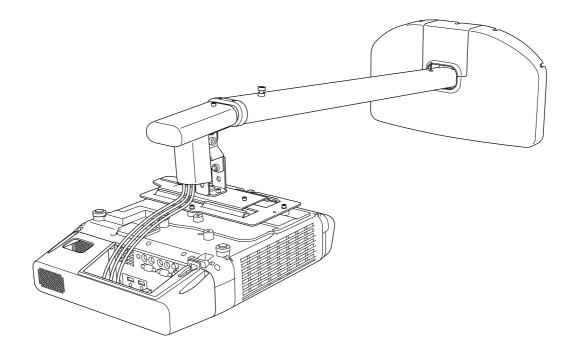


# ELPMB64 Installation Guide



### **About This Installation Guide**

Not all models are available in all markets.

This guide describes how to mount the short-throw projectors PowerLite® EB-L200SX/EB-L200SW to a wall using the Epson® ELPMB64 wall mount.

**Safety Instructions** 

# For your safety, read all the instructions in this guide before using the wall mount. Incorrect handling that ignores instructions in this guide could damage the wall mount or could result in personal injury or property

damage. Keep this installation guide on hand for future reference. Read the safety instructions in the online *User's Guide* for your projector and follow the instructions in this

### Explanation of Symbols

document.

The warning marks shown below are used throughout this installation guide to prevent personal injury or property damage. Make sure you understand these warnings when reading this installation guide.

A Warning	This symbol indicates information that, if ignored, could possibly result in personal injury or even death due to incorrect handling.
<b>▲</b> Caution	This symbol indicates information that, if ignored, could possibly result in personal injury or physical damage due to incorrect handling.
	This symbol indicates related or useful information.
	Sumbal indicating an action that must not be done

$\bigcirc$	Symbol indicating an action that must not be done
0	Symbol indicating an action that should be done

### **Safety Precautions for Installation**

🕂 Warning	
The wall mount is designed specifically for mounting a projector and optional accessories to a wall. If anything other than a projector and optional accessories are mounted, the weight may result in damage. If the wall mount falls, it could cause personal injury or property damage.	0
The installation work (wall mounting) should be performed by qualified technicians using only approved mounting equipment. Incomplete or incorrect installation could cause the wall mount or projector to fall and cause personal injury or property damage.	0
Follow the instructions in this guide when installing the wall mount.	
If the instructions are not followed, the wall mount may fall, resulting in personal injury or property damage.	Ų
Turn off the projector when installing the mount to avoid fire or electric shock.	0

🕂 Warning	
<ul> <li>Handle the power cord carefully.</li> <li>Incorrect handling may cause fire or electric shock. Observe the following precautions when handling:</li> <li>Do not handle the power plug with wet hands.</li> <li>Do not use a power cord that is damaged or modified.</li> <li>Do not pull the power cord with too much force when routing it through the wall mount.</li> </ul>	0
<b>Do not install the wall mount in a place where it might be subjected to vibration or shock.</b> Vibration or shock could cause damage to the projector or mounting surface. It could also cause the wall mount or projector to fall and cause personal injury or property damage.	$\bigcirc$
Install the wall mount so that it can sufficiently support the weight of the projector and wall mount, and resist any horizontal vibration. Use M8 nuts and bolts. Nuts and bolts smaller than M8 could cause the wall mount to fall. Epson accepts no responsibility for any damage or injury caused by lack of wall strength or inadequate installation.	0
The installation work should be performed by at least two qualified service personnel. If you need to loosen any screws during installation, be careful not to drop the wall mount. If the wall mount or projector falls, it could cause personal injury or property damage.	0
When installing the wall mount, do not hold on to the cable cover to position the mount. Holding the mount by the cable cover could cause the cover to detach, resulting in personal injury or property damage.	$\bigcirc$
When you mount the projector on the wall with the wall mount, the wall requires enough strength to hold the projector and the wall mount. This wall mount should be installed on a concrete wall. Confirm the weight of the projector and the wall mount before installation, and maintain the strength of the wall. If the wall is not strong enough, reinforce the wall before installation.	0
If you need to loosen any screws while installing, be careful not to drop the projector or the mount. If the wall mount or projector falls, it could cause personal injury or property damage.	0
<b>Inspect the wall mount on a regular basis to ensure there are no broken parts or loose bolts or screws.</b> If there are any broken parts, stop using the wall mount immediately. If the wall mount or projector falls, it could cause personal injury or property damage.	0
Never modify the wall mount.	$\bigcirc$
<b>Do not disassemble or modify the projector.</b> There are numerous high-voltage components inside the projector that could cause a fire, electric shock, or an accident.	$\bigcirc$
<b>Do not hang on the wall mount or hang a heavy object on the wall mount.</b> If the projector or wall mount falls, it could cause personal injury or property damage.	$\bigcirc$
<ul> <li>Stop using the mount and contact Epson if any of the following occur:</li> <li>The mount is dropped or damaged during installation.</li> <li>The arm unit detaches from the wall or falls.</li> </ul>	0
<b>Do not use adhesives, lubricants, or oils to install or adjust the wall mount.</b> If you use adhesives to prevent the bolts or screws from loosening or things such as lubricants or oils on the part of the projector attached to the slide plate, the case may crack and cause the projector to fall, resulting in personal injury or property damage.	$\bigcirc$
<b>Tighten all screws firmly after adjustment.</b> Otherwise, the projector or wall mount may fall and cause personal injury or property damage.	0
<b>Never loosen the bolts and nuts after installation.</b> Confirm that the screws have not become loose on a regular basis. If you find any loose screws, tighten them firmly. Otherwise, the projector or wall mount may fall and cause personal injury or property damage.	$\bigcirc$
When performing wiring, make sure the cable does not come into contact with any screws or bolts. Handling the cable incorrectly may cause fire or electric shock.	$\bigcirc$

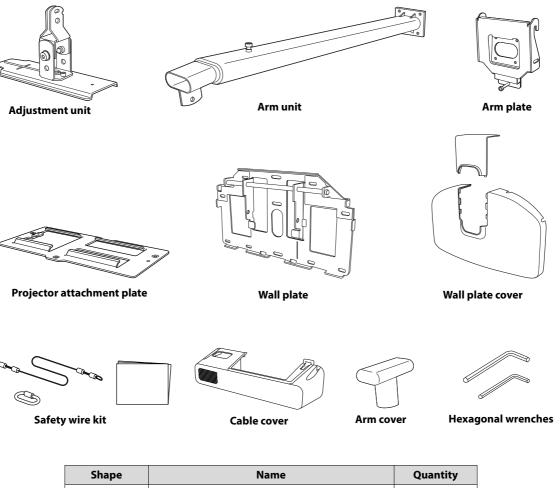
<u> </u>	
Do not install the wall mount in a location where the operating temperature for your projector model may be exceeded. Such an environment may damage the projector.	$\bigcirc$
<b>Do not install in a location subject to oily smoke or smoke for events.</b> If oils stick to the slide plate fixing part of the projector, the case may crack and cause the projector to fall, resulting in personal injury or property damage.	$\bigcirc$
Install the wall mount in a place free from excessive dust and humidity to prevent the lens or optical components from becoming dirty.	0
<b>Do not use excessive force when adjusting the wall mount.</b> The wall mount may break, resulting in personal injury.	$\bigcirc$

## Location

- Determine where you will install the wall mount and prepare the location in advance. Also, make sure there is a gap of 16 to 26 inches (410 to 660 mm) from the top of the image projected onto the white board to the ceiling. See "Positioning the Projector" on page 10 for more details.
- Do not install the projector in a location where it might be subjected to vibration or shock. Vibration or shock could cause damage to the projector or mounting surface. It could also cause the wall mount or projector to fall, resulting in serious injury or death.
- Before installing the projector, verify the power supply wiring for the installation location.
- Install the projector away from other electric devices such as fluorescent lights or air conditioners. Some kinds of fluorescent lights could interfere with the projector remote control.
- Install the projector away from direct sunlight and other bright light sources.
- It is recommended to keep VGA computer cable length less than 66 feet (20 meters) to reduce external noise.
- If you want to hide the projector power plug under the wall plate cover, make sure the power outlet is located in the cutout on the left or right of the wall plate. Depending on where the plug is placed within the opening, there is between 1.9 to 2.3 inches (48 to 57.5 mm) of space between the cutout and the wall plate cover.

### **Package Contents** 6 1 **Specifications 7** 2 • 9 3 **Connecting Devices Positioning the Projector F** 11 4 Installation Measurements for PowerLite EB\_L200SW - Wide 1. 2. Installation Measurements for PowerLite EB-L200SW - Tele 3. Installation Measurements for PowerLite EB-L200SX - Wide 4. Installation Measurements for PowerLite EB-L200SX - Tele Installing the Projector 5 🖝 19 1. Install the wall plate 2. Assemble the wall mount 3. Route the cables through the arm unit 4. Attach the wall mount to the wall plate 5. Attach the attachment plate to the projector 6. Attach the projector to the adjustment unit 7. Adjust the arm length 8. Connect the power cord and other cables to the projector 9. Attach the cable cover to the projector 10. Turn on the projector and check the image 11. Install the safety wire 12. Attach the arm cover 13. Attach the wall plate cover

### 1 Package Contents

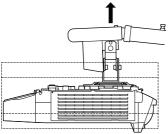


Shape	Name	Quantity
O Co	M4 $\times$ 12 mm hexagon socket head cap bolt with washer	1
<b>N</b> o	M4 $\times$ 12 mm hexagon socket head cap bolt without washer	6
O <sub>O</sub>	M4 × 12 mm hexagon socket head cap bolt with washer/spring washer	5
<b>No</b>	$\rm M8 \times 16~mm~hexagon$ socket head cap bolt without washer	7

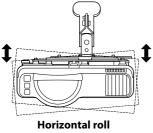
- Use the bolts or screws supplied with the wall mount to install it as directed in this guide. Do not substitute these bolts with any other types.
- You need to use commercially available M8  $\times$  60 mm or 3/8 inch anchors (at least 3) to attach the wall plate to the wall.
- Gather the tools and parts you need before you begin installation.

## 2 Specifications

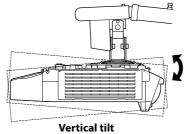
Item	Specification
Weight	Approx. 21.4 lb (9.7 kg)
Maximum load capacity	14.3 lb (6.5 kg)
Arm length	39.4 to 59.4 inches (1000 to 1510 mm) (from wall plate attachment point to arm cover point)
Vertical height adjustment range	0 to 5.3 inches (0 to 134 mm) (arm length minimum) 0 to 9.1 inches (0 to 230 mm) (arm length maximum)
Vertical tilt adjustment range	-7 to 17° (arm length minimum) -17 to 7° (arm length maximum)
Horizontal rotation adjustment range	0 to ± 5°
Horizontal roll adjustment range	0 to ± 5°
Horizontal slide adjustment range	0 to ± 1.8 inches (45 mm)



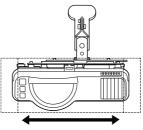
Vertical height adjustment



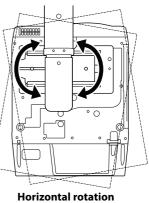
adjustment



adjustment

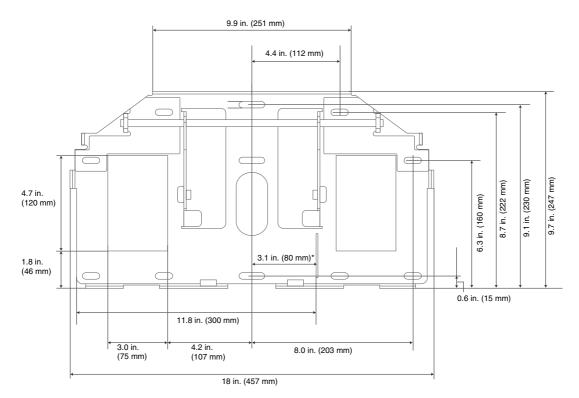


Horizontal slide adjustment



adjustment

### Wall plate

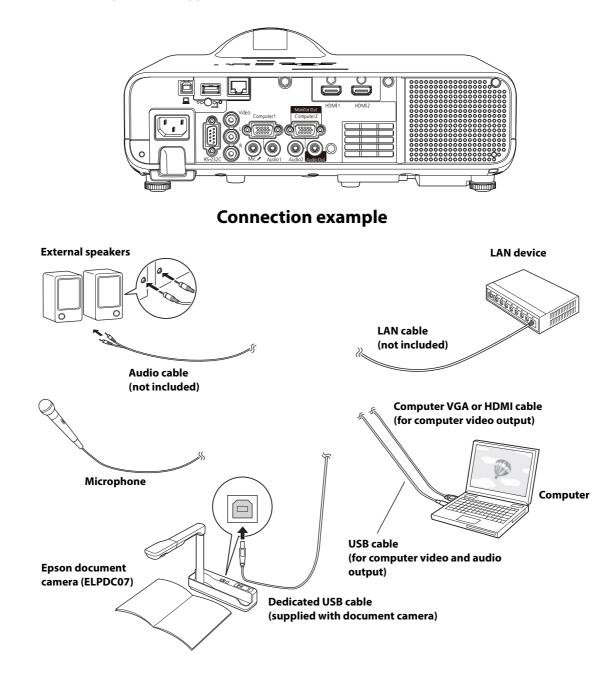


\*Offset from the center of the projected image to the center of the wall plate.

### **3** Connecting Devices

Make sure you have the power cord, computer VGA or HDMI cable, and other parts at the location where the wall mount is to be installed.

Make sure you also have all necessary cables for devices, such as a document camera or microphone, that you will connect to the projector. This includes cables for any optional equipment that may be connected in the future. For details, refer to the online *User's Guide* or at **epson.com/support** (U.S.), **epson.ca/support** (Canada), or **latin.epson.com/support** (Caribbean).

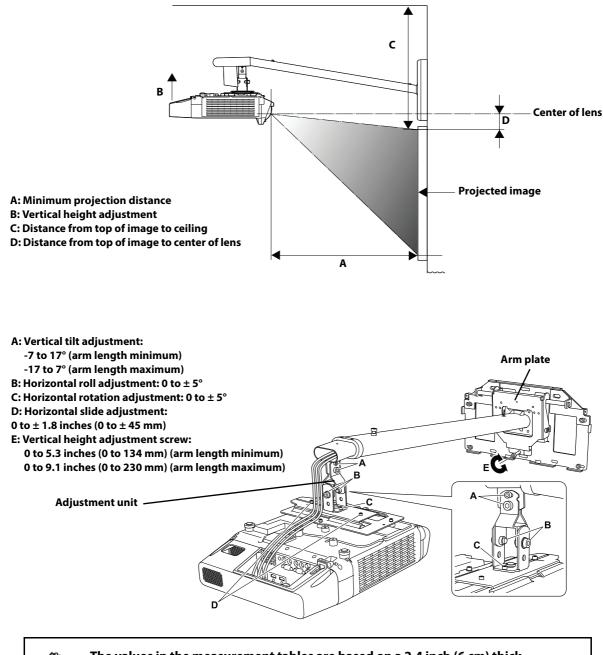


### **4** Positioning the Projector

The PowerLite EB-L200SW can project up to 113 inches diagonally for a WXGA image or 100 inches diagonally for an XGA image using this mount. The PowerLite EB-L200SX can project up to 106 inches diagonally for an XGA image. You can project onto a pre-installed whiteboard or directly onto a plain wall. The height of the included wall mount determines how high the image appears on the wall or whiteboard. The distance of the projector from the wall (once it is mounted on the adjustable arm of the wall mount) also affects image size and position.

If you are planning to project on a whiteboard, the image may not fill the entire board, depending on the aspect ratio. If you match the image height to the board's height, gaps may appear on the sides of the board.

Refer to the tables on the following pages and install the mount and projector to project images at the appropriate size. The values are only a guide. The recommended projection distance is 27.6 to 46.9 inches (70 to 119 cm).



The values in the measurement tables are based on a 2.4 inch (6 cm) thick whiteboard. Make sure your whiteboard is no more than 2.4 inch (6 cm) thick.

EB_L200SW - Wide	
Installation Measurements for PowerLite EB_	

Screen		16:10	16:10 WXGA			4:3	4:3 XGA			16:9 Wi	16:9 Widescreen	
	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distance from top of image to center of lens (D)	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distance from top of image to center of lens (D)	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distancefrom top of image to center of lens (D)
60 in.	-	-	,	-	27.6 in. (70 cm)	1.6 in. (4 cm)	16.9 in. (43 cm)	4.3 in. (11 cm)				
61 in.					28 in. (71 cm)	2 in. (5 cm)	17.3 in. (44 cm)	4.3 in. (11 cm)				
62 in.	-	1	I	I	28.3 in. (72 cm)	2 in. (5 cm)	17.3 in. (44 cm)	4.3 in. (11 cm)		1	,	
63 in.		1	I	1	29.1 in. (74 cm)	2 in. (5 cm)	17.3 in. (44 cm)	4.3 in. (11 cm)		1		
64 in.		1	I	I	29.5 in. (75 cm)	2 in. (5 cm)	17.3 in. (44 cm)	4.3 in. (11 cm)		1		
65 in.			ı		29.9 in. (76 cm)	2 in. (5 cm)	17.3 in. (44 cm)	4.7 in. (12 cm)		1		
66 in.	1	1	1	1	30.3 in. (77 cm)	2 in. (5 cm)	17.7 in. (45 cm)	4.7 in. (12 cm)	27.6 in. (70 cm)	3.5 in. (9 cm)	18.9 in. (48 cm)	5.9 in. (15 cm)
67 in.	1	1	1		31.1 in. (79 cm)	2 in. (5 cm)	17.7 in. (45 cm)	4.7 in. (12 cm)	28 in. (71 cm)	3.9 in. (10 cm)	19.2 in. (49 cm)	6.3 in. (16 cm)
68 in.	27.6 in. (70 cm)	1.6 in. (4 cm)	16.9 in. (43 cm)	4.3 in. (11 cm)	31.5 in. (80 cm)	2 in. (5 cm)	17.7 in. (45 cm)	4.7 in. (12 cm)	28.3 in. (72 cm)	3.9 in. (10 cm)	19.3 in. (49 cm)	6.3 in. (16 cm)
69 in.	27.9 in. (71 cm)	2 in. (5 cm)	17.3 in. (44 cm)	4.3 in. (11 cm)	31.9 in. (81 cm)	2 in. (5 cm)	17.7 in. (45 cm)	4.7 in. (12 cm)	28.7 in. (73 cm)	3.9 in. (10 cm)	19.3 in. (49 cm)	6.3 in. (16 cm)
70 in.	28.4 in. (72 cm)	2 in. (5 cm)	17.3 in. (44 cm)	4.3 in. (11 cm)	32.3 in. (82 cm)	2 in. (5 cm)	17.7 in. (45 cm)	5.1 in. (13 cm)	29.1 in. (74 cm)	3.9 in. (10 cm)	19.3 in. (49 cm)	6.3 in. (16 cm)
71 in.	29 in. (73 cm)	2 in. (5 cm)	17.3 in. (44 cm)	4.3 in. (11 cm)	32.7 in. (83 cm)	2 in. (5 cm)	18.1 in. (46 cm)	5.1 in. (13 cm)	29.5 in. (75 cm)	3.9 in. (10 cm)	19.7 in. (50 cm)	6.3 in. (16 cm)
72 in.	29.1 in. (74 cm)	2 in. (5 cm)	17.3 in. (44 cm)	4.3 in. (11 cm)	33.5 in. (85 cm)	2 in. (5 cm)	18.1 in. (46 cm)	5.1 in. (13 cm)	30.3 in. (77 cm)	3.9 in. (10 cm)	19.7 in. (50 cm)	6.7 in. (17 cm)
73 in.	29.5 in. (75 cm)	2 in. (5 cm)	17.3 in. (44 cm)	4.7 in. (12 cm)	33.9 in. (86 cm)	2 in. (5 cm)	18.1 in. (46 cm)	5.1 in. (13 cm)	30.7 in. (78 cm)	3.9 in. (10 cm)	19.7 in. (50 cm)	6.7 in. (17 cm)
74 in.	30.3 in. (77 cm)	2 in. (5 cm)	17.7 in. (45 cm)	4.7 in. (12 cm)	34.3 in. (87 cm)	2.4 in. (6 cm)	18.1 in. (46 cm)	5.1 in. (13 cm)	31.1 in. (79 cm)	3.9 in. (10 cm)	19.7 in. (50 cm)	6.7 in. (17 cm)
75 in.	30.7 in. (78 cm)	2 in. (5 cm)	17.7 in. (45 cm)	4.7 in. (12 cm)	34.7 in. (88 cm)	2.4 in. (6 cm)	18.1 in. (46 cm)	5.1 in. (13 cm)	31.5 in. (80 cm)	3.9 in. (10 cm)	19.7 in. (50 cm)	6.7 in. (17 cm)
76 in.	31.1 in. (79 cm)	2 in. (5 cm)	17.7 in. (45 cm)	4.7 in. (12 cm)	35.4 in. (90 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	55 in. (14 cm)	31.9 in. (81 cm)	4.3 in. (11 cm)	20.1 in. (51 cm)	7.1 in. (18 cm)
77 in.	31.5 in. (80 cm)	2 in. (5 cm)	17.7 in. (45 cm)	4.7 in. (12 cm)	35.8 in. (91 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	55 in. (14 cm)	32.3 in. (82 cm)	4.3 in. (11 cm)	20.1 in. (51 cm)	7.1 in. (18 cm)
78 in.	31.9 in. (81 cm)	2 in. (5 cm)	17.7 in. (45 cm)	4.7 in. (12 cm)	36.2 in. (92 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	55 in. (14 cm)	32.7 in. (83 cm)	4.3 in. (11 cm)	20.1 in. (51 cm)	7.1 in. (18 cm)

Screen		16:10	16:10 WXGA			4:3	4:3 XGA			16:9 Wi	16:9 Widescreen	
9716	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distance from top of image to center of lens (D)	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distance from top of image to center of lens (D)	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distance from top of image to center of lens (D)
79 in.	32.3 in. (82 cm)	2 in. (5 cm)	17.7 in. (45 cm)	4.7 in. (12 cm)	36.6 in. (93 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	55 in. (14 cm)	33.1 in. (84 cm)	4.3 in. (11 cm)	20.1 in. (51 cm)	7.1 in.(18 cm)
80 in.	32.7 in. (83 cm)	2 in. (5 cm)	18.1 in. (46 cm)	5.1 in. (13 cm)	37 in. (94 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	55 in. (14 cm)	33.5 in. (85 cm)	4.3 in. (11 cm)	20.5 in. (52 cm)	7.5 in. (19 cm)
81 in.	33 in. (84 cm)	2 in. (5 cm)	18.1 in. (46 cm)	5.1 in. (13 cm)	37.8 in. (96 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	5.9 in. (15 cm)	34.3 in. (87 cm)	4.3 in. (11 cm)	20.5 in. (52 cm)	7.5 in. (19 cm)
82 in.	33.5 in. (85 cm)	2.4 in. (6 cm)	18.1 in. (46 cm)	5.1 in. (13 cm)	38.2 in. (97 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	5.9 in. (15 cm)	34.7 in. (88 cm)	4.3 in. (11 cm)	20.5 in. (52 cm)	7.5 in. (19 cm)
83 in.	33.9 in. (86 cm)	2.4 in. (6 cm)	18.1 in. (46 cm)	5.1 in. (13 cm)	38.6 in. (98 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	5.9 in. (15 cm)	35 in. (89 cm)	4.3 in. (11 cm)	20.5 in. (52 cm)	7.5 in. (19 cm)
84 in.	34.3 in. (87 cm)	2.4 in. (6 cm)	18.1 in. (46 cm)	5.1 in. (13 cm)	39 in. (99 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	5.9 in. (15 cm)	35.4 in. (90 cm)	4.3 in. (11 cm)	20.9 in. (53 cm)	7.5 in. (19 cm)
85 in.	34.7 in. (88 cm)	2.4 in. (6 cm)	18.1 in. (46 cm)	5.1 in. (13 cm)	39.8 in. (101 cm)	2.4 in. (6 cm)	18.9 in. (48 cm)	5.9 in. (15 cm)	35.8 in. (91 cm)	4.7 in. (12 cm)	20.9 in. (53 cm)	7.9 in. (20 cm)
86 in.	35.4 in. (90 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	55 in. (14 cm)	40.2 in. (102 cm)	2.4 in. (6 cm)	19.3 in. (49 cm)	5.9 in. (15 cm)	36.2 in. (92 cm)	4.7 in. (12 cm)	20.9 in. (53 cm)	7.9 in. (20 cm)
87 in.	35.8 in. (91 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	55 in. (14 cm)	40.6 in. (103 cm)	2.4 in. (6 cm)	19.3 in. (49 cm)	6.3 in. (16 cm)	36.6 in. (93 cm)	4.7 in. (12 cm)	20.9 in. (53 cm)	7.9 in. (20 cm)
88 in.	36.2 in. (92 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	55 in. (14 cm)	40.9 in. (104 cm)	2.8 in. (7 cm)	19.3 in. (49 cm)	6.3 in. (16 cm)	37 in. (94 cm)	4.7 in. (12 cm)	20.9 in. (53 cm)	7.9 in. (20 cm)
89 in.	36.6 in. (93 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	55 in. (14 cm)	41.3 in. (105 cm)	2.8 in. (7 cm)	19.3 in. (49 cm)	6.3 in. (16 cm)	37.4 in. (95 cm)	4.7 in. (12 cm)	21.3 in. (54 cm)	8.3 in. (21 cm)
90 in.	37 in. (94 cm)	2.4 in. (6 cm)	18.5 in. (47 cm)	55 in. (14 cm)	42.1 in. (107 cm)	2.8 in. (7 cm)	19.3 in. (49 cm)	6.3 in. (16 cm)	38.2 in. (97 cm)	4.7 in. (12 cm)	21.3 in. (54 cm)	8.3 in. (21 cm)
91 in.	37.4 in. (95 cm)	2.4 in. (6 cm)	18.9 in. (48 cm)	55 in. (14 cm)	42.5 in. (108 cm)	2.8 in. (7 cm)	19.7 in. (50 cm)	6.3 in. (16 cm)	38.6 in. (98 cm)	4.7 in. (12 cm)	21.3 in. (54 cm)	8.3 in. (21 cm)
92 in.	37.8 in. (96 cm)	2.4 in. (6 cm)	18.9 in. (48 cm)	5.9 in. (15 cm)	42.9 in. (109 cm)	2.8 in. (7 cm)	19.7 in. (50 cm)	6.3 in. (16 cm)	39 in. (99 cm)	4.7 in. (12 cm)	21.3 in. (54 cm)	8.3 in. (21 cm)
93 in.	38.2 in. (97 cm)	2.4 in. (6 cm)	18.9 in. (48 cm)	5.9 in. (15 cm)	43.3 in. (110 cm)	2.8 in. (7 cm)	19.7 in. (50 cm)	6.7 in. (17 cm)	39.4 in. (100 cm)	5.1 in. (13 cm)	21.7 in. (55 cm)	8.7 in.(22 cm)
94 in.	38.6 in. (98 cm)	2.4 in. (6 cm)	18.9 in. (48 cm)	5.9 in. (15 cm)	43.7 in. (111 cm)	2.8 in. (7 cm)	19.7 in. (50 cm)	6.7 in. (17 cm)	39.8 in. (101 cm)	5.1 in. (13 cm)	21.7 in. (55 cm)	8.7 in. (22 cm)
95 in.	39 in. (99 cm)	2.4 in. (6 cm)	18.9 in. (48 cm)	5.9 in. (15 cm)	44.5 in. (113 cm)	2.8 in. (7 cm)	19.7 in. (50 cm)	6.7 in. (17 cm)	40.2 in. (102 cm)	5.1 in. (13 cm)	21.7 in. (55 cm)	8.7 in. (22 cm)
96 in.	39.4 in. (100 cm)	2.4 in. (6 cm)	18.9 in. (48 cm)	5.9 in. (15 cm)	44.9 in. (114 cm)	2.8 in. (7 cm)	20.1 in. (51 cm)	6.7 in. (17 cm)	40.6 in. (103 cm)	5.1 in. (13 cm)	21.7 in. (55 cm)	8.7 in. (22 cm)
97 in.	39.8 in. (101 cm)	2.8 in. (7 cm)	19.3 in. (49 cm)	5.9 in. (15 cm)	45.3 in. (115 cm)	2.8 in. (7 cm)	20.1 in. (51 cm)	6.7 in. (17 cm)	40.9 in. (104 cm)	5.1 in. (13 cm)	21.7 in. (55 cm)	8.7 in. (22 cm)
98 in.	40.2 in. (102 cm)	2.8 in. (7 cm)	19.3 in. (49 cm)	6.3 in. (16 cm)	45.7 in. (116 cm)	2.8 in. (7 cm)	20.1 in. (51 cm)	7.1 in. (18 cm)	41.3 in. (105 cm)	5.1 in. (13 cm)	22.1 in. (56 cm)	9.1 in. (23 cm)

Screen		16:10	16:10 WXGA			4:3	4:3 XGA			16:9 Wi	16:9 Widescreen	
SIZE	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distance from top of image to center of lens (D)	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distance from top of image to center of lens (D)	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distancefrom top of image to center of lens (D)
99 in.	40.9 in. (104 cm)	2.8 in. (7 cm)	19.3 in. (49 cm)	6.3 in. (16 cm)	46.5 in. (118 cm)	2.8 in. (7 cm)	20.1 in. (51 cm)	7.1 in. (18 cm)	41.7 in. (106 cm)	5.1 in. (13 cm)	22.1 in. (56 cm)	9.1 in. (23 cm)
100 in.	41.3 in. (105 cm)	2.8 in. (7 cm)	19.3 in. (49 cm)	6.3 in. (16 cm)	46.9 in. (119 cm)	2.8 in. (7 cm)	20.1 in. (51 cm)	7.1 in. (18 cm)	42.5 in. (108 cm)	5.1 in. (13 cm)	22.1 in. (56 cm)	9.1 in. (23 cm)
101 in.	41.7 in. (106 cm) 2.8 in. (7 cm)	2.8 in. (7 cm)	19.3 in. (49 cm)	6.3 in. (16 cm)	1	I		ı	42.9 in. (109 cm)	5.1 in. (13 cm)	22.1 in. (56 cm)	9.1 in. (23 cm)
102 in.	42.1 in. (107 cm) 2.8 in. (7 cm)	2.8 in. (7 cm)	19.3 in. (49 cm)	6.3 in. (16 cm)		ı			43.3 in. (110 cm)	5.5 in. (14 cm)	22.4 in. (57 cm)	9.4 in. (24 cm)
103 in.	42.5 in. (108 cm)	2.8 in. (7 cm)	19.7 in. (50 cm)	6.3 in. (16 cm)	1	ı			43.7 in. (111 cm)	5.5 in. (14 cm)	22.4 in. (57 cm)	9.4 in. (24 cm)
104 in.	42.9 in. (109 cm)	2.8 in. (7 cm)	19.7 in. (50 cm)	6.3 in. (16 cm)	1	1		ı	44.1 in. (112 cm)	5.5 in. (14 cm)	22.4 in. (57 cm)	9.4 in. (24 cm)
105 in.	43.3 in. (110 cm)	2.8 in. (7 cm)	19.7 in. (50 cm)	6.7 in. (17 cm)	1	I			44.5 in. (113 cm)	5.5 in. (14 cm)	22.4 in. (57 cm)	9.4 in. (24 cm)
106 in.	43.7 in. (111 cm)	2.8 in. (7 cm)	19.7 in. (50 cm)	6.7 in. (17 cm)	1	-			44.9 in. (114 cm)	5.5 in. (14 cm)	22.8 in. (58 cm)	9.8 in. (25 cm)
107 in.	44.1 in. (112 cm)	2.8 in. (7 cm)	19.7 in. (50 cm)	6.7 in. (17 cm)	I	I			45.3 in. (115 cm)	5.5 in. (14 cm)	22.8 in. (58 cm)	9.8 in. (25 cm)
108 in.	44.5 in. (113 cm)	2.8 in. (7 cm)	20.1 in. (51 cm)	6.7 in. (17 cm)	I	I		I	45.7 in. (116 cm)	5.5 in. (14 cm)	22.8 in. (58 cm)	9.8 in. (25 cm)
109 in.	44.9 in. (114 cm)	2.8 in. (7 cm)	20.1 in. (51 cm)	6.7 in. (17 cm)	1	ı			46.5 in. (118 cm)	5.5 in. (14 cm)	22.8 in. (58 cm)	9.8 in. (25 cm)
110 in.	45.3 in. (115 cm)	2.8 in. (7 cm)	20.1 in. (51 cm)	6.7 in. (17 cm)	1	I		ı	46.9 in. (119 cm)	5.5 in. (14 cm)	22.8 in. (58 cm)	9.8 in. (25 cm)
111 in.	45.7 in. (116 cm)	2.8 in. (7 cm)	20.1 in. (51 cm)	7.1 in. (18 cm)	1	I			-	ı		I
112 in.	46.5 in. (118 cm)	2.8 in. (7 cm)	20.1 in. (51 cm)	7.1 in. (18 cm)	1	-			-			
113 in.	46.9 in. (119 cm) 2.8 in. (7 cm)	2.8 in. (7 cm)	20.1 in. (51 cm)	7.1 in. (18 cm)	-	-		-	-	-		-
* Project	* Projection distance is measured from the projector lens to the projection surface.	measured frc	om the projecto	or lens to the p	roiection surfa	ce.						

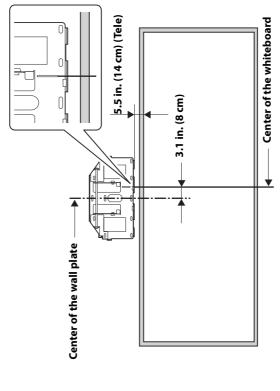
Projection distance is measured from the projector lens to the projection surface.

\*\* Vertical adjustments are made with the vertical height adjustment screw. (See item "E" in the image on page 10).

	Screen size range	Projection distance range (A)	Vertical height range (B)	Distance from top of projected image to ceiling range (C)
16:10 WXGA*	50 - 84 in.	27.6 - 46.9 in. (70 - 119 cm) 0 - 6.7 in. (0 - 17 cm)	0 - 6.7 in. (0 - 17 cm)	20.1 - 26 in. (51 - 66 cm)
4:3 XGA*	44 - 74 in.	27.2 - 46.9 in. (69 - 119 cm) 0 - 6.7 in. (0 - 17 cm)	0 - 6.7 in. (0 - 17 cm)	20.1 - 26 in. (51 - 66 cm)
16:9 Widescreen*	48 - 82 in.	27.2 - 46.9 in. (69 - 119 cm) 2 - 9.1 in. (5 - 23 cm)	2 - 9.1 in. (5 - 23 cm)	17.7 - 23.6 in. (45 - 60 cm)

Installation Measurements for PowerLite EB-L200SW - Tele

\* Allow at least 5.5 in. (14 cm) of space between the top of the projected image and the bottom of the wall plate.



Installation Measurements for PowerLite EB-L200SX - Wide

Screen		16:10	16:10 WXGA			4:3	4:3 XGA			16:9 Wi	16:9 Widescreen	
size	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distance from top of image to center of lens (D)	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distance from top of image to center of lens (D)	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distance from top of image to center of lens (D)
58 in.			1	_	1				27.6 in. (70 cm)	5.9 in. (15 cm)	20.9 in. (53 cm)	7.9 in. (20 cm)
59 in.	1	1	1	1	1	I		ı	28 in. (71 cm)	6.3 in. (16 cm)	21.3 in. (54 cm)	8.3 in. (21 cm)
60 in.	27.6 in. (70 cm)	4.3 in. (11 cm)	19.3 in. (49 cm)	6.3 in. (16 cm)		I		1	28.4 in. (72 cm)	6.3 in. (16 cm)	21.3 in. (54 cm)	8.3 in. (21 cm)
61 in.	28.4 in. (72 cm)	4.7 in. (12 cm)	19.7 in. (50 cm)	6.7 in. (17 cm)	1	I		1	29.1 in. (74 cm)	6.3 in. (16 cm)	21.7 in. (55 cm)	8.3 in. (21 cm)
62 in.	28.7 in. (73 cm)	4.7 in. (12 cm)	19.7 in. (50 cm)	6.7 in. (17 cm)	I	I		ı	29.5 in. (75 cm)	6.3 in. (16 cm)	21.7 in. (55 cm)	8.7 in. (22 cm)
63 in.	29.1 in. (74 cm)	4.7 in. (12 cm)	19.7 in. (50 cm)	6.7 in. (17 cm)	27.6 in. (70 cm)	0.8 in. (2 cm)	16.1 in. (41 cm)	3.1 in. (8 cm)	29.9 in. (76 cm)	6.3 in. (16 cm)	21.7 in. (55 cm)	8.7 in. (22 cm)
64 in.	29.5 in. (75 cm)	4.7 in. (12 cm)	20.1 in. (51 cm)	6.7 in. (17 cm)	28 in. (71 cm)	0.8 in. (2 cm)	16.5 in. (42 cm)	3.1 in. (8 cm)	30.3 in. (77 cm)	6.7 in. (17 cm)	22.1 in. (56 cm)	8.7 in. (22 cm)
65 in.	29.9 in. (76 cm)	4.7 in. (12 cm)	20.1 in. (51 cm)	7.1 in. (18 cm)	28.4 in. (72 cm)	0.8 in. (2 cm)	16.5 in. (42 cm)	3.1 in. (8 cm)	31.1 in. (79 cm)	6.7 in.(17 cm)	22.1 in. (56 cm)	9.1 in. (23 cm)
66 in.	30.7 in. (78 cm)	4.7 in. (12 cm)	20.1 in. (51 cm)	7.1 in. (18 cm)	28.7 in. (73 cm)	0.8 in. (2 cm)	16.5 in. (42 cm)	3.5 in. (9 cm)	31.5 in. (80 cm)	6.7 in.(17 cm)	22.1 in. (56 cm)	9.1 in. (23 cm)
67 in.	31.1 in. (79 cm)	5.1 in. (13 cm)	20.1 in. (51 cm)	7.1 in. (18 cm)	29.1 in. (74 cm)	0.8 in. (2 cm)	16.5 in. (42 cm)	3.5 in. (9 cm)	31.9 in. (81 cm)	6.7 in. (17 cm)	22.4 in (57 cm)	9.1 in. (23 cm)
68 in.	31.5 in. (80 cm)	5.1 in. (13 cm)	20.5 in. (52 cm)	7.1 in. (18 cm)	29.5 in. (75 cm)	0.8 in. (2 cm)	16.5 in. (42 cm)	3.5 in. (9 cm)	32.3 in. (82 cm)	6.7 in. (17 cm)	22.4 in (57 cm)	9.4 in. (24 cm)
69 in.	31.9 in. (81 cm)	5.1 in. (13 cm)	20.5 in. (52 cm)	7.5 in. (19 cm)	30.3 in. (77 cm)	0.8 in. (2 cm)	16.5 in. (42 cm)	3.5 in. (9 cm)	33.1 in. (84 cm)	7.1 in. (18 cm)	22.4 in (57 cm)	9.4 in. (24 cm)
70 in.	32.7 in. (83 cm)	5.1 in. (13 cm)	20.5 in. (52 cm)	7.5 in. (19 cm)	30.7 in. (78 cm)	0.8 in. (2 cm)	16.5 in. (42 cm)	3.5 in. (9 cm)	33.5 in. (85 cm)	7.1 in.(18 cm)	22.8 in. (58 cm)	9.4 in. (24 cm)
71 in.	33.1 in. (84 cm)	5.1 in. (13 cm)	20.5 in. (52 cm)	7.5 in. (19 cm)	31.1 in. (79 cm)	0.8 in. (2 cm)	16.9 in. (43 cm)	3.5 in. (9 cm)	33.9 in. (86 cm)	7.1 in.(18 cm)	22.8 in. (58 cm)	9.8 in. (25 cm)
72 in.	33.5 in. (85 cm)	5.1 in. (13 cm)	20.9 in. (53 cm)	7.9 in. (20 cm)	31.5 in. (80 cm)	0.8 in. (2 cm)	16.9 in. (43 cm)	3.5 in. (9 cm)	34.3 in. (87 cm)	7.1 in.(18 cm)	22.8 in. (58 cm)	9.8 in. (25 cm)
73 in.	33.9 in. (86 cm)	5.1 in. (13 cm)	20.9 in. (53 cm)	7.9 in. (20 cm)	31.9 in. (81 cm)	0.8 in. (2 cm)	16.9 in. (43 cm)	3.5 in. (9 cm)	35 in. (89 cm)	7.5 in. (19 cm)	23.2 in. (59 cm)	9.8 in. (25 cm)
74 in.	34.3 in. (87 cm)	5.5 in. (14 cm)	20.9 in. (53 cm)	7.9 in. (20 cm)	32.3 in. (82 cm)	0.8 in. (2 cm)	16.9 in. (43 cm)	3.9 in. (10 cm)	35.4 in. (90 cm)	7.5 in. (19 cm)	23.2 in. (59 cm)	10.2 in. (26 cm)
75 in.	35 in. (89 cm)	5.5 in. (14 cm)	21.3 in. (54 cm)	7.9 in. (20 cm)	32.7 in. (83 cm)	0.8 in. (2 cm)	16.9 in. (43 cm)	3.9 in. (10 cm)	35.8 in. (91 cm)	7.5 in. (19 cm)	23.6 in. (60 cm)	10.2 in. (26 cm)
76 in.	35.4 in. (90 cm)	5.5 in. (14 cm)	21.3 in. (54 cm)	8.3 in. (21 cm)	33.5 in. (85 cm)	0.8 in. (2 cm)	16.9 in. (43 cm)	3.9 in. (10 cm)	36.2 in. (92 cm)	7.5 in. (19 cm)	23.6 in. (60 cm)	10.2 in. (26 cm)

Minimum         Vertical height tigance from projection         Distance from height (B)**         Distance from height to centra (B)         Distance from height to centra (B)         Neither height (B)**         Distance from height to centra (B)           338 hn.(91 cm)         55 hn.(14 cm)         213 hn.(54 cm)         331 n.(57 cm)         381 n.(57 cm)         163 hn.(44 cm)           328 hn.(91 cm)         55 hn.(14 cm)         213 hn.(55 cm)         83 n.(21 cm)         343 n.(87 cm)         08 hn.(2 cm)         173 hn.(44 cm)           328 hn.(95 cm)         55 hn.(14 cm)         217 hn.(55 cm)         83 n.(21 cm)         343 n.(89 cm)         08 hn.(2 cm)         173 hn.(44 cm)           378 hn.(96 cm)         59 hn.(15 cm)         217 hn.(55 cm)         81 n.(22 cm)         38 hn.(20 cm)         08 hn.(2 cm)         173 hn.(44 cm)           382 hn.(96 cm)         59 hn.(15 cm)         21 hn.(25 cm)         31 hn.(96 cm)         08 hn.(2 cm)         173 hn.(44 cm)           382 hn.(90 cm)         59 hn.(15 cm)         21 hn.(55 cm)         31 hn.(96 cm)         08 hn.(2 cm)         173 hn.(44 cm)           382 hn.(90 cm)         59 hn.(16 cm)         21 hn.(25 cm)         31 hn.(96 cm)         08 hn.(2 cm)         173 hn.(44 cm)           382 hn.(90 cm)         59 hn.(10 cm)         59 hn.(10 cm)         08 hn.(2 cm)         173 hn.(44 cm)	Screen		16:10	16:10 WXGA			4:3	4:3 XGA			16:9 Wi	16:9 Widescreen	
	size	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distance from top of image to center of lens (D)	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distance from top of image to center of lens (D)	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distance from top of image to center of lens (D)
$362$ in, $(92  {\rm cm})$ $55$ in, $(14  {\rm cm})$ $31$ in, $(54  {\rm cm})$ $341$ in, $(83  {\rm cm})$ $361$ in, $(21  {\rm cm})$ $3421$ in, $(83  {\rm cm})$ $1731$ in, $(44  {\rm cm})$ $374$ in, $(94  {\rm cm})$ $551$ in, $(14  {\rm cm})$ $2171$ in, $(55  {\rm cm})$ $8.31$ in, $(21  {\rm cm})$ $3421$ in, $(83  {\rm cm})$ $0.81$ in, $(2  {\rm cm})$ $1731$ in, $(44  {\rm cm})$ $374$ in, $(95  {\rm cm})$ $551$ in, $(14  {\rm cm})$ $2171$ in, $(55  {\rm cm})$ $8.71$ in, $(22  {\rm cm})$ $361$ i. $(90  {\rm cm})$ $0.81$ i. $(2  {\rm cm})$ $1731$ in, $(44  {\rm cm})$ $382$ in, $(96  {\rm cm})$ $591$ in, $(15  {\rm cm})$ $2211$ in, $(56  {\rm cm})$ $9.11$ in, $(23  {\rm cm})$ $381$ in, $(90  {\rm cm})$ $0.81$ in, $(2  {\rm cm})$ $1731$ in, $(44  {\rm cm})$ $386$ in, $(98  {\rm cm})$ $5.91$ in, $(15  {\rm cm})$ $2211$ in, $(56  {\rm cm})$ $9.11$ in, $(23  {\rm cm})$ $381$ in, $(94  {\rm cm})$ $1771$ in, $(45  {\rm cm})$ $394$ in, $(100  {\rm cm})$ $5.91$ in, $(15  {\rm cm})$ $2211$ in, $(56  {\rm cm})$ $9.11$ in, $(23  {\rm cm})$ $381$ in, $(94  {\rm cm})$ $394$ in, $(100  {\rm cm})$ $5.91$ in, $(15  {\rm cm})$ $2211$ in, $(56  {\rm cm})$ $9.11$ in, $(23  {\rm cm})$ $281$ in, $(44  {\rm cm})$ $394$ in, $(100  {\rm cm})$ $5.91$ in, $(15  {\rm cm})$ $2211$ in, $(56  {\rm cm})$ $9.11$ in, $(23  {\rm cm})$ $281$ in, $(44  {\rm cm})$ $394$ in, $(100  {\rm cm})$ $5.91$ in, $(15  {\rm cm})$ $2211$ in, $(56  {\rm cm})$ $211$ in, $(25  {\rm cm})$ $1771$ in, $(45  {\rm cm})$ $394$ in, $(100  {\rm cm})$ $5.91$ in, $(165  {\rm cm})$ $2211$ in, $($	77 in.	35.8 in. (91 cm)	5.5 in. (14 cm)	21.3 in. (54 cm)	8.3 in. (21 cm)	33.9 in. (86 cm)	0.8 in. (2 cm)	16.9 in. (43 cm)	3.9 in. (10 cm)	37 in. (94 cm)	7.5 in. (19 cm)	23.6 in. (60 cm)	10.6 in. (27 cm)
$37n.(94  \mathrm{cm})$ $5.in.(14  \mathrm{cm})$ $217in.(55  \mathrm{cm})$ $8.in.(21  \mathrm{cm})$ $34.7in.(88  \mathrm{cm})$ $0.8in.(2  \mathrm{cm})$ $17.3in.(44  \mathrm{cm})$ $374  \mathrm{in}.(95  \mathrm{cm})$ $5.in.(14  \mathrm{cm})$ $217  \mathrm{in}.(55  \mathrm{cm})$ $8.7in.(22  \mathrm{cm})$ $35.in.(89  \mathrm{cm})$ $0.8in.(2  \mathrm{cm})$ $17.3in.(44  \mathrm{cm})$ $378  \mathrm{in}.(96  \mathrm{cm})$ $5.9in.(15  \mathrm{cm})$ $21.1in.(56  \mathrm{cm})$ $8.7in.(22  \mathrm{cm})$ $36.in.(93  \mathrm{cm})$ $0.8in.(2  \mathrm{cm})$ $17.3in.(44  \mathrm{cm})$ $38.6  \mathrm{in}.(98  \mathrm{cm})$ $5.9in.(15  \mathrm{cm})$ $22.1  \mathrm{in}.(56  \mathrm{cm})$ $9.1  \mathrm{in}.(23  \mathrm{cm})$ $36.in.(93  \mathrm{cm})$ $0.8in.(2  \mathrm{cm})$ $17.3in.(44  \mathrm{cm})$ $38.6  \mathrm{in}.(98  \mathrm{cm})$ $5.9in.(15  \mathrm{cm})$ $22.1  \mathrm{in}.(56  \mathrm{cm})$ $9.1  \mathrm{in}.(23  \mathrm{cm})$ $36.in.(93  \mathrm{cm})$ $0.8in.(2  \mathrm{cm})$ $17.3in.(44  \mathrm{cm})$ $39.6  \mathrm{in}.(100  \mathrm{cm})$ $5.9in.(15  \mathrm{cm})$ $22.1  \mathrm{in}.(56  \mathrm{cm})$ $9.1  \mathrm{in}.(23  \mathrm{cm})$ $38.in.(94  \mathrm{cm})$ $39.6  \mathrm{in}.(100  \mathrm{cm})$ $5.9in.(15  \mathrm{cm})$ $22.1  \mathrm{in}.(56  \mathrm{cm})$ $9.1  \mathrm{in}.(23  \mathrm{cm})$ $38.in.(94  \mathrm{cm})$ $39.6  \mathrm{in}.(100  \mathrm{cm})$ $5.9in.(16  \mathrm{cm})$ $22.4  \mathrm{in}.(57  \mathrm{cm})$ $39.in.(100  \mathrm{cm})$ $0.8in.(2  \mathrm{cm})$ $39.6  \mathrm{in}.(100  \mathrm{cm})$ $6.3  \mathrm{in}.(16  \mathrm{cm})$ $22.4  \mathrm{in}.(57  \mathrm{cm})$ $39.in.(100  \mathrm{cm})$ $0.8in.(2  \mathrm{cm})$ $40.2  \mathrm{in}.(102  \mathrm{cm})$ $6.3  \mathrm{in}.(16  \mathrm{cm})$ $22.4  \mathrm{in}.(57  \mathrm{cm})$ $39.in.(2  \mathrm{cm})$ $0.8in.(2  \mathrm{cm})$ $40.2  \mathrm{in}.(105  \mathrm{cm})$ $6.3  i$	78 in.	36.2 in. (92 cm)	5.5 in. (14 cm)	21.3 in. (54 cm)	8.3 in. (21 cm)		0.8 in. (2 cm)	17.3 in. (44 cm)	3.9 in. (10 cm)	37.4 in. (95 cm)	7.9 in. (20 cm)	23.6 in. (60 cm)	10.6 in. (27 cm)
374 in. (95 cm) $5.5$ in. (14 cm) $17.7$ in. (55 cm) $8.7$ in. (22 cm) $354$ in. (90 cm) $0.8$ in. (2 cm) $17.3$ in. (44 cm) $378$ in. (96 cm) $5.9$ in. (15 cm) $21.7$ in. (55 cm) $8.7$ in. (22 cm) $354$ in. (90 cm) $0.8$ in. (2 cm) $17.3$ in. (44 cm) $382$ in. (97 cm) $5.9$ in. (15 cm) $22.1$ in. (56 cm) $8.7$ in. (23 cm) $36.5$ in. (93 cm) $0.8$ in. (2 cm) $17.3$ in. (44 cm) $386$ in. (98 cm) $5.9$ in. (15 cm) $22.1$ in. (56 cm) $9.1$ in. (23 cm) $371$ in. (94 cm) $0.8$ in. (2 cm) $17.3$ in. (44 cm) $394$ in. (100 cm) $5.9$ in. (15 cm) $22.1$ in. (56 cm) $9.1$ in. (23 cm) $371$ in. (94 cm) $0.8$ in. (2 cm) $17.7$ in. (44 cm) $394$ in. (100 cm) $5.9$ in. (15 cm) $22.1$ in. (56 cm) $9.1$ in. (23 cm) $371$ in. (94 cm) $0.8$ in. (2 cm) $17.7$ in. (44 cm) $304$ in. (100 cm) $5.9$ in. (15 cm) $22.1$ in. (56 cm) $9.1$ in. (23 cm) $37.8$ in. (96 cm) $0.8$ in. (2 cm) $17.7$ in. (45 cm) $402$ in. (102 cm) $6.3$ in. (16 cm) $22.4$ in. (57 cm) $9.4$ in. (24 cm) $38.2$ in. (96 cm) $0.8$ in. (2 cm) $17.7$ in. (45 cm) $41.7$ in. (106 cm) $6.3$ in. (16 cm) $22.4$ in. (57 cm) $9.4$ in. (24 cm) $38.1$ in. (100 cm) $0.8$ in. (2 cm) $17.7$ in. (45 cm) $41.7$ in. (106 cm) $6.3$ in. (16 cm) $22.4$ in. (57 cm) $9.4$ in. (20 cm) $0.8$ in. (2 cm) $17.7$ in. (45 cm) $41.7$ in. (106 cm) $6.3$ in. (16 cm) $22.8$ in. (58 cm) $9.4$ in. (24 cm) $38.1$ in. (100	79 in.	37 in. (94 cm)	5.5 in. (14 cm)	21.7 in. (55 cm)	8.3 in. (21 cm)	34.7 in. (88 cm)	0.8 in. (2 cm)	17.3 in. (44 cm)	3.9 in. (10 cm)	37.8 in. (96 cm)	7.9 in. (20 cm)	23.6 in. (60 cm)	11 in. (28) cm)
378 ln. (96 cm)         5.9 in. (15 cm)         21.7 ln. (55 cm)         8.7 in. (22 cm)         35.4 in. (90 cm)         0.8 in. (2 cm)         17.3 in. (44 cm)           38.2 in. (97 cm)         5.9 in. (15 cm)         22.1 ln. (56 cm)         8.7 in. (22 cm)         36.5 in. (92 cm)         0.8 in. (2 cm)         17.3 in. (44 cm)           38.6 in. (98 cm)         5.9 in. (15 cm)         22.1 ln. (56 cm)         9.1 in. (23 cm)         36.5 in. (92 cm)         0.8 in. (2 cm)         17.3 in. (44 cm)           39.4 in. (100 cm)         5.9 in. (15 cm)         22.1 ln. (56 cm)         9.1 in. (23 cm)         35.1 in. (95 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           39.8 in. (101 cm)         5.9 in. (15 cm)         22.4 in. (57 cm)         9.4 in. (24 cm)         38.1 in. (96 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           40.6 in. (103 cm)         6.3 in. (16 cm)         22.4 in. (57 cm)         9.4 in. (24 cm)         38.1 in. (96 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           41.3 in. (105 cm)         6.3 in. (16 cm)         22.4 in. (57 cm)         9.4 in. (24 cm)         38.1 in. (96 cm)         17.7 in. (45 cm)           41.3 in. (105 cm)         6.3 in. (16 cm)         22.4 in. (57 cm)         9.4 in. (24 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           41.3 in. (105 cm)         6.3 in. (16 cm)	80 in.	37.4 in. (95 cm)	5.5 in. (14 cm)	21.7 in. (55 cm)	8.7 in. (22 cm)		8 in. (2	17.3 in. (44 cm)	3.9 in. (10 cm)	38.6 in. (98 cm)	7.9 in. (20 cm)	23.6 in. (60 cm)	11 in. (28) cm)
38.2 in. (97 cm)         5.9 in. (15 cm)         2.1 in. (56 cm)         8.7 in. (23 cm)         36.5 in. (93 cm)         0.8 in. (2 cm)         17.3 in. (44 cm)           38.6 in. (98 cm)         5.9 in. (15 cm)         22.1 in. (56 cm)         9.1 in. (23 cm)         36.6 in. (93 cm)         0.8 in. (2 cm)         17.3 in. (44 cm)           39.8 in. (100 cm)         5.9 in. (15 cm)         22.1 in. (56 cm)         9.1 in. (23 cm)         37.4 in. (95 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           39.8 in. (101 cm)         5.9 in. (15 cm)         22.1 in. (56 cm)         9.1 in. (23 cm)         38.1 in. (96 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           40.6 in. (103 cm)         6.3 in. (16 cm)         22.4 in. (57 cm)         9.4 in. (24 cm)         38.6 in. (98 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           41.7 in. (106 cm)         6.3 in. (16 cm)         22.4 in. (57 cm)         9.4 in. (24 cm)         38.6 in. (100 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           41.7 in. (106 cm)         6.3 in. (16 cm)         22.4 in. (57 cm)         9.4 in. (24 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           42.5 in. (108 cm)         6.3 in. (16 cm)         22.4 in. (57 cm)         9.4 in. (100 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           42.5 in. (108 cm)         6.3 in. (16 cm)	81 in.	37.8 in. (96 cm)	5.9 in. (15 cm)	21.7 in. (55 cm)	8.7 in. (22 cm)	•	0.8 in. (2 cm)	17.3 in. (44 cm)	3.9 in. (10 cm)	39 in. (99 cm)	7.9 in. (20 cm)	23.6 in. (60 cm)	11 in. (28) cm)
38.6 in. (98 cm)         5.9 in. (15 cm)         22.1 in. (56 cm)         9.1 in. (23 cm)         366 in. (93 cm)         0.8 in. (2 cm)         17.3 in. (44 cm)           39.4 in. (100 cm)         5.9 in. (15 cm)         22.1 in. (56 cm)         9.1 in. (23 cm)         37 in. (94 cm)         0.8 in. (2 cm)         17.3 in. (44 cm)           39.4 in. (100 cm)         5.9 in. (15 cm)         22.1 in. (56 cm)         9.1 in. (23 cm)         37 in. (95 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           39.8 in. (101 cm)         5.9 in. (16 cm)         22.4 in. (57 cm)         9.1 in. (23 cm)         38.2 in. (96 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           40.5 in. (103 cm)         6.3 in. (16 cm)         22.4 in. (57 cm)         9.4 in. (24 cm)         38.5 in. (96 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           41.3 in. (105 cm)         6.3 in. (16 cm)         22.4 in. (57 cm)         9.4 in. (24 cm)         39.4 in. (100 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           42.5 in. (106 cm)         6.3 in. (16 cm)         22.8 in. (58 cm)         9.4 in. (25 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           42.5 in. (107 cm)         6.3 in. (106 cm)         23.in. (107 cm)         28 in. (26 cm)         0.8 in. (2 cm)         17.7 in. (45 cm)           42.5 in. (108 cm)         6.3 in. (106 cm)	82 in.	38.2 in. (97 cm)	5.9 in. (15 cm)	22.1 in. (56 cm)	8.7 in. (22 cm)	36.2 in. (92 cm)	0.8 in. (2 cm)	17.3 in. (44 cm)	4.3 in. (11 cm)	39.4 in. (100 cm)	7.9 in. (20 cm)	23.6 in. (60 cm)	11.4 in. (29) cm)
39.4 in. (100 cm)       5.9 in. (15 cm)       2.1 in. (56 cm)       9.1 in. (23 cm)       37.4 in. (94 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         39.8 in. (101 cm)       5.9 in. (15 cm)       22.1 in. (56 cm)       9.1 in. (23 cm)       37.4 in. (95 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         40.2 in. (102 cm)       5.9 in. (16 cm)       22.4 in. (57 cm)       9.1 in. (23 cm)       38.2 in. (96 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         41.3 in. (105 cm)       6.3 in. (16 cm)       22.4 in. (57 cm)       9.4 in. (24 cm)       38.6 in. (98 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         41.3 in. (105 cm)       6.3 in. (16 cm)       22.4 in. (57 cm)       9.4 in. (24 cm)       38.6 in. (98 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.1 in. (107 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.4 in. (24 cm)       39.8 in. (101 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.5 in. (108 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       9.8 in. (26 cm)       17.7 in. (45 cm)         42.5 in. (108 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.5 in. (108 cm)       6.3 in. (108 cm)       0.8 in. (2 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)	83 in.	38.6 in. (98 cm)	5.9 in. (15 cm)	22.1 in. (56 cm)	9.1 in. (23 cm)		0.8 in. (2 cm)	17.3 in. (44 cm)	4.3 in. (11 cm)	39.8 in. (101 cm)	8.3 in. (21 cm)	23.6 in. (60 cm)	11.4 in. (29) cm)
39.8 in. (101 cm)       5.9 in. (15 cm)       22.1 in. (56 cm)       9.1 in. (23 cm)       37.4 in. (95 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         40.2 in. (102 cm)       5.9 in. (15 cm)       22.4 in. (57 cm)       9.1 in. (23 cm)       38.6 in. (96 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         40.5 in. (103 cm)       6.3 in. (16 cm)       22.4 in. (57 cm)       9.4 in. (24 cm)       38.5 in. (98 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         41.3 in. (105 cm)       6.3 in. (16 cm)       22.4 in. (57 cm)       9.4 in. (24 cm)       38.6 in. (98 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.1 in. (106 cm)       6.3 in. (16 cm)       22.4 in. (57 cm)       9.4 in. (25 cm)       39.8 in. (101 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.1 in. (107 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.4 in. (25 cm)       40.5 in. (102 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.9 in. (109 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.9 in. (109 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.9 in. (109 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       0.8 in. (2 cm)	84 in.	39.4 in. (100 cm)	5.9 in. (15 cm)	22.1 in. (56 cm)	9.1 in. (23 cm)		0.8 in. (2 cm)	17.3 in. (44 cm)	4.3 in. (11 cm)	40.6 in. (103 cm)	8.3 in. (21 cm)	23.6 in. (60 cm)	11.4 in. (29) cm)
40.2 in. (102 cm)5.9 in. (15 cm)22.4 in. (57 cm)9.1 in. (23 cm)37.8 in. (96 cm)0.8 in. (2 cm)17.7 in. (45 cm)40.6 in. (103 cm)6.3 in. (16 cm)22.4 in. (57 cm)9.4 in. (24 cm)38.6 in. (98 cm)0.8 in. (2 cm)17.7 in. (45 cm)41.3 in. (105 cm)6.3 in. (16 cm)22.4 in. (57 cm)9.4 in. (24 cm)38.6 in. (98 cm)0.8 in. (2 cm)17.7 in. (45 cm)41.7 in. (106 cm)6.3 in. (16 cm)22.4 in. (57 cm)9.4 in. (24 cm)39.4 in. (100 cm)0.8 in. (2 cm)17.7 in. (45 cm)42.1 in. (107 cm)6.3 in. (16 cm)22.8 in. (58 cm)9.4 in. (24 cm)39.8 in. (101 cm)0.8 in. (2 cm)17.7 in. (45 cm)42.5 in. (108 cm)6.3 in. (16 cm)22.8 in. (58 cm)9.8 in. (25 cm)40.2 in. (102 cm)0.8 in. (2 cm)17.7 in. (45 cm)42.9 in. (100 cm)6.3 in. (16 cm)22.8 in. (59 cm)9.8 in. (25 cm)40.9 in. (103 cm)0.8 in. (2 cm)17.7 in. (45 cm)43.7 in. (111 cm)6.3 in. (16 cm)23.2 in. (59 cm)9.8 in. (25 cm)40.9 in. (104 cm)0.8 in. (2 cm)18.1 in. (46 cm)44.1 in. (112 cm)6.7 in. (17 cm)23.2 in. (59 cm)10.2 in. (26 cm)41.3 in. (107 cm)0.8 in. (2 cm)18.1 in. (46 cm)44.5 in. (113 cm)6.7 in. (17 cm)23.2 in. (59 cm)10.2 in. (26 cm)42.5 in. (108 cm)0.8 in. (2 cm)18.1 in. (46 cm)44.9 in. (114 cm)6.7 in. (17 cm)23.2 in. (59 cm)10.2 in. (26 cm)42.5 in. (108 cm)0.8 in. (2 cm)18.1 in. (46 cm)44.9 in. (114 cm)6.	85 in.	39.8 in. (101 cm)		22.1 in. (56 cm)			0.8 in. (2 cm)	17.7 in. (45 cm)	4.3 in. (11 cm)	40.9 in. (104 cm)	8.3 in. (21 cm)	23.6 in. (60 cm)	11.8 in. (30) cm)
40.6 in. (103 cm)6.3 in. (16 cm)22.4 in. (57 cm)9.4 in. (24 cm)38.2 in. (97 cm)0.8 in. (2 cm)17.7 in. (45 cm)41.3 in. (105 cm)6.3 in. (16 cm)22.4 in. (57 cm)9.4 in. (24 cm)38.6 in. (98 cm)0.8 in. (2 cm)17.7 in. (45 cm)41.7 in. (105 cm)6.3 in. (16 cm)22.4 in. (57 cm)9.4 in. (24 cm)39.4 in. (100 cm)0.8 in. (2 cm)17.7 in. (45 cm)42.1 in. (107 cm)6.3 in. (16 cm)22.8 in. (58 cm)9.4 in. (24 cm)39.8 in. (101 cm)0.8 in. (2 cm)17.7 in. (45 cm)42.5 in. (108 cm)6.3 in. (16 cm)22.8 in. (58 cm)9.8 in. (25 cm)40.2 in. (102 cm)0.8 in. (2 cm)17.7 in. (45 cm)42.5 in. (109 cm)6.3 in. (16 cm)22.8 in. (58 cm)9.8 in. (25 cm)40.6 in. (103 cm)0.8 in. (2 cm)17.7 in. (45 cm)42.9 in. (101 cm)6.3 in. (16 cm)22.8 in. (59 cm)9.8 in. (25 cm)40.9 in. (103 cm)0.8 in. (2 cm)17.7 in. (46 cm)43.7 in. (111 cm)6.3 in. (16 cm)23.2 in. (59 cm)9.8 in. (25 cm)40.9 in. (107 cm)0.8 in. (2 cm)18.1 in. (46 cm)44.1 in. (112 cm)6.7 in. (17 cm)23.2 in. (59 cm)10.2 in. (26 cm)41.3 in. (107 cm)0.8 in. (2 cm)18.1 in. (46 cm)44.9 in. (114 cm)6.7 in. (17 cm)23.2 in. (59 cm)10.2 in. (26 cm)42.5 in. (108 cm)0.8 in. (2 cm)18.1 in. (46 cm)44.9 in. (114 cm)6.7 in. (17 cm)23.2 in. (59 cm)10.2 in. (26 cm)42.5 in. (108 cm)0.8 in. (2 cm)18.1 in. (46 cm)44.9 in. (114 cm)6	86 in.	40.2 in. (102 cm)	5.9 in. (15 cm)	22.4 in. (57 cm)	9.1 in. (23 cm)		0.8 in. (2 cm)	17.7 in. (45 cm)	4.3 in. (11 cm)	41.3 in. (105 cm)	8.3 in. (21 cm)	23.6 in. (60 cm)	11.8 in. (30) cm)
41.3 in. (105 cm)       6.3 in. (16 cm)       22.4 in. (57 cm)       9.4 in. (24 cm)       38.6 in. (98 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         41.7 in. (105 cm)       6.3 in. (16 cm)       22.4 in. (57 cm)       9.4 in. (24 cm)       39.4 in. (100 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.1 in. (107 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.4 in. (24 cm)       39.8 in. (101 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.5 in. (108 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       40.2 in. (102 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.9 in. (109 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       40.6 in. (103 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.9 in. (111 cm)       6.3 in. (16 cm)       23.2 in. (59 cm)       9.8 in. (25 cm)       40.9 in. (104 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.1 in. (112 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       10.2 in. (26 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.5 in. (113 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.9 in. (114 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)	87 in.	40.6 in. (103 cm)		22.4 in. (57 cm)	9.4 in. (24 cm)	38.2 in. (97 cm)	0.8 in. (2 cm)	17.7 in. (45 cm)	4.3 in. (11 cm)	41.7 in. (106 cm)	8.3 in. (21 cm)	23.6 in. (60 cm)	11.8 in. (30) cm)
41.7 in. (106 cm)       6.3 in. (16 cm)       22.4 in. (57 cm)       9.4 in. (24 cm)       39.4 in. (100 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.1 in. (107 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.4 in. (24 cm)       39.8 in. (101 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.5 in. (108 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       40.6 in. (102 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.9 in. (109 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       40.6 in. (103 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.9 in. (110 cm)       6.3 in. (16 cm)       23.2 in. (59 cm)       9.8 in. (25 cm)       40.9 in. (104 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.1 in. (112 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       41.3 in. (107 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.5 in. (113 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.9 in. (114 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.9 in. (114 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       0.8 in. (2 cm)	88 in.	41.3 in. (105 cm)	6.3 in. (16 cm)	22.4 in. (57 cm)	9.4 in. (24 cm)	38.6 in. (98 cm)	0.8 in. (2 cm)	17.7 in. (45 cm)	4.3 in. (11 cm)	42.5 in. (108 cm)	8.7 in. (22 cm)	23.6 in. (60 cm)	12.2 in. (31) cm)
42.1 in. (107 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.4 in. (24 cm)       39.8 in. (101 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.5 in. (108 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       40.2 in. (102 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.9 in. (109 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       40.6 in. (103 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.9 in. (109 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       40.6 in. (103 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         43.7 in. (111 cm)       6.3 in. (16 cm)       23.2 in. (59 cm)       9.8 in. (26 cm)       41.3 in. (107 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.1 in. (112 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       42.1 in. (107 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.9 in. (114 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       42.5 in. (108 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.9 in. (114 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       42.5 in. (108 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)	89 in.	41.7 in. (106 cm)		22.4 in. (57 cm)	9.4 in. (24 cm)	39.4 in. (100 cm)	0.8 in. (2 cm)	17.7 in. (45 cm)	4.3 in. (11 cm)	42.9 in. (109 cm)	8.7 in. (22 cm)	23.6 in. (60 cm)	12.2 in. (31) cm)
42.5 in. (108 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       40.2 in. (102 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.9 in. (109 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       40.6 in. (103 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         42.9 in. (111 cm)       6.3 in. (16 cm)       22.2 in. (59 cm)       9.8 in. (25 cm)       40.9 in. (104 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.1 in. (112 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       41.3 in. (107 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.5 in. (113 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       42.5 in. (108 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.9 in. (114 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       42.5 in. (108 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)	90 in.	42.1 in. (107 cm)	6.3 in. (16 cm)	22.8 in. (58 cm)	9.4 in. (24 cm)	. (101	0.8 in. (2 cm)	17.7 in. (45 cm)	4.7 in. (12 cm)	43.3 in. (110 cm)	8.7 in. (22 cm)	23.6 in. (60 cm)	12.2 in. (31) cm)
42.9 in. (109 cm)       6.3 in. (16 cm)       22.8 in. (58 cm)       9.8 in. (25 cm)       40.6 in. (103 cm)       0.8 in. (2 cm)       17.7 in. (45 cm)         43.7 in. (111 cm)       6.3 in. (16 cm)       23.2 in. (59 cm)       9.8 in. (25 cm)       40.9 in. (104 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.1 in. (112 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       41.3 in. (107 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.5 in. (113 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       42.1 in. (107 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.9 in. (114 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       42.5 in. (108 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)	91 in.	42.5 in. (108 cm)	6.3 in. (16 cm)	22.8 in. (58 cm)	9.8 in. (25 cm)	. (102	0.8 in. (2 cm)	17.7 in. (45 cm)	4.7 in. (12 cm)	43.7 in. (111 cm)	8.7 in. (22 cm)	23.6 in. (60 cm)	12.6 in. (32) cm)
43.7 in. (111 cm)       6.3 in. (16 cm)       23.2 in. (59 cm)       9.8 in. (25 cm)       40.9 in. (104 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.1 in. (112 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       41.3 in. (105 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.5 in. (113 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       42.1 in. (107 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.9 in. (114 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       42.5 in. (108 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)	92 in.	42.9 in. (109 cm)	6.3 in. (16 cm)	22.8 in. (58 cm)	9.8 in. (25 cm)	. (103	2	17.7 in. (45 cm)	4.7 in. (12 cm)	44.5 in. (113 cm)	8.7 in. (22 cm)	23.6 in. (60 cm)	12.6 in. (32) cm)
44.1 in. (112 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       41.3 in. (105 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.5 in. (113 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       42.1 in. (107 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.9 in. (114 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       42.5 in. (108 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)	93 in.	43.7 in. (111 cm)	6.3 in. (16 cm)	23.2 in. (59 cm)	9.8 in. (25 cm)	. (104	2	18.1 in. (46 cm)	4.7 in. (12 cm)	44.9 in. (114 cm)	9.1 in. (23 cm)	23.6 in. (60 cm)	12.6 in. (32) cm)
44.5 in. (113 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       42.1 in. (107 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)         44.9 in. (114 cm)       6.7 in. (17 cm)       23.2 in. (59 cm)       10.2 in. (26 cm)       42.5 in. (108 cm)       0.8 in. (2 cm)       18.1 in. (46 cm)	94 in.	44.1 in. (112 cm)		23.2 in. (59 cm)		•	0.8 in. (2 cm)	18.1 in. (46 cm)	4.7 in. (12 cm)	45.3 in. (115 cm)	9.1 in. (23 cm)	23.6 in. (60 cm)	13 in. (33) cm)
44.9 in. (114 cm) 6.7 in. (17 cm) 23.2 in. (59 cm) 10.2 in. (26 cm) 42.5 in. (108 cm) 0.8 in. (2 cm) 18.1 in. (46 cm)	95 in.	44.5 in. (113 cm)	6.7 in. (17 cm)	23.2 in. (59 cm)			0.8 in. (2 cm)	18.1 in. (46 cm)	4.7 in. (12 cm)	45.7 in. (116 cm)	9.1 in. (23 cm)	23.6 in. (60 cm)	13 in. (33) cm)
	96 in.	44.9 in. (114 cm)		23.2 in. (59 cm)			0.8 in. (2 cm)	18.1 in. (46 cm)	4.7 in. (12 cm)	46.5 in. (118 cm)	9.1 in. (23 cm)	23.6 in. (60 cm)	13 in. (33) cm)

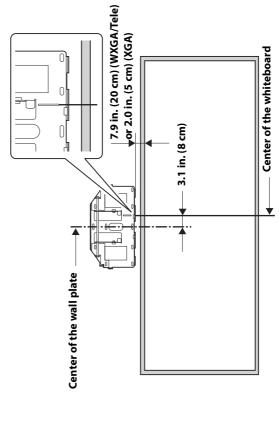
Screen		16:1(	16:10 WXGA			4:3	4:3 XGA			16:9 Wi	16:9 Widescreen	
size	Minimum projection distance (A)*	Vertical height adjustment (B)**		Distance from Distance from top of image top of image to ceiling (C) to center of lens (D)	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from top of image to ceiling (C)	Distancefrom top of image to center of lens (D)	Minimum projection distance (A)*	Vertical height adjustment (B)**	Distance from Distance from top of image top of image to ceiling (C) to center of lens (D)	Distance from top of image to center of lens (D)
97 in.	<b>97 in.</b> 45.7 in. (116 cm) 6.7 in. (17 cm) 23.6 in. (60 cm)	6.7 in. (17 cm)		10.2 in. (26 cm)	42.9 in. (109 cm) 0.8 in. (2 cm) 18.1 in. (46 cm)	0.8 in. (2 cm)	18.1 in. (46 cm)	5.1 in. (13 cm)	46.9 in. (119 cm)	9.1 in. (23 cm)	46.9 in. (119 cm) 9.1 in. (23 cm) 23.6 in. (60 cm) 13.4 in. (34) cm)	13.4 in. (34) cm)
98 in.		6.7 in. (17 cm)	46.1 in. (117 cm) 6.7 in. (17 cm) 23.6 in. (60 cm)	10.6 in. (27 cm)	43.3 in. (110 cm)	0.8 in. (2 cm)	18.1 in. (46 cm)	5.1 in. (13 cm)	I	I	I	
99 in.	<b>99 in.</b> [46.5 in. (118 cm) 6.7 in. (17 cm) 23.6 in. (60 cm)	6.7 in. (17 cm)		10.6 in. (27 cm)	43.7 in. (111 cm) 0.8 in. (2 cm)		18.1 in. (46 cm)	5.1 in. (13 cm)	I	I	I	
100 in.	<b>100 in.</b> 46.9 in. (119 cm) 6.7 in. (17 cm) 23.6 in. (60 cm)	6.7 in. (17 cm)	23.6 in. (60 cm)	10.6 in. (27 cm)	44.1 in. (112 cm)	0.8 in. (2 cm)	18.5 in. (47 cm)	5.1 in. (13 cm)	I	I	I	
101 in.	1	1	I	I	44.9 in. (114 cm)	0.8 in. (2 cm)	18.5 in. (47 cm)	5.1 in. (13 cm)	I	I	1	
102 in.	ı		ı	ı	45.3 in. (115 cm)	0.8 in. (2 cm)	18.5 in. (47 cm)	5.1 in. (13 cm)	ı	ı		
103 in.	1	1	I	I	45.7 in. (116 cm)	0.8 in. (2 cm)	18.5 in. (47 cm)	5.1 in. (13 cm)	1	1		
104 in.	1	1	I	I	46.1 in. (117 cm) 0.8 in. (2 cm)	0.8 in. (2 cm)	18.5 in. (47 cm)	5.1 in. (13 cm)	I	I	1	
105 in.	1	1	I	I	46.5 in. (118 cm)	0.8 in. (2 cm)	18.5 in. (47 cm)	5.5 in. (14 cm)	I	I	I	
106 in.	-		I	I	46.9 in. (119 cm) 0.8 in. (2 cm)	0.8 in. (2 cm)	18.9 in. (48 cm)	5.5 in. (14 cm)	I	ı	1	
* Projec	tion distance is	s measured f	* Projection distance is measured from the projector lens to the projection surface.	tor lens to the	projection surf	ace.						

* Projection distance is measured from the projector lens to the projection surface.	ical adjustments are made with the vertical height adjustment screw. (See item "E" in the image on page 10).
* Projection dis	** Vertical adjustr

# Installation Measurements for PowerLite EB-L2005X - Tele

	Screen size range	Projection distance range (A)	Vertical adjustment range (B)	Distance from top of projected image to ceiling range (C)
16:10 WXGA*	44 - 74 in.	27.6 - 46.9 in. (70 - 119 cm) 0 - 7.1 in. (0 - 18 cm)	0 - 7.1 in. (0 - 18 cm)	19.7 - 25.6 in. (50 - 65 cm)
4:3 XGA**	46 - 78 in.	27.2 - 46.5 in. (69 - 118 cm) 2 - 8.7 in. (5 - 22 cm)	2 - 8.7 in. (5 - 22 cm)	17.7 - 23.6 in. (45 - 60 cm)
16:9 Widescreen*	43 - 72 in.	27.6 - 46.9 in. (70 - 119 cm) 2 - 9.1 in. (5 - 23 cm)	2 - 9.1 in. (5 - 23 cm)	17.7 - 23.6 in. (45 - 60 cm)

\* Allow at least 7.9 inches (20 cm) of space between the top of the projected image and the bottom of the wall plate. \*\* Allow at least 2 inches (5 cm) of space between the top of the projected image and the bottom of the wall plate.



If you have a pre-existing interactive whiteboard, refer to the table below to identify common models and sizes. If your board is listed here, use the dimensions to reference the installation requirements found on pages 11 through 18.

Diagonal size specification	16:10 WXGA	4:3 XGA	16:9 Widescreen
64 inches	_	SMART <sup>™</sup> Board <sup>®</sup> 660 Promethean ActivBoard 164	_
77 inches	_	SMART Board 680 SMART BoardX880	—
78 inches	—	Promethean ActivBoard 178 / 378	—
87 inches	SMART Board 685 SMART BoardX 885 Promethean ActivBoard 387 Promethean ActivBoard 587 pro	_	_
94 inches	—	—	SMART Board 690
95 inches	_	-	Promethean ActivBoard 395 Promethean ActivBoard 595 pro

### Interactive whiteboard sizes

### **1** Installing the Projector

Make sure to follow the steps below to install the wall mount. If you ignore these steps, the wall mount could fall and cause personal injury or property damage.

### **Marning**

- When you mount the projector on the wall with the wall mount, the wall requires enough strength to hold the projector, the wall mount, and the cables. This wall mount should be installed on a concrete wall. Confirm the weight of the projector, the wall mount, and the cables before installation, and maintain the strength of the wall. If the wall is not strong enough, reinforce the wall before installation.
- Install the wall mount so that it can sufficiently support the weight of the projector and wall mount, and resist any horizontal vibration. Use M8 nuts and bolts. Nuts and bolts smaller than M8 could cause the wall mount to fall.
- □ Epson accepts no responsibility for any damage or injury caused by lack of wall strength or inadequate installation.



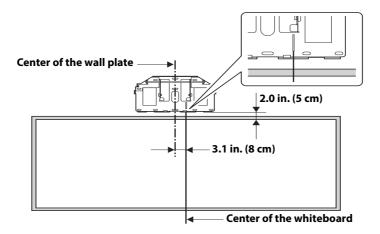
At the point where the wall mount is installed, make sure there is a gap of 16 to 26 inches (410 to 660 mm) from the top of the image projected onto the white board to the ceiling. See "Positioning the Projector" on page 10 for more details.

### 1. Install the wall plate

- 1. Determine where you want to install the wall plate, and then mark that position on the wall.
- 2. Align the marked line on the wall plate with the vertical center of the whiteboard, as shown in the illustration below. The line is 3.1 inches (8 cm) to the right of the vertical center of the wall plate. Allow at least a 2 inch (5 cm) gap (PowerLite EB-L200SW) or a 5.5 inch (14 cm) gap (PowerLite EB-L200SX) between the top of the projected image and the bottom of the wall plate. However, if you are using the maximum (tele) screen size, refer to the

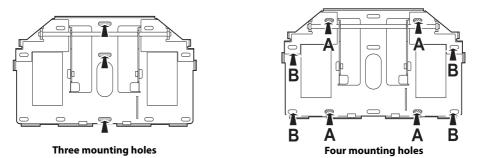
tables on the previous pages.

After installing, you can slide the projector horizontally 1.8 inches (4.5 cm) by using the slider on the adjustment unit. See "Turn on the projector and check the image" on page 26 for more details.



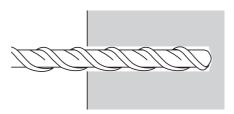
3. Position the wall plate over the marks you made in step 1, and then mark the position of the wall plate's mounting holes as shown in the following illustration.

Use at least three mounting holes. If you are securing the wall plate in four places, drill the holes indicated by A or B in the illustration below.

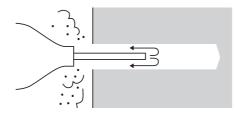


4. Drill holes of the following diameters and depths at the points you marked.

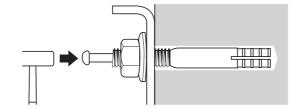
Drill diameter	0.3 in. (8.5 mm)
Pilot hole depth	1.6 in. (40 mm)
Anchor hole depth	1.4 in. (35 mm)



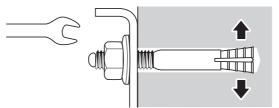
5. Use a device such as a dust pump to clean out concrete dust from the hole.



6. Position the wall plate on the wall and insert  $M8 \times 60$  mm expansion anchors into the holes. Attach the nut and tap it with a hammer until the core touches the top of the anchor.

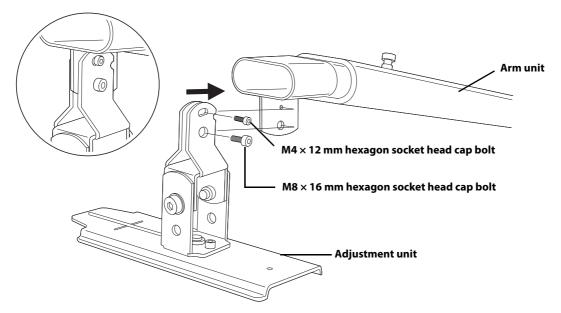


7. Tighten the nut with a wrench to secure the wall plate to the wall.

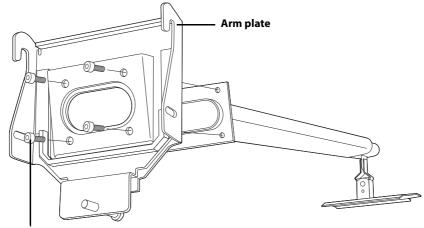


### 2. Assemble the wall mount

- 1. Attach the adjustment unit to the arm unit.
- 2. Partially tighten the M4  $\times$  12 mm hexagon socket head cap bolt and M8  $\times$  16 mm hexagon socket head cap bolt using the hexagonal wrenches (M4 and M8).



3. Attach the arm plate using a hexagonal wrench (M8) and four M8 × 16 mm hexagon socket head cap bolts. Tighten the bolts firmly.

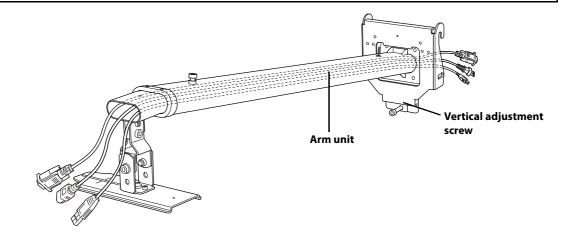


 $M8 \times 16$  mm hexagon socket head cap bolt (×4)

### 3. Route the cables through the arm unit

Route the projector's power cord and any additional cables connecting to the projector through the arm unit.

Be sure to also route the cables for any optional equipment (for example document camera, speakers, etc.) that may be used in the future. Otherwise, each time you need to connect another device, you will need to remove the projector from the mount to connect additional cables.



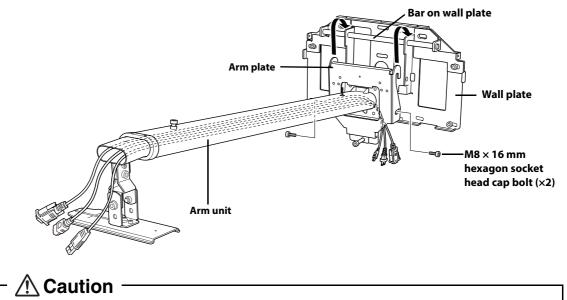
### **A** Caution

Problems may occur if you use this product without routing the cables through the arm unit.

Route the USB cable so that the type B connector emerges on the projector side. Epson recommends labeling any duplicate cables so that additional connections can be more easily identified.

### 4. Attach the wall mount to the wall plate

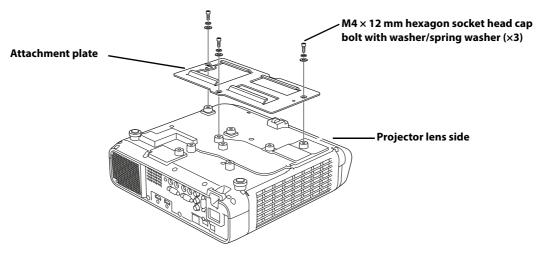
- 1. Attach the hook on the arm plate to the bar on the wall plate.
- 2. Partially tighten two M8  $\times$  16 mm hexagon socket head cap bolts to secure the arm plate.



Take care not to trap the cables between the mount arm and wall plate.

### 5. Attach the attachment plate to the projector

- 1. Place the projector upside down.
- 2. Attach the attachment plate to the projector using the hexagonal wrench (M4) and three  $M4 \times 12$  mm bolts with washers/spring washers.



### **M** Warning

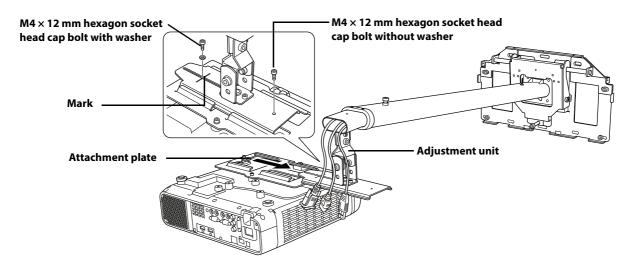
When installing or adjusting the wall mount, do not use adhesives to prevent the bolts from loosening and do not use lubricants or oils on the projector slide plate. This may cause the case to crack and the projector to fall, resulting in personal injury or property damage.



Tighten the bolts firmly.

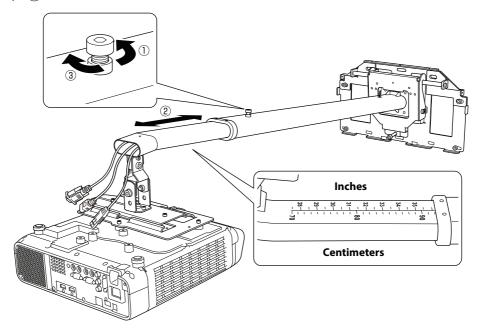
### 6. Attach the projector to the adjustment unit

- 1. Slide the attachment plate onto the adjustment unit as shown below.
- 2. Partially tighten two M4 × 12 mm bolts at the points marked on the adjustment unit as shown below.



### 7. Adjust the arm length

- 1. Loosen the screw on the arm (1).
- 2. Adjust the length of the arm using the measure on the bottom to match the projection distance recommended in "Positioning the Projector" on page 10 (2).
- 3. After adjusting the length, secure the arm position temporarily by tightening the screw on top  $(\widehat{(3)})$ .



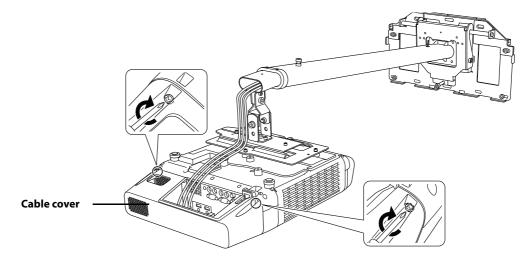
### 8. Connect the power cord and other cables to the projector

Connect any necessary cables such as the power cord, computer cable, HDMI cable, audio cables, and USB cable to the projector.

If you are planning to run the cables inside the wall, make sure you follow all local electrical codes. If you are running the cables outside the wall, use a cable management system to keep the cables from obstructing the image. An optional cable management system is available from Epson (part # ELPCK01).

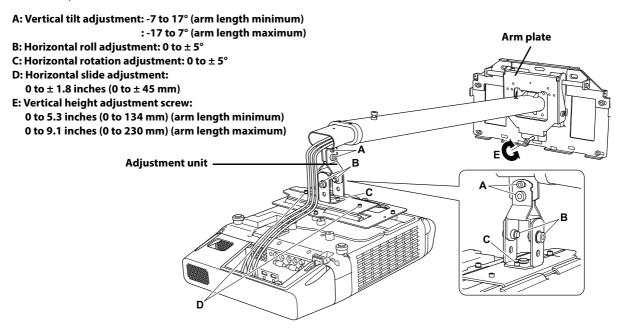
### 9. Attach the cable cover to the projector

Take up the cable slack, and then attach the cable cover and use a cross-head screwdriver to tighten the screws (2) and secure the cable cover.



### 10. Turn on the projector and check the image

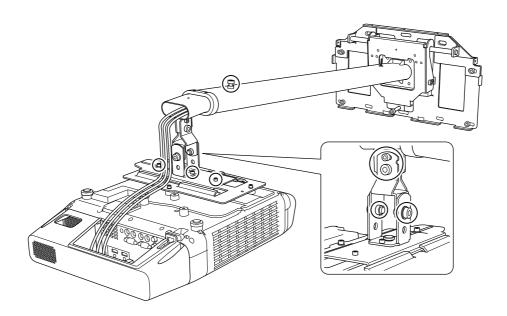
- 1. Plug in and turn on the projector.
- 2. Hold down the **A/V Mute** button on the remote control for five seconds to flip the image top-to-bottom.
- 3. Adjust the vertical height of the arm using screw (E) on the bottom of the arm plate. The arm rises when you tighten the screw, and lowers when you loosen it.
- 4. Loosen the screws on the adjustment unit (A, B, C, and D) as shown below to adjust the image position.



5. Firmly tighten the screws on the arm unit and adjustment unit using the hexagonal wrenches (M4 and M8).

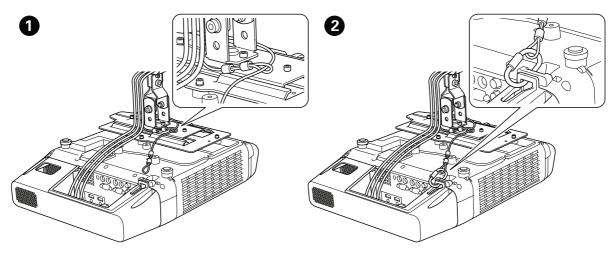
### – 🕂 Warning

Tighten all screws firmly. Otherwise, the projector or wall mount may fall and cause personal injury or property damage.



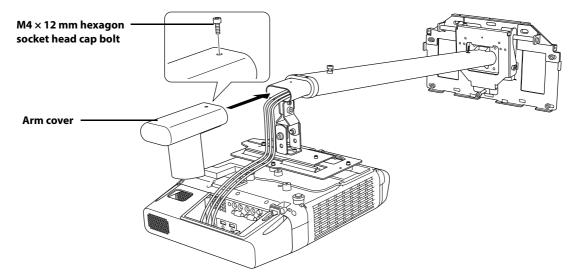
### 11. Install the safety wire

Loop one end of the safety wire around the wall mount as shown and use the included carabiner to clip the other end of the wire to the projector. Make sure you tighten the carabiner lock.



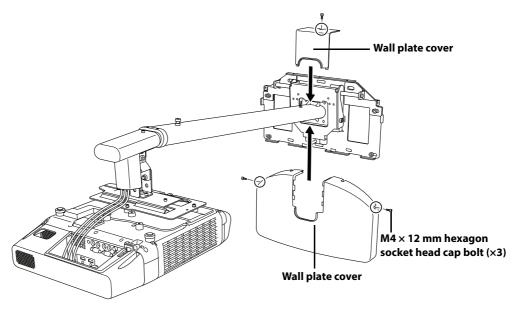
### 12. Attach the arm cover

Secure the arm cover with a hexagonal wrench (M4) and an M4  $\times$  12 mm hexagon socket head cap bolt.



### 13. Attach the wall plate cover

Secure the wall plate cover with a hexagonal wrench (M4) and three M4 × 12 mm hexagon socket head cap bolts.



Depending on how the cables are wired, you may need to cut out parts of the wall plate cover to allow the cables to be passed through it.

When cutting the thin section of the wall plate cover and passing the cables through, make sure you smooth off any sharp edges to prevent damaging the cables.

Make sure you operate the cutter safely.

### **A** Caution

Only a specialist should remove or reinstall the projector for maintenance and repairs. Refer to the projector *User's Guide* for instructions on maintenance and repairs.

### 🗥 Warning

- Never loosen the bolts and nuts after installation. Regularly confirm that the bolts and screws have not become loose. If you find any loose bolts or screws, tighten them firmly. Otherwise, the projector or wall mount may fall and cause personal injury or property damage.
- Do not hang on the wall mount or hang a heavy object on the wall mount. If the projector or wall mount falls, it could cause personal injury or property damage.



After installation of the projector is complete, make sure you leave the remote control and batteries in the room with the projector.