25 kg (55 lb)	10 M2 (110 sqft)	5-6 L (1.3-1.6 gal)
Fellert North America Adhesive (Styrobond II)	23 kg (50 lb)	7 M2 (75 sqft)	5.7 L (1.5 gal)
Fellert Primer (C channel edging)	4 L	56 LM (185 lft)	N/A
Fellert Primer (direct drywall)	4 L	24 M2 (260 sqft)	N/A
Fellert Even Better 1 (basecoat) <i>calculated waste: 5%</i>	5 kg	10 M2 (100 sqft)	9 gal (34 L)
Fellert Even Better 1 Finish (Secern) <i>calculated waste: 5%</i>	5 kg	15-30 M2 (150-300 sqft)	9 gal (34 L)
Fellert Even Better 2 Finish (Sahara) <i>calculated waste: 5%</i>	5 kg	40 M2 (430 sqft)	7 gal (26.5 L)
Fellert Even Better 2 Finish (Silk) <i>calculated waste: 5%</i>	5 kg	20 M2 (200 sqft)	8 gal (30.2 L)

COVERAGE RATES ARE AVERAGES AND MAY VARY ACCORDING TO PROJECT CONDITIONS.

1. Put 34 L (9 gal) of water into a large clean mixing container for Fellert Even Better 1. Use 30.2 L (8 gal) for the Fellert Even Better 2. Recommend using a clear or white colored plastic container for mixing the plaster. You can add 1.9 L (½ gal) of water if deemed necessary for desired consistency.
2. If a custom colored finish is required add colorant vial to the water in the mixing container, rinse the colorant vial clean and mix well with the water. Fellert recommends that both coats of plaster be tinted. However, in some cases it is possible to only tint the finish coat on very light colors. Your Fellert agent will advise you if the basecoat should be tinted or not.
3. Add Fellert Plaster to water and mix until desired (oatmeal) consistency. Do not over mix as this may cause excessive clumping of the material. Should only take 3-4 minutes to mix the plaster.
4. Leave plaster set for 30 minutes; this is to let the cotton fibers expand so you can spray the material without excessive clogging.
5. Remix the plaster after the set time prior to spraying.
6. Use the Fellert Whisk with mixing drill speed not exceeding 300 rpm.
7. Note that a higher consumption rate of EB2 plaster may occur when doing the Sahara finish in mid to dark colors.

PRINCIPLES OF INSTALLATION

Application of Standard Finishes

A. EB1 "Basecoat" Plaster

Colored finishes: add and mix tint vial to the water in the mixing container prior to adding and mixing the base plaster. Use tint guidelines outlined on page 27.



For the basecoat application, use #10 Graco orifice.

You will not use the extender nozzle and outer spray tip when spraying the basecoat.



Set the material flow control on the Graco RTX 1500 spray machine to the following settings:

- The 4th dot for the basecoat.
- The 3rd dot for the finishes.



Adjust the air flow valve as needed.

PRINCIPLES OF INSTALLATION

Application of Standard Finishes



Use sandpaper to slightly round the corners and smooth the edges of the Fellert Trowel.



The objective is to spray and trowel the basecoat onto the Fellert Acoustical Board at 3 mm (1/8") wet thickness as the dry thickness will be approx. 1.5 mm (1/16").

Spray in a small circular motion approximately 3 M2 (30 sqft) and have applicators start to trowel the plaster.



Start smoothing off the plaster in near the edges.

Position the Fellert Trowel at a low angle and firm but not excessive pressure on the basecoat.

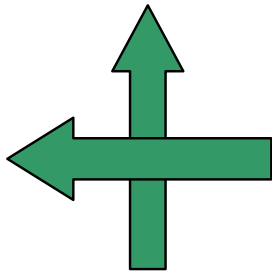
PRINCIPLES OF INSTALLATION

Application of Standard Finishes



This is the basecoat being hand troweled.

It is critical you only trowel the basecoat plaster no more than 3–4 times as depicted on the picture.



The more you trowel the more uneven the plaster surface becomes. Do not excessively trowel the basecoat plaster.



Leave the minor trowel lines or imperfections on the surface as they will be sanded smooth when dry.

Allow the basecoat to fully dry. This will take an average of 2-3 days in mild conditions. Use fans in the drying process and ensure the HVAC is operational or the air in the area is being recirculated.

PRINCIPLES OF INSTALLATION

Application of Standard Finishes



Resin Spots: Must be treated by cutting into the affected basecoat and Fellert Acoustical Board to remove the resin deposit. Fill the extracted area with new board, basecoat and sand when dry.

“Quick Patch” method: Spray a single Fellert Acoustical Board at the same time you apply the basecoat. Once dry, plug-in the extracted area with the pre-sprayed board. Lightly sand, fill with base plaster and proceed with the finish coat.



This is NOT a resin spot.

Any potential resin spotting matter will not be visible on the Fellert Acoustical Board surface.



Pre-filling of any joints or variances in the basecoat is very important. Spot apply EB1 to any rippers, beads, board joints, etc. as needed and let dry. When dry, sand out any ridge lines or surface unevenness from the basecoat application. Sand the entire surface of the basecoat with 220 grade sanding discs.

PRINCIPLES OF INSTALLATION

Application of Standard Finishes

B. EB1 “Finish” Plaster for Secern

Colored finishes: add and mix tint vial to the water in the mixing container prior to adding and mixing the finish plaster. Use tint guidelines outlined on page 28. Use plaster the same day of mixing.



For the EB1 finish coat use #8 orifice with the second largest outer fan spray tip (C) near right. You may need to adjust the components to match the desired texture. Some applicators prefer not to use the fine finish kit when creating a Natural finish— ***the golden rule is to match the mock-up.***



The material flow would normally be set the 3rd ascending dot on the Graco RTX 1500. Mix up the EB1 finish coat in the same manner as the basecoat.

The objective is to spray the finish desired texture approx. 1.5 mm (1/16”). Complete the entire surface corner-to-corner with the EB1 finish in one application. Leave to dry 1-2 days.



Completed Secern finish - ***the golden rule is to match the mock-up.***

Dry thickness of the plaster finish will be approx. 3 mm (1/8”).

PRINCIPLES OF INSTALLATION

Application of Standard Finishes

C. EB2 "Finish" Plaster for Sahara

Colored finishes: add and mix tint vial to the water in the mixing container prior to adding and mixing the base and finish plaster. Use tint guidelines outlined on page 28. Use plaster the same day of mixing.



For the EB2 finish coat use size 3 orifice with the smallest outer fan tip (A). The material flow would normally be set to the 4th ascending dot for fine texture and 5th ascending dot for medium texture. The air vent is fully open and the material flow control on the spray gun (see picture) is set to be almost closed. (When it is in accurate position you will only get a spray mist, without any splattering.)



The objective is to spray the EB2 finish onto the basecoat leaving a fine sprayed texture, at 1.5 mm (1/16") wet thickness.



Spray consistent and eliminate splattering on plaster surface leave to dry 1-2 days. Dry thickness of the plaster finish will be approximately 3 mm (1/8").

PRINCIPLES OF INSTALLATION

Application of Standard Finishes

D. EB2 "Finish" Plaster for Silk

Colored finishes: add and mix tint vial to the water in the mixing container prior to adding and mixing the finish plaster. Use tint guidelines outlined on page 28. Use plaster the same day of mixing.

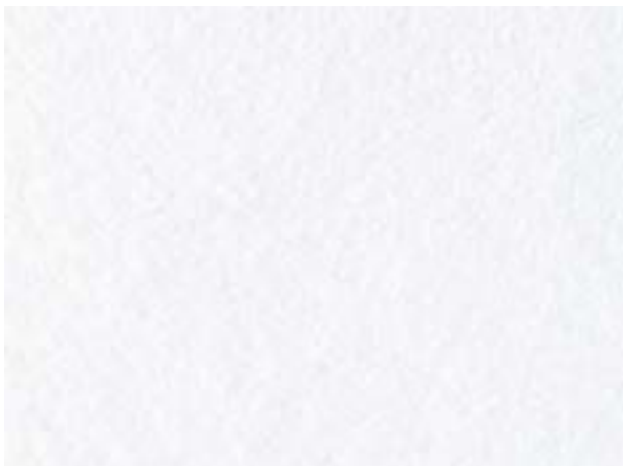


The Silk finish consists of a base layer of EB1 and a finish coat of EB2 plaster. Sand the base layer application with a 220 grit sanding disc and sanding sponges. Once sanding is complete all imperfections should be eliminated including any board joints, holes, or trim details.



For the Silk finish use size 6 orifice with the second largest outer fan spray tip (C) near right. The material flow on the Graco RTX 1500 would typically be set to the 3rd ascending dot.

Mix the Silk with 34 L (8 gal) of water.



Spray the EB2 Silk plaster on to the surface approx. 3 mm (1/8") wet thickness and trowel smooth as possible. Do not over trowel the plaster. Have two applicators troweling the Silk plaster smooth immediately upon spraying. Closing in the surface and removing the excess plaster. As the plaster takes up (surface moisture decreases) you may need 2-3 separate passes with the trowel over the surface in order to achieve a consistent finish, approx. 4-5 minute in between passes.

PRINCIPLES OF INSTALLATION

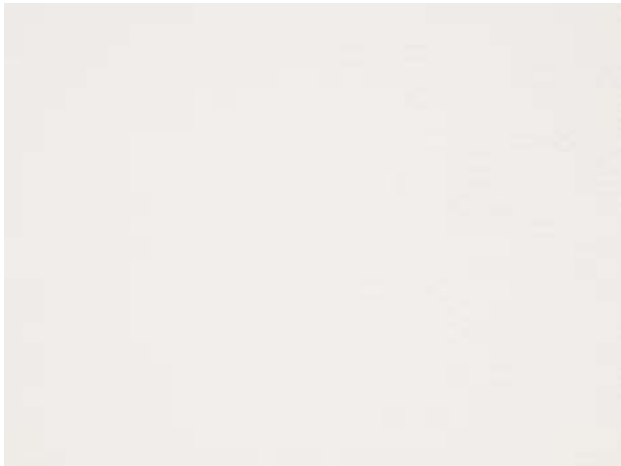
Application of Standard Finishes



Have third applicator make a final pass over the EB2 Silk plaster within 15–20 minutes of the initial application.

This will ensure a consistently smooth hand-crafted finish

Ensure to keep your trowels clean at all times during the troweling of the Silk plaster by constantly wiping with damp rags.



Completed Silk finish—***the golden rule is to match the mock-up.***

Dry thickness of Fellert Silk finish will be approximately 3 mm (1/8") thick. The Silk finish is intended not to be sanded.

PRINCIPLES OF INSTALLATION

Vertical Surfaces

As an option fiberglass mesh can be used for vertical surfaces or areas where impact is a concern.

Properties of the mesh that Fellert supplies are:

- 1.22 M (48") wide fiberglass mesh
- 128 grams (4.5 oz) per square yard
- clear in color
- .08 mm (1/32") thickness

Below is an example of how to employ the 1.22 M (48") mesh with Fellert on a vertical application.



PRINCIPLES OF INSTALLATION

Vertical Surface



Apply approximately 70% of the basecoat as normal to the surface. Place each vertical length of mesh as you proceed along the length of a wall spraying basecoat. Do not overlap the mesh. Try and butt the lengths as tight as possible. A small gap of 1.3 cm (1/2") is acceptable.

Spray additional basecoat plaster over the surface of the mesh to complete the appropriate thickness.



Trowel the plaster 1–2 times. You will visually notice the mesh within the basecoat.

Spray approximately 30% of the basecoat over the mesh imbedded basecoat and lightly trowel.

You still may notice the mesh still at this point especially as the basecoat product is still wet.



Leave the basecoat to fully dry, lightly sand and proceed with the finish coat as normal.

PRINCIPLES OF INSTALLATION

Curved Surfaces

When estimating projects that have curved shapes, it is advisable to allow for the application of an additional basecoat of Fellert plaster, EB1 basecoat for all finishes. This additional coat will assist in achieving a relatively even base layer.

An example of a curved ceiling done with the Fellert is depicted below. An application of two (2) coats of Fellert Acoustical Plaster EB1 Basecoat was undertaken prior to the application of the Fellert Sahara finish.

You will achieve slightly more flex in the board by cutting 1.3 cm ($\frac{1}{2}$ ") every 5 cm–7.5 cm (2"–3") into the board from the rear. Use the Fellert Spring Washers or other disc shaped washers to assist you with temporary securing the acoustical board to the drywall substrate.

Installation of curved surfaces is to be done with the adhered to GWB method.



PRINCIPLES OF INSTALLATION

Custom Color and Techniques

The Secern, Sahara, and Silk finishes are available in custom colors. All custom finishes must be made and approved by Fellert.

During the mixing process the colorant is mixed into the water prior to the addition of the plaster product. For applications with colors of more intense or deep colors it will tend to have more mottling or a color variance throughout the ceiling since it is a hand applied plaster. If a lighter or more medium tone of blue is chosen the mottling will be considerably less but will always have a slight color variance. All custom finish techniques need to be approved by all parties with a mock-up prior to installation.

All custom samples must be made by Fellert.

Multi-Color

Several colors can be incorporated into the acoustical finish to create custom designs.



PRINCIPLES OF INSTALLATION

Key Installation Notes

- ***Obtain the approval of a mock-up prior to commencing with the installation—the golden rule of Fellert.*** Mock-up approval is Fellert policy and is in the product specifications.
- Always stage sufficient lighting to illuminate work area as if duplicating the true critical lighting environment.
- Keep the Fellert Acoustical Board in the boxes until they ready for installation to ensure edges are protected from damage and exposure to sunlight. Always store flat, do not stack on edge.
- Apply the adhesive evenly to the back of the board.
- Ensure the manufacturing press lines on the back of the board remain in continuity on the substrate.
- If possible align the continuous join lines of Fellert Acoustical Boards towards the strongest source of light.
- Fill in board joint gaps more than 0.8 mm (1/32”) wide with Fellert Acoustical Board splices.
- Sand the entire surface of the Fellert Acoustical Board , not just the joints.
- Remove the protective masking tape after priming the transitions and re-mask accordingly.
- Always leave the Fellert Primer to dry overnight.
- Do not over mix the plaster. Add the correct amount of water to achieve desired consistency.
- Always use the Flexogrip or Fellert Trowel.
- Do not excessively trowel the basecoat, less is better.
- Spot apply EB1 to any rippers, beads, board joints, etc. as needed and let dry.
- Leave basecoat until fully dry which is approx. 2-3 days but may be quicker with forced air.
- Always spray the finish plaster corner-to-corner and spray in an irregular pattern to eliminate plaster cold joints.

HEALTH & SAFETY RECOMMENDATIONS

- When mixing any of the dry powder products wear a respirator.
- When handling and installing any Fellert acoustical panels or other system components follow regional government enforced health and safety codes including OSHA.
- When using any of the Fellert products wear protective clothing and avoid contact with your skin whenever possible.
- Wear eye protection at all times. If eye contact occurs irrigate eye with clean water and seek immediate medical attention.
- If any of the materials are swallowed, seek immediate medical attention.

All current MSDS documents are available online.

FINAL APPEARANCE STATEMENT

The Fellert Acoustical Plaster system is designed to be an acoustical sound absorption system with architectural aesthetic design capabilities. The visual appearance is intended to be a monolithic and natural looking hand-crafted plaster.

As the plaster is sprayed and hand troweled product, it allows sound to be absorbed while retaining an attractive, wall-to-wall seamless appearance.

The final appearance of any Textured, Fine Textured, or Smooth finishes will vary slightly throughout the expanse of the surface as with any hand-crafted plaster, especially under critical lighting conditions. The product should be monolithic and natural plaster looking in final appearance.

As per Fellert policies and specifications, an approved project mock up is required.

DRY STAINS - ALL FELLERT FINISHES (NON-SOLUBLE)

Commence with step 1. Proceed to the other steps if needed.

Step #1

Try brushing the stain with a soft uncolored brush.



Step #2

Vacuum with soft brush nozzle. If there are remaining stains, lightly scrape carefully with a sharp edge.



Step #3

Spray water mist.



Step #4

Sahara and Secern - form the surface to the desired appearance by using a firm brush.

Silk - form the surface to the desired appearance by using a soft sponge or a plastic trowel.



SOLUBLE STAINS - ALL FELLERT FINISHES

Step #1

Damp a soft sponge with fresh water. Press the sponge on the stain and let the water soak into the surface. Release the pressure, letting the water soak back into the sponge. Rinse sponge and repeat if necessary.



Step #2

Sahara and Secern - form the surface to the desired appearance by using a firm brush.

Silk - form the surface to the desired appearance by using a soft sponge or a plastic trowel.



HOLES, DAMAGES, & WATER DAMAGED AREAS

1. SILK

Step #1

Cut out the damaged area. Replace damaged acoustical board. If possible, use an acoustical board prepared in advance with Even Better 1 plaster. If not, build up an Even Better 1 layer and leave to dry, by filling the scratch with a small amount of Even Better 1 plaster. Moisten edge of existing plaster prior to application. Use plaster with same batch number as the one used for the ceiling.



Step #2

Spray Even Better 2 plaster on the repaired area to the desired appearance. Moisten edge of existing plaster prior to application. Hand trowel the plaster if necessary. Leave to dry. Lightly sand with 400 grit sand paper and soft sponge (moisten plaster with water), if necessary to blend.



HOLES, DAMAGES, & WATER DAMAGED AREAS

2. SAHARA

Step #1

Cut out the damaged area. Replace damaged acoustical board. If possible, use an acoustical board prepared in advance with Even Better 2 plaster. If not, build up an Even Better 2 layer and leave to dry, by filling the scratch with a small amount of Even Better 2 plaster. Moisten edge of existing plaster prior to application. Use plaster with same batch number as the one used for the ceiling.



Step #2

In a circular motion, spray Even Better 2 plaster on the repaired area to the desired appearance. Moisten edge of existing plaster prior to application. Leave to dry. Lightly sand with 400 grit sand paper and brush (moisten plaster with water), if necessary to blend.



HOLES, DAMAGES, & WATER DAMAGED AREAS

3. SECERN

Step #1

Cut out the damaged area. Replace damaged acoustical board. If possible, use an acoustical board prepared in advance with Even Better 1 plaster. If not, build up an Even Better 1 layer and leave to dry, by filling the scratch with a small amount of Even Better 1 plaster. Moisten edge of existing plaster prior to application. Use plaster with same batch number as the one used for the ceiling.

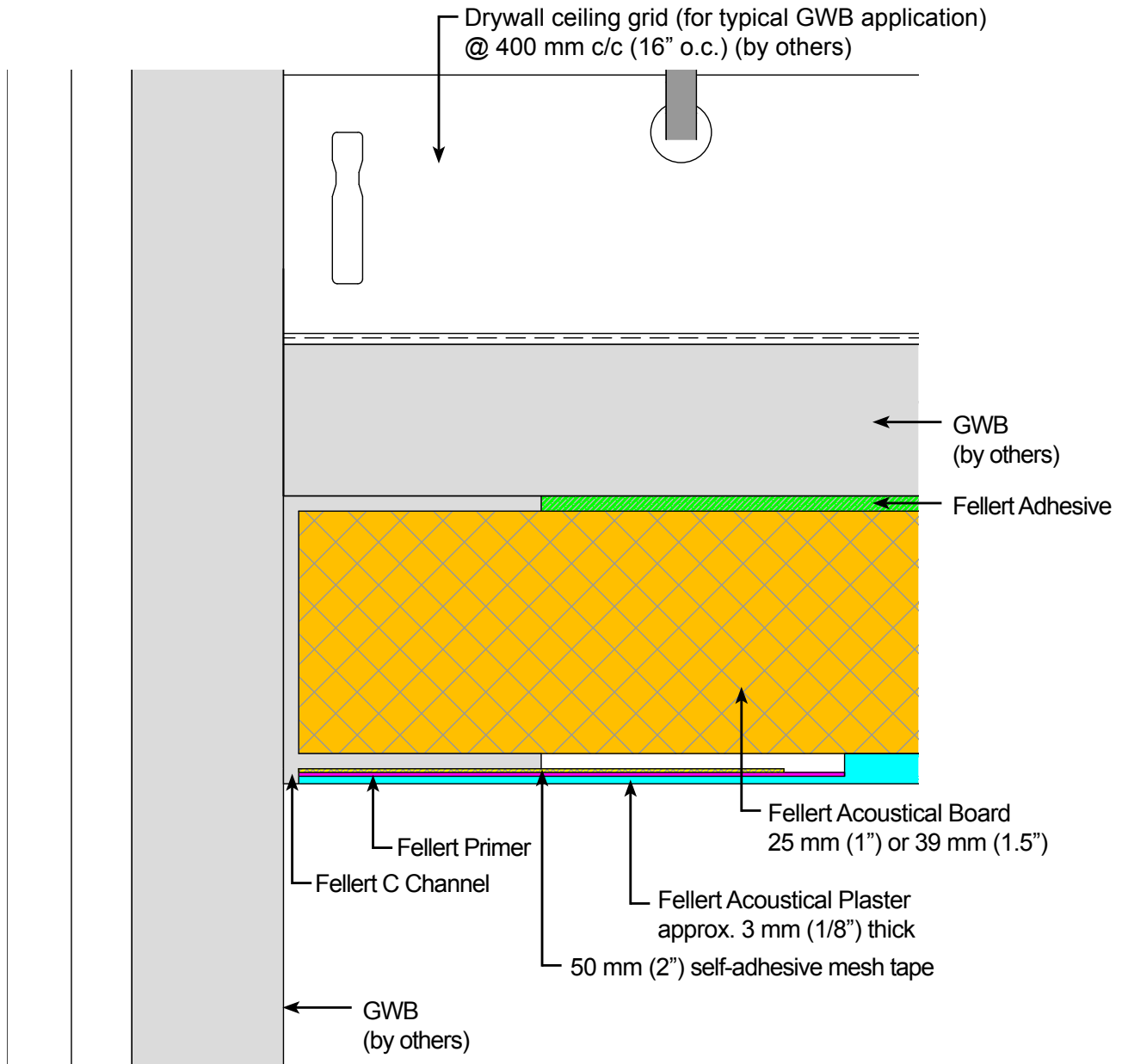


Step #2

Spray Even Better 1 plaster on the repaired area to the desired appearance. Spray in circular movements, thinner and thinner to connect the new and the old surfaces. Leave to dry.



5.1 Ceiling to Wall Interface with **GWB** Fully Adhered System



Custom details are available upon request. Installer is responsible for installation and to ensure relevant details are included in the project mock-up. Visit www.fellert.com to access all Fellert construction details.

