Revelation Planning Sheet

by DRAPER

Use this planning sheet to accomplish three goals:

① ***Select a light path.***
② ***Decide where to install your Revelation.***
③ ***Select a Revelation for your projector and ceiling space.***

① Choose a projector* based on its light path

A light path is the projector's spread of light and its relationship to the centerline of the lens. Since the Revelation folds a light path twice (bounces the image off of two first surface mirrors), it's critical to understand your projector's light path to know approximately where the image will land on the wall. Consult the projector manufacturer to determine its light path geometry.

Single lens projectors fall into one of four categories of light path geometry as depicted in the illustrations at right.

Light Path A

Single lens projectors with light path geometry "A" work well with the Revelation. Since the light is already projecting at a downward angle to the centerline, the image is projected further down on the wall resulting in a lower installation point for the projection screen. A projector with Light Path A mounted in the Revelation projects a light path similar to the same projector ceiling mounted with the centerline of its lens mounted approximately 2"-3" below the ceiling.

Light Path B

Single lens projectors with light path geometry "B" will work with the Revelation within certain limitations. The upper edge of the image runs parallel to the centerline of the lens. A projector with Light Path B mounted in the Revelation projects a light path similar to the same projector ceiling mounted with the centerline of its lens mounted approximately 6"-8" below the ceiling. By using the built in adjustment features of the Revelation, you should be able to bring the top of the image below the ceiling. Adjusting the ceiling closure door may introduce a keystone effect to the image. If your projector has a keystone correction feature you may be able to compensate for keystoning.

Light Path C

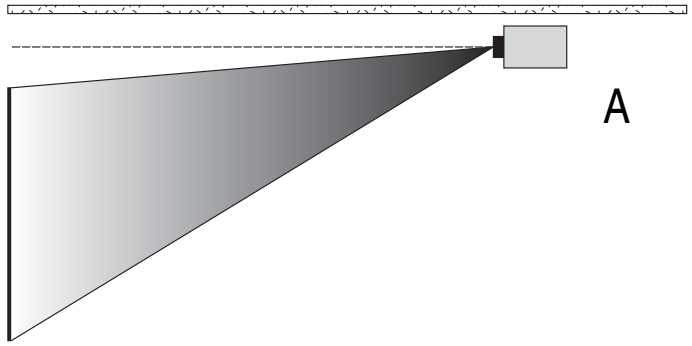
Single lens projectors with light path geometry "C" will work with the Revelation within certain limitations. The portion of the image above the centerline of the lens projects at a gradual angle up towards the ceiling. A projector with Light Path C mounted in the Revelation projects a light path similar to the same projector ceiling mounted with the centerline of its lens mounted approximately 6"-8" below the ceiling. By using the built in adjustment features of the Revelation, you should be able to bring the top of the image below the ceiling. Adjusting the ceiling closure door may introduce a keystone effect to the image. If your projector has a keystone correction feature you may be able to compensate for keystoning.

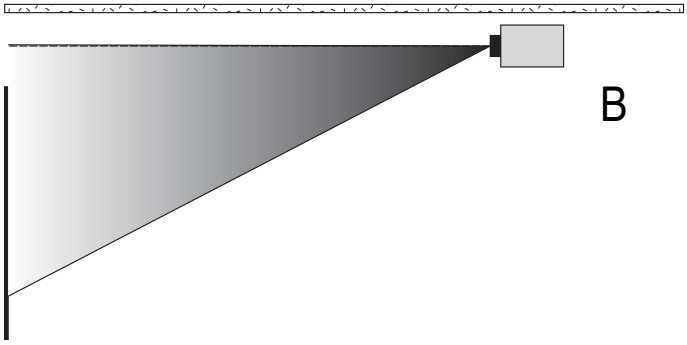
Light Path D

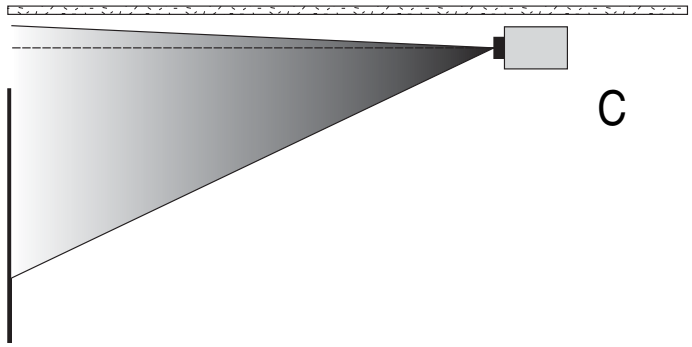
Single lens projectors with light path geometry "D" will not work with the Revelation. The portion of the image above the centerline of the lens projects at too steep of an angle to be lowered below ceiling level, even with the adjustment features built into the Revelation.

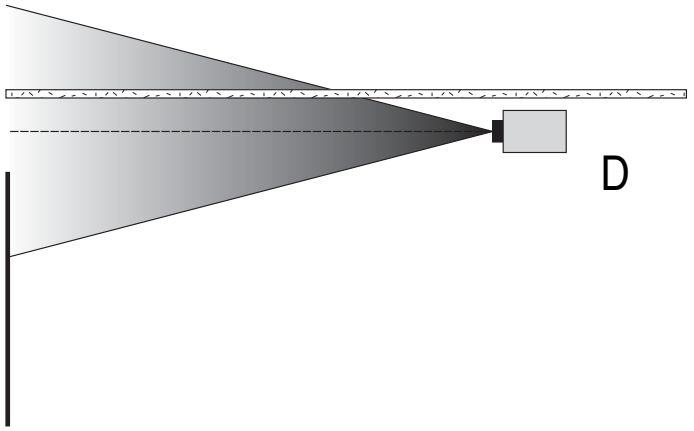
****Consult your projector manufacturer if in doubt about its light path geometry, throw distance or projector dimensions. Also, be sure your projector has the ability to invert its image.***

Please Note: The Revelation is not compatible with lenses that have a throw distance of less than 1.5:1.









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 Form Revelation_PlanSheet12 Printed in U.S.A.

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Revelation Planning Sheet by Draper

② Where to install the Revelation

To determine where to mount the Revelation, you need to know the following:

① The projector manufacturer's recommended throw distance (TD). Typically, a minimum and maximum range is provided per screen size. Select a throw distance that is 6" greater than the minimum and 6" less than the maximum stated. We recommend the average of the two numbers. For example, if the range given is 228" max. and 142½" min., then use a number between 222" and 148½". We recommend using the average of 185¼" as the TD.

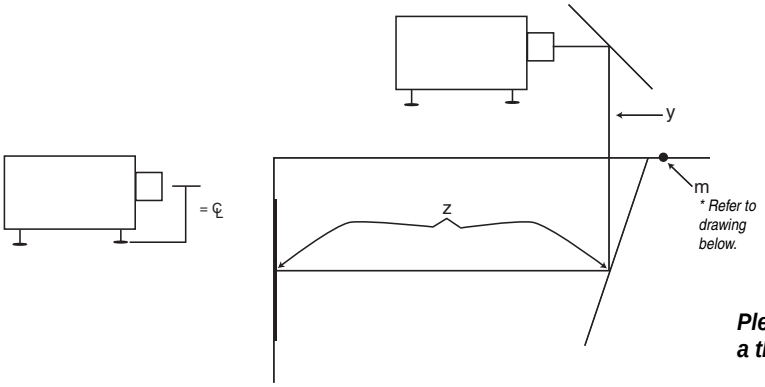
② The distance from the centerline of the lens to the bottom of the projector's feet (CL).

To find the mounting point (m = back edge of the rough cut) use the following formula:

y = 15" + CL

z = TD – y

m = z + 8"



Remember:

CL = *Distance from centerline of lens to bottom of projector's feet.*

TD = *Manufacturer's horizontal throw distance for the selected screen size.*

m = *Calculated mounting point (mounting point is back edge of rough cut as measured from screen surface.)*

As an example, if you are using a projector with recommended throw distance (TD) of 185¼" for a 100" diagonal image, and its CL dimension is 4", calculate the mounting point as follows:

y = 15" + CL	z = TD – y	m = z + 8"
y = 15" + 4"	z = 185¼" – 19"	m = 166¼" + 8"
y = 19"	z = 166¼"	m = 174¼"

In the example above, the distance from the screen to the back edge of the rough cut would be 174¼". (Formula has a ± 6" accuracy).

Formula to find m
(mounting point is back edge of rough cut farthest away from projection screen—see drawing below).

y = 15" + CL

z = TD – y

m = z + 8"

where:

CL = centerline of lens to bottom feet

TD = throw distance

Accuracy: ± 6"

Please Note: The Revelation is not compatible with lenses that have a throw distance of less than 1.5:1.

③ Choose a Revelation

Use below dimensions to determine which Revelation model works with your projector and in the space above your ceiling.

☐ Model A
☐ Model B

Revelation Dimensions & Data	***Model A***	***Model B***
Overall Unit Size (HWL)	13" x 38¼" x 34"	13" x 38¼" x 44"
Required Space Above Ceiling*	13⅝" x 38¼" x 34"	13⅝" x 38¼" x 44"
Clearance Below Ceiling	approx. 17"	approx. 17"
Rough Ceiling Opening for motorized door	23½" x 23½"	23½" x 23½"
Capacity	100 lbs.	100 lbs.
Door's Downward Travel Distance	approx. 17"	approx. 17"
Travel Time	9 sec.	9 sec.
Net Weight	85 lbs.	90 lbs.
Shipping Weight	215 lbs.	220 lbs.

Projector Space (HWL)—To fit within parameters of inner pan.

Max. projector height with EAS Housing is 9¾".

* 13⅝" is overall height of Revelation with EAS Housing (13" WITHOUT EAS Housing).

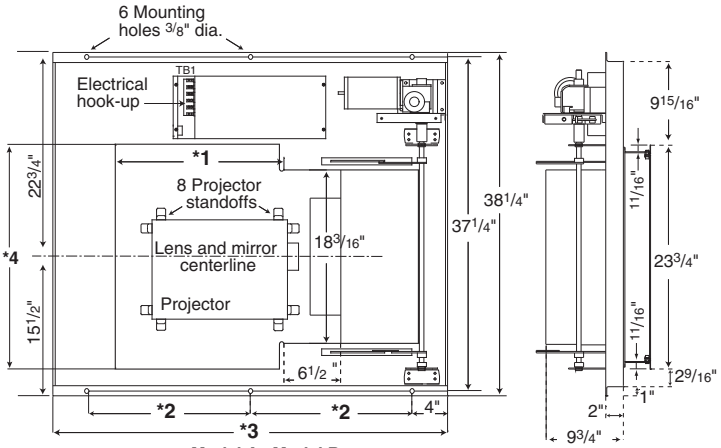
Electrical Specifications

Operating Voltage	110–120 VAC 50–60 Hz
Amperes	1 Amp**
Control Voltage	12 VAC

Motor Specifications:

Voltage	110–120 VAC 50–60 Hz
Amps	.43
Torque	200 IN–lbs.

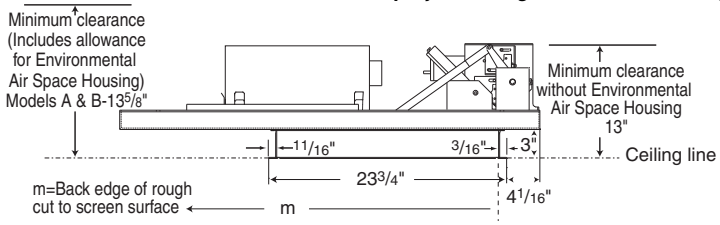
** Does not include any load placed on internal outlet.



	Model A	Model B
*1	9⅛"	18 11/16"
*2	13"	18"
*3	34"	44"
*4	21½"	24 13/16"

Minimum rough opening
23½" x 23½"

Max. projector height with EAS Housing is 9¾".



If you need additional information about the Revelation, call your dealer or Draper, Inc., Spiceland, Indiana, 765/987-7999, or fax 765/987-7142, and request the form "Installation/Operating Instructions—Revelation Video Projector Mount."