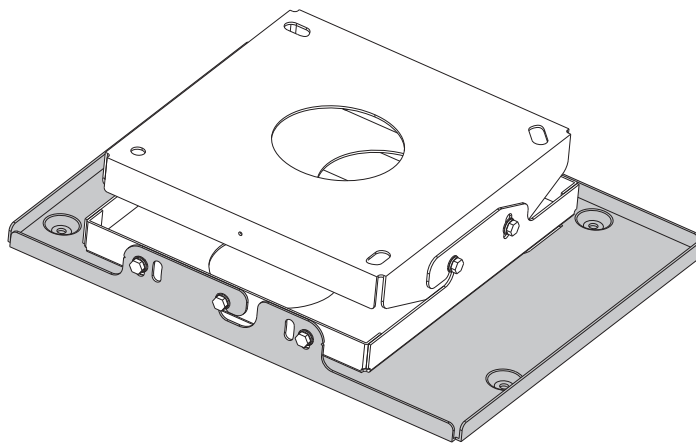


## Installation Instructions

### Projector Mount Bracket

Model No. **ET-PKE301B**



ENGLISH

FRANÇAIS

DEUTSCH

\* The figure above shows a combination of this product and the separately sold ET-PKD120S ceiling mount bracket (for low ceilings).

Thank you for purchasing this Panasonic Product.

#### ■ To customers

The "Installation Instructions" is intended for use by installation personnel. Be sure to employ certified personnel to perform the installation. After installation, have the installation personnel return these "Installation Instructions" to you, and save it for future use. When moving or removing the projector, give this "Installation Instructions" to the installation personnel and have them perform the procedure.

#### ■ To installation personnel

Carefully read the "Installation Instructions" and install this product correctly and safely. Be sure to read through the section entitled "Read this first!" (page 3) before proceeding with the installation. After installation, return these "Installation Instructions" to the customer.



# Contents

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- In this document, the illustrations with the projector mount bracket combined with a projector show the case of the PT-EZ770 as a typical example.  
The positions and quantity of adjustable feet, position to secure the wire rope, etc. differ depending on the model. For details, refer to the operating instructions of your projector.

## WARNING:

**Installation work should only be carried out by the certified personnel.**

- If this product is not installed correctly, serious accidents may result.
- Follow the instructions specified in "Installation" of this manual, and perform secure installation.

**Install the ceiling mount bracket in accordance with the structure and materials of the installation location.**

- If a mistake is made in the installation procedure, the ceiling mount bracket may fall down and an injury may result.

**Mounting and installation must be carried out by two or more persons.**

- When installing the projector in an overhead location, for example, in a high ceiling, at least two persons will be required to handle the installation.

**Make sure that your footing is safe and secure during installation.**

- If your footing is not secure, you may fall down or drop the unit, and an injury may result.

**Do not loosen or remove the ceiling mount bracket screws and bolts unnecessarily.**

- The projector may fall down and an injury may result.

**Do not install in a location that is not strong enough.**

- If the installation location is not strong enough, the unit may fall down and damage to the projector or an injury may result.

**Do not install the ceiling mount bracket in humid or dusty locations or in locations where the ceiling mount bracket may come into contact with oily smoke or steam.**

- Using the projector under such conditions may result in fire or electric shock. Also, the oil will cause the plastic to deteriorate and the projector may fall down when installed on a ceiling.

**Do not allow children to reach the supplied screws and metal fittings.**

- The supplied screws and metal fittings can cause personal injury if swallowed.
- If swallowed, seek medical advice immediately.

**Do not disassemble or modify the ceiling mount bracket.**

- The projector may be damaged or fall, causing injury.

## CAUTION:

**Only install a designated projector.**

**Only install using a designated method.**

- The projector may fall down and be damaged, and an injury may result.

**Do not install the unit in a location that may impede projector ventilation.**

- A fire may result.

**Do not hang from or hang objects on the projector or ceiling mount bracket.**

- The projector may fall and cause injury.

**Use only the specified ceiling mount bracket (for high ceilings or for low ceilings).**

- Failure to obey may result in dropping, damage to the projector, or injury.

**When installing, always use the supplied components.**

- The unit may be damaged, or the projector may fall down and an injury may result.

**Install the mounting screws and power cable in such a way that they will not make contact with metal objects inside the ceiling.**

- Electric shocks may result from contact with any metal objects inside the ceiling.

■ Panasonic Connect Co., Ltd. takes no responsibility for any accident or damage caused by the installation of the ceiling mount bracket using methods that are not described or methods that do not use the parts specified in these Installation Instructions.

■ If products are no longer being used, they should be dismantled and removed by certified personnel as soon as possible.

# Product components

This is a ceiling mount bracket for installing projectors.

## ■ Applicable ceiling mount brackets and projectors

### ● Ceiling mount brackets

ET-PKD120H (for high ceilings) / ET-PKD120S (for low ceilings) / ET-PKD130H (for high ceilings, 6-axis adjustment)

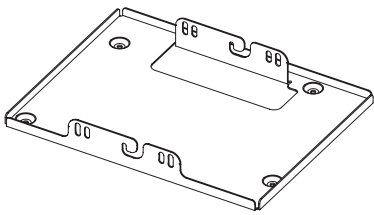
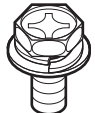
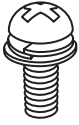


### ● Projectors

PT-CMZ50 / PT-MZ20K / PT-MZ17K / PT-MZ14K / PT-MZ11K / PT-MZ16K / PT-MZ13K / PT-MZ10K / PT-MZ880 / PT-MZ780 / PT-MZ680 / PT-MZ770 / PT-MW730 / PT-MZ670 / PT-MW630 / PT-MZ570 / PT-MW530 / PT-EZ770 / PT-EZ590 / PT-EZ580 / PT-EZ57 / PT-EW730 / PT-EW650 / PT-EW640 / PT-EW550 / PT-EW540 / PT-EX800 / PT-EX620 / PT-EX610 / PT-EX520 / PT-EX510 / PT-FZ570 / PT-FW530 / PT-FX500

### Note

- In this document, the alphabet letters at the end of the projector part numbers are omitted.
- Models other than the above may also be supported. Refer to the operating instructions for your projector or the following website.  
<https://panasonic.net/cns/projector/>

## ■ Structural components

Parts name	Form (number of parts)	Applications
Projector mount bracket	 × 1	This is used to install the projector itself. It has a function which allows adjustment of the left and right tilt.
Bolts	Captive washer hex head bolts (M6×16)  × 4	These are used to secure the brackets to the projector.
Projector drop-prevention kit	Captive washer Screw (M6×20)  × 1 Wire rope [2.5 mm (3/32") wire diameter, 800 mm (31-1/2")]  × 1 Flat washer (M8)  × 2	Prevents the projector from falling.

- Tightening torque for the screws are M6:  $4 \pm 0.5 \text{ N}\cdot\text{m}$ .
- When tightening up the screws, use a tool such as a torque screwdriver or torque wrench. Do not use electric screwdrivers or impact screwdrivers.

### Attention

- Dispose of the packaging materials properly after taking the product out of it.
- Store small parts in an appropriate manner, and keep them away from small children.

# Standard installation dimensions

## <When using other than the PT-CMZ50 projector>

The dimensional relationship between the screen and projector is shown below.

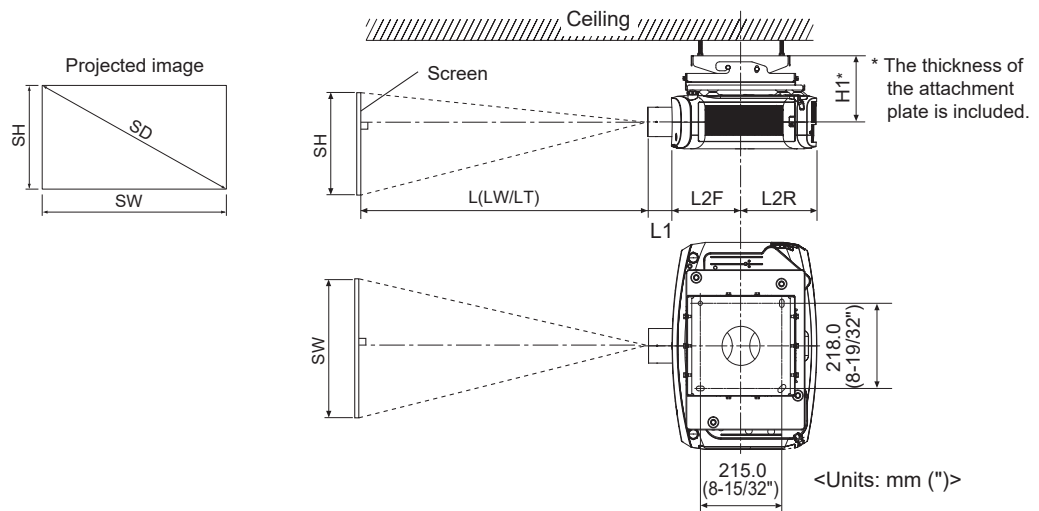
Establish the ceiling installation position after accessing the "Dimensional relationship diagram" (pages 5-6) and "Dimensional relationship" in the Appendix.

The projection distance can be adjusted using the zoom lens (except ET-ELW21). Check the projected image while making fine adjustments.

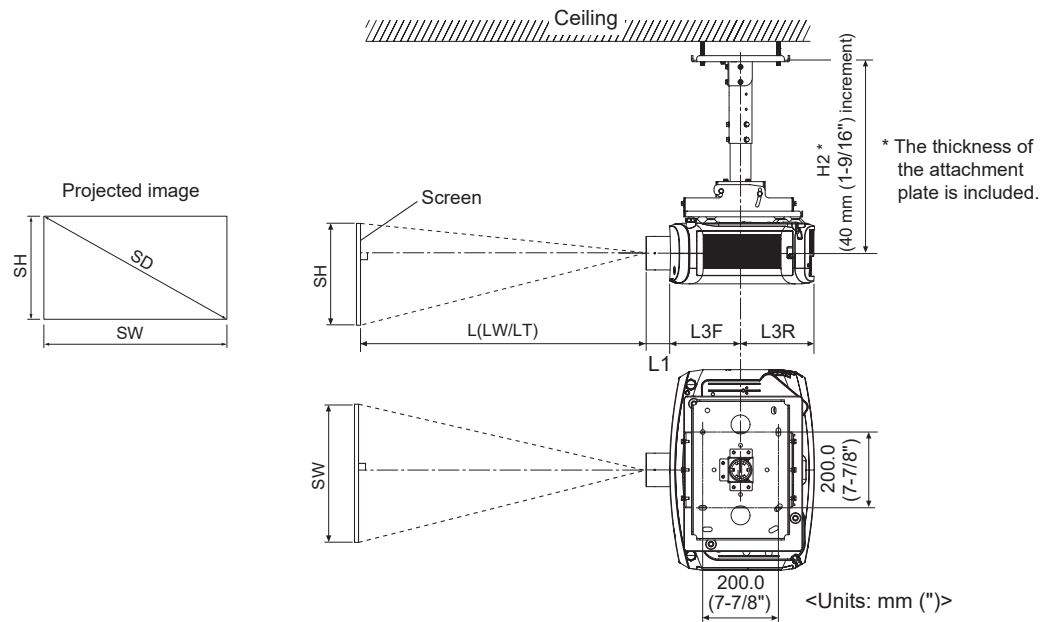
If the projector is equipped the lens shift function, the vertical position of the projected image can be adjusted. Then "H1/H2" will change according to lens shift amount.

### ■ Dimensional relationship diagram

(when using the ceiling mount bracket ET-PKD120S (for low ceilings))



(when using the ceiling mount bracket ET-PKD120H (for high ceilings))



### Note

- This illustration assumes that the projector will be installed so that the projected image fills the screen and is properly aligned with it.
- This drawing is not in exact scale.

## Standard installation dimensions (continued)

SH	Projected image height	H1 / H2	Distance from the center of lens to the attachment plate (including plate thickness)
SW	Projected image width	L1	Lens protrusion dimension (from front of set to tip of lens)
SD	Projected image size	L2F / L3F	Distance from the center of attachment plate to the front end of lens
L(LW/LT)*1	Projection distance	L2R / L3R	Distance from the center of attachment plate to the rear end of projector

\*1 : LW : Minimum projection distance when the zoom lens is used  
 LT : Maximum projection distance when the zoom lens is used

### Attention

- Install the projector at a sufficient distance from the surrounding walls and objects so that the air intake and exhaust ports of the projector are not blocked. For details on the distance, refer to the operating instructions for your projector.
- Avoid setting up in places which are subject to sudden temperature changes, such as near an air conditioner or lighting equipment.

### ■ Dimensional relationship

For the formula of the projection distance (L) and the other specifications (H1 / H2, L1, L2F / L3F, L2R / L3R), refer to the appendix at the end of this instruction.

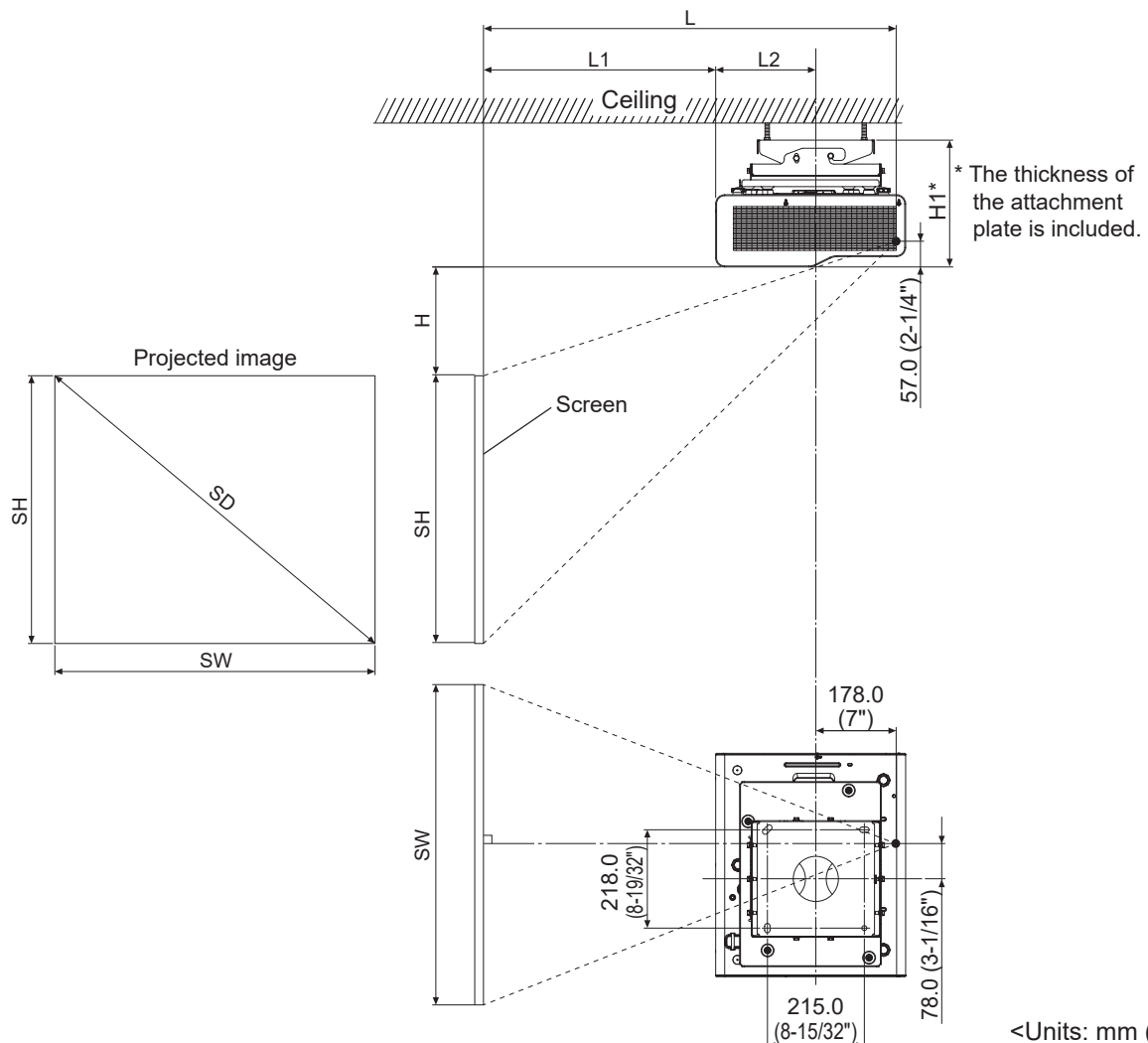
### <When using the PT-CMZ50 projector>

The dimensional relationship between the screen and projector is shown below.

Establish the ceiling installation position after accessing the "Dimensional relationship diagram" (pages 6-7) and "Dimensional relationship" in the Appendix.

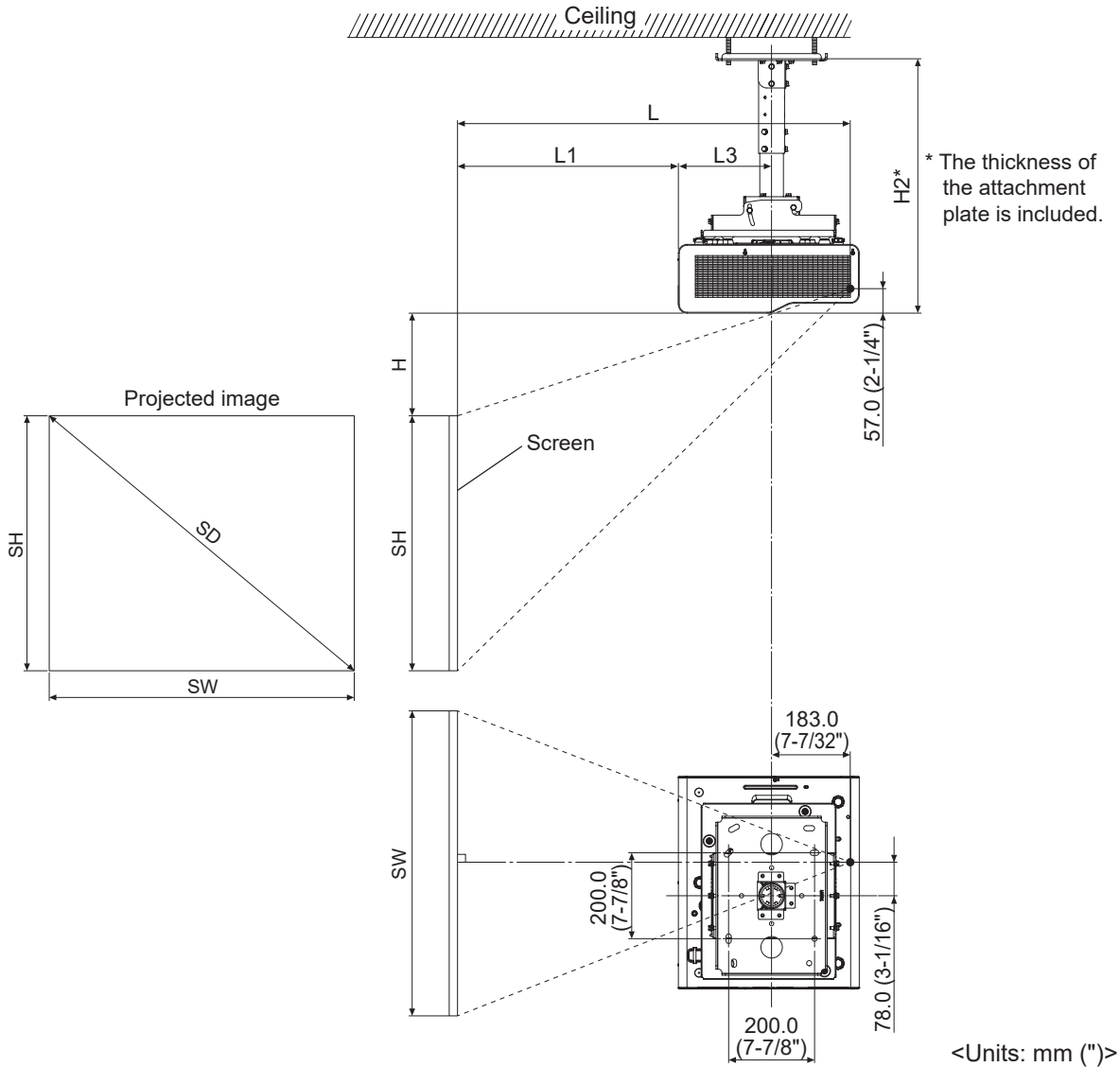
### ■ Dimensional relationship diagram

(when using the ceiling mount bracket ET-PKD120S (for low ceilings))



# Standard installation dimensions (continued)

(when using the ceiling mount bracket ET-PKD120H (for high ceilings))



## Note

- This illustration assumes that the projector will be installed so that the projected image fills the screen and is properly aligned with it.
- This drawing is not in exact scale.

SH	Projected image height	H	Distance from the top of projector to top edge of screen
SW	Projected image width	H1 / H2	Distance from the top of projector to attachment plate (includes plate thickness)
SD	Projected image size	L1	Distance from the screen to rear of projector
L	Projection distance (from screen to mirror reflective surface*1)	L2 / L3	Distance from the center of attachment plate to the rear end of projector

\*1 : The mirror reflective surface is inside the fixed-focus lens, and is not visible from the outside.

## Attention

- Install the projector at a sufficient distance from the surrounding walls and objects so that the air intake and exhaust ports of the projector are not blocked. For details on the distance, refer to the operating instructions for your projector.
- Avoid setting up in places which are subject to sudden temperature changes, such as near an air conditioner or lighting equipment.

## Dimensional relationship

For the formula of the projection distance (L) and the other specifications (H, H1/H2, L1, L2/L3), refer to the appendix at the end of this instruction.

# Installation

After checking the height, width and structure of the installation location while referring to the “Dimensional relationship diagram” (pages 5-7) and “Dimensional relationship” in the Appendix, determine the appropriate positions for setting up the screen and installing the projector.

## Setting up the screen

Set up the screen according to the specified method in a position which takes into account the projection distance and angle and the type of screen being used.

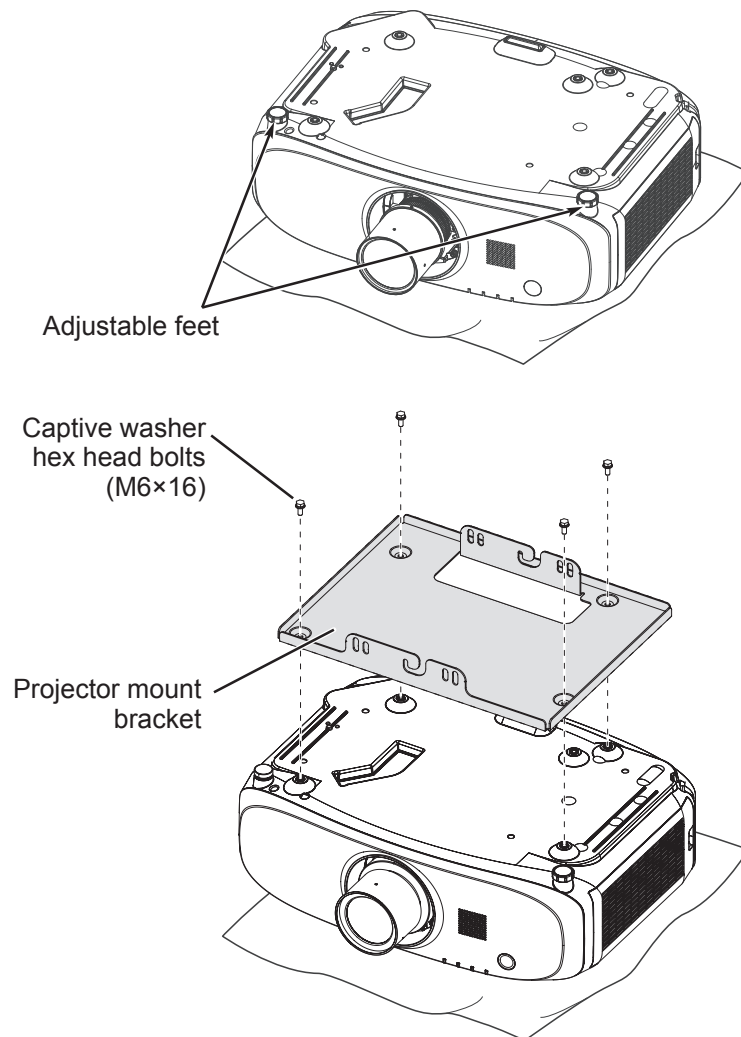
## Screws tightening torques

M6.....4 ± 0.5 N•m

- Use a torque screwdriver or torque wrench to tighten screws and bolts to their specified tightening torques. Do not use electric screwdrivers or impact screwdrivers.

## Installing the bracket to the projector

Attach the projector mount bracket to the projector (sold separately).



- 1 Place the projector upside down on top of a soft cloth.
- 2 Turn the adjustable feet (as shown on the left) clockwise to minimize the length of the feet.
- 3 Secure the projector mount bracket to the bottom of the projector using the four supplied captive washer hex head bolts (M6×16) as illustrated on the left.



## Installation (continued)

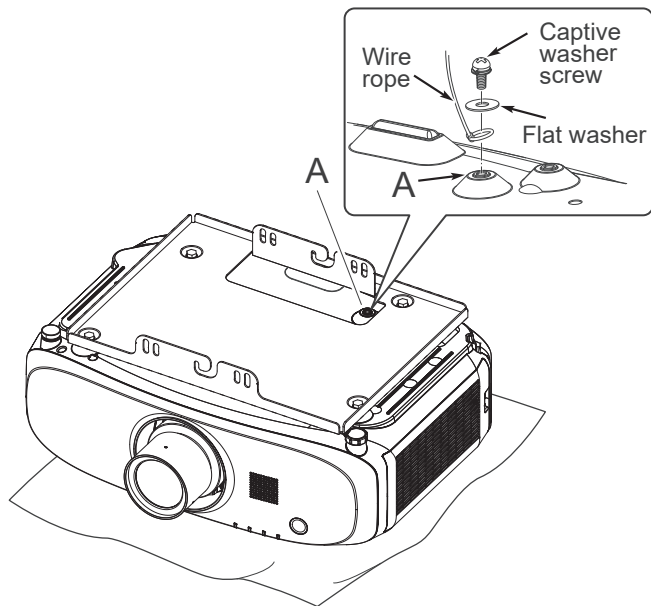
### Attaching the projector drop-prevention kit

Secure the wire rope to the projector (sold separately).

#### Attention

- For the combination of the projector with the ceiling mount bracket (for low ceilings) ET-PKD120S (sold separately) and the ceiling mount bracket (for high ceilings) ET-PKD120H (sold separately), and the mounting of the wire rope to the ceiling, please refer to the installation instructions of the ceiling mount bracket ET-PKD120S (for low ceilings) and ET-PKD120H (for high ceilings).

(when using the ceiling mount bracket ET-PKD120S (for low ceilings))



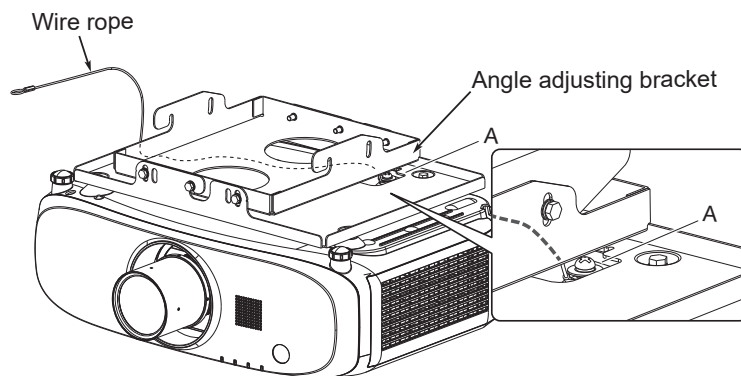
- 1 Secure one end of the wire rope with a captive washer screw (M6×20) to "A" on the projector as shown on the left.

#### Attention

- Be sure to use the supplied flat washers and wire rope.
- At this step, please keep the wire rope through the opening of the mounting bracket base.

#### Note

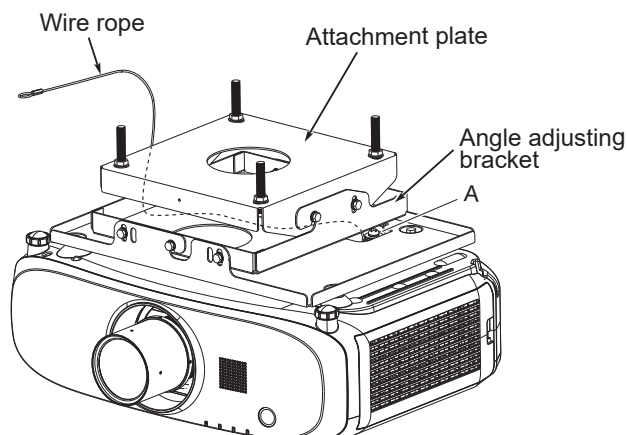
- One of the two supplied washers with this product is for the fixing of the wire rope to the projector and the other is for the fixing of the wire rope to the ceiling.



- 2 Mount the projector with the ceiling mount bracket ET-PKD120S (for low ceilings) to the angle adjusting bracket.

#### Attention

- Pass the wire rope through to the other side of the angle adjusting bracket during this step.



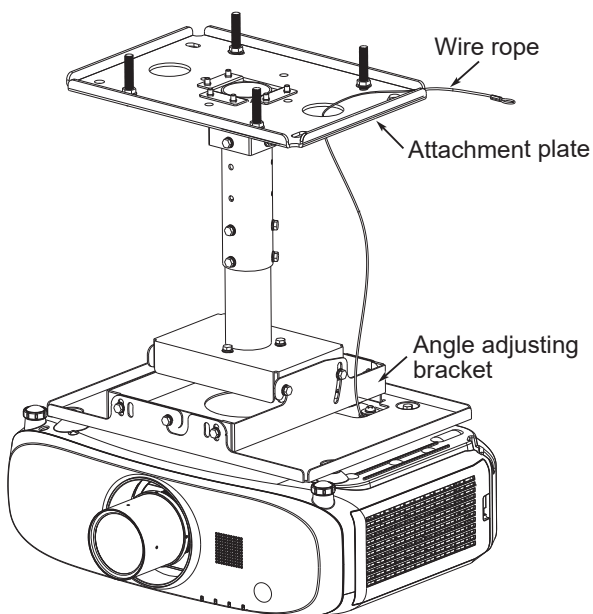
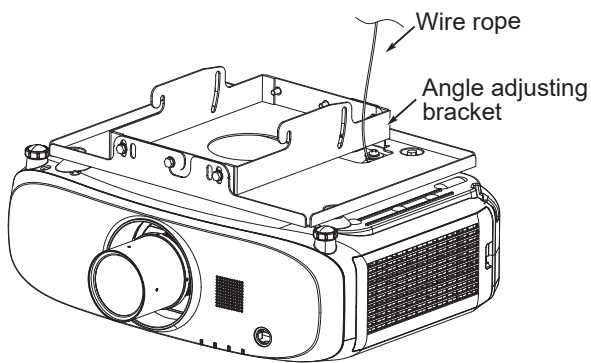
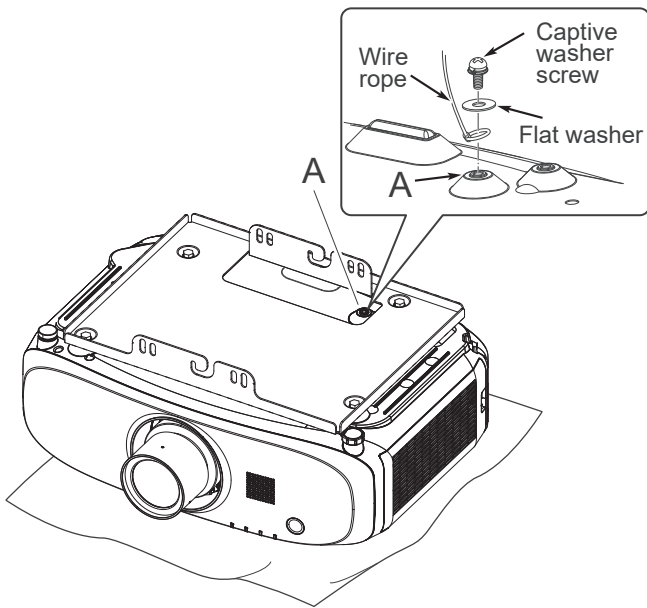
- 3 Mount the projector to the ceiling.

#### Attention

- For the combination of this projector and the ceiling mount bracket (sold separately), please refer to the installation instructions of the ceiling mount bracket ET-PKD120S (for low ceilings).
- 4 Pass the wire rope through to the other side of the angle adjusting bracket and attachment plate as shown on the left.

## Installation (continued)

(when using the ceiling mount bracket ET-PKD120H (for high ceilings))



- 1 Secure one end of the wire rope with a captive washer screw (M6×20) to "A" on the projector as shown on the left.

### Attention

- Be sure to use the supplied flat washers and wire rope.
- At this step, please keep the wire rope through the opening of the mounting bracket base.

### Note

- One of the two supplied washers with this product is for the fixing of the wire rope to the projector and the other is for the fixing of the wire rope to the ceiling.

- 2 Mount the projector with the ceiling mount bracket ET-PKD120H (for high ceilings) to the angle adjusting bracket.

- 3 Mount the projector to the ceiling.

### Attention

- For the combination of this product and the ceiling mount bracket (sold separately), please refer to the installation instructions of the ceiling mount bracket ET-PKD120H (for high ceilings).
- 4 Pass the wire rope through the hole as shown in the figure on the left.

# Specifications

<b>External dimensions</b>	Width: 410 mm (16-5/32") Height: 56 mm (2-7/32") Length: 314 mm (12-3/8")
<b>Weight</b>	Approx. 2.2 kg (4.85 lbs)

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# Panasonic Connect Co., Ltd.

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# Appendix / Annexe / Anhang

<When using other than the PT-CMZ50 projector>

<Lorsque vous utilisez un autre projecteur que le PT-CMZ50>

<Bei Verwendung eines anderen Projektors als des PT-CMZ50>

## ■ Dimensional relationship

## ■ Relations dimensionnelles

## ■ Verhältnis der Abmessungen

The dimensional relationship between the screen and projection is shown below.

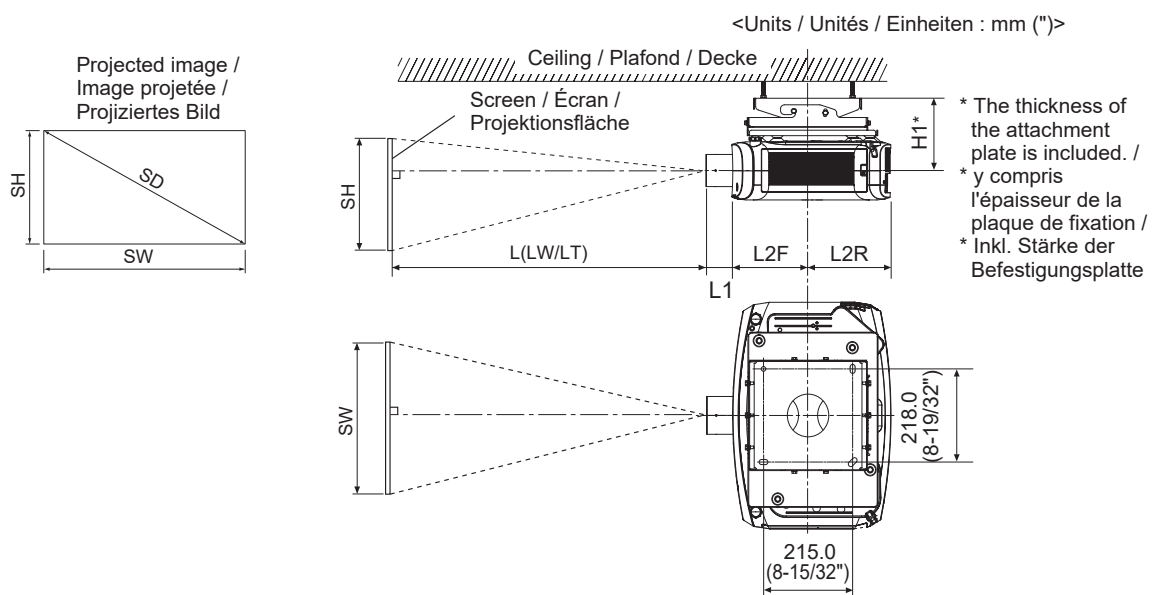
Le rapport dimensionnel entre l'écran et la projection est montré comme suit.

Das maßstäbliche Verhältnis zwischen der Projektionsfläche und der Projektion wird unten aufgeführt.

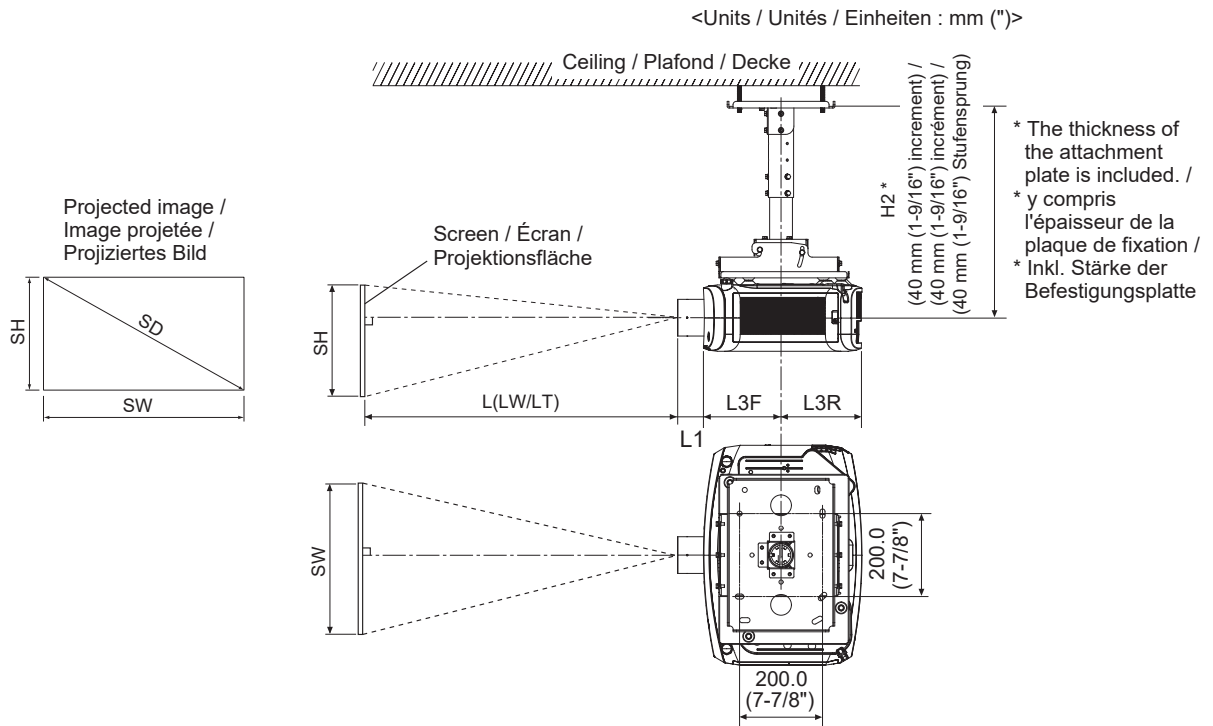
(when using the ceiling mount bracket ET-PKD120S (for low ceilings))

(lors de l'utilisation du support de montage au plafond ET-PKD120S (pour plafond bas))

(bei Verwendung der Aufhängevorrichtung ET-PKD120S (für niedrige Decken))



(when using the ceiling mount bracket ET-PKD120H (for high ceilings))  
 (lors de l'utilisation du support de montage au plafond ET-PKD120H (pour plafond élevé))  
 (bei Verwendung der Aufhängevorrichtung ET-PKD120H (für hohe Decken))



SH	Height of the projection area / Hauteur de la zone de projection / Höhe des Projektionsbereichs
SW	Width of the projection area / Largeur de la zone de projection / Breite des Projektionsbereichs
SD	Diagonal length of the projection area (m) / Longueur diagonale de la zone de projection (m) / Länge der Diagonalen des Projektionsbereichs (m)
L(LW/LT)*1	Projection distance (m) / Distance de projection (m) / Projektionsabstand (m)
H1 / H2	Distance from the center of lens to the attachment plate (including plate thickness) (mm) / La distance du centre de l'objectif à la plaque de fixation (y compris l'épaisseur de la plaque) (mm) / Abstand von der Mitte des Objektivs zur Befestigungsplatte (einschließlich Plattenstärke) (mm)
L1	Lens protrusion dimension (from front of set to tip of lens) (mm) / Dimension de la saillie de l'objectif (de l'avant de l'ensemble à l'extrémité de l'objectif) (mm) / Objektiv-Vorsprungmaß (von der Vorderseite des Geräts bis zur Front des Objektivs) (mm)
L2F / L3F	Distance from the center of attachment plate to the front end of lens (mm) / La distance du centre de la plaque de fixation à l'extrémité avant de l'objectif (mm) / Abstand von der Mitte der Befestigungsplatte bis zum vorderen Ende des Objektivs (mm)
L2R / L3R	Distance from the center of attachment plate to the rear end of projector (mm) / La distance du centre de la plaque de fixation à l'extrémité arrière du projecteur (mm) / Abstand von der Mitte der Befestigungsplatte bis zum hinteren Ende des Projektors (mm)

\*1: LW : Minimum projection distance when the zoom lens is used /  
 Distance de projection minimale lorsque vous utilisez l'objectif-zoom /  
 Mindest-Projektionsabstand bei Verwendung des Zoomobjektivs Minimalentfernung  
 LT : Maximum projection distance when the zoom lens is used /  
 Distance de projection maximale lorsque vous utilisez l'objectif-zoom /  
 Größter Projektionsabstand bei Verwendung des Zoomobjektivs

● Values of H1/H2, L2F/L3F and L2R/L3R

● Valeurs H1/H2, L2F/L3F et L2R/L3R

● Werte H1/H2, L2F/L3F und L2R/L3R

● PT-MZ20K / PT-MZ17K / PT-MZ14K / PT-MZ11K / PT-MZ16K / PT-MZ13K / PT-MZ10K

Ceiling Mount Bracket / Support de montage au plafond / Aufhängevorrichtung	(Units / Unités / Einheiten : mm)					
ET-PKD120S	H1	208	L2F	244	L2R	199
ET-PKD120H	H2	451 - 531	L3F	250	L3R	193

● PT-MZ880 / PT-MZ780 / PT-MZ680

Ceiling Mount Bracket / Support de montage au plafond / Aufhängevorrichtung	(Units / Unités / Einheiten : mm)					
ET-PKD120S	H1	216	L2F	257	L2R	180
ET-PKD120H	H2	459 - 539	L3F	262	L3R	174

● PT-MZ770 / PT-MW730 / PT-MZ670 / PT-MW630 / PT-MZ570 / PT-MW530

Ceiling Mount Bracket / Support de montage au plafond / Aufhängevorrichtung	(Units / Unités / Einheiten : mm)					
ET-PKD120S	H1	197	L2F	244	L2R	184
ET-PKD120H	H2	440 - 520	L3F	250	L3R	178

● PT-EZ770 / PT-EZ580 / PT-EW730 / PT-EW640 / PT-EW540 / PT-EX800 / PT-EX610 / PT-EX510

Ceiling Mount Bracket / Support de montage au plafond / Aufhängevorrichtung	(Units / Unités / Einheiten : mm)					
ET-PKD120S	H1	200	L2F	184.8	L2R	200.2
ET-PKD120H	H2	431.0 - 511.0	L3F	189.8	L3R	195.2

● PT-EZ590 / PT-EZ57 / PT-EW650 / PT-EW550 / PT-EX620 / PT-EX520 / PT-FZ570 / PT-FW530 / PT-FX500

Ceiling Mount Bracket / Support de montage au plafond / Aufhängevorrichtung	(Units / Unités / Einheiten : mm)					
ET-PKD120S	H1	182.5	L2F	166.5	L2R	191.5
ET-PKD120H	H2	413.5 - 493.5	L3F	171.5	L3R	186.5

● **Values of L1 / Valeurs L1 / Werte L1**

- **PT-EZ770 / PT-EZ580 / PT-EW730 / PT-EW640 / PT-EW540 / PT-EX800 / PT-EX610 / PT-EX510**

Projection Lens / l'Objectif de projection / Projektionsobjektiv	L1
Standard zoom lens / Objectif-zoom standard / Standard-Zoomobjektiv	59
ET-ELT20	81
ET-ELT21	80
ET-ELW20	80
ET-ELW21	50
ET-ELW22	95

(Units / Unités / Einheiten : mm)

- **PT-EZ590 / PT-EW650 / PT-EW550 / PT-EX620 / PT-EX520**

Projection Lens / l'Objectif de projection / Projektionsobjektiv	L1
Standard zoom lens / Objectif-zoom standard / Standard-Zoomobjektiv	40
ET-ELT30	81
ET-ELT31	92
ET-ELW30	71
ET-ELW31	70

(Units / Unités / Einheiten : mm)

- **PT-FZ570 / PT-FW530 / PT-FX500 / PT-EZ57**

Projection Lens / l'Objectif de projection / Projektionsobjektiv	L1
Standard zoom lens / Objectif-zoom standard / Standard-Zoomobjektiv	40.3

(Units / Unités / Einheiten : mm)

**Note**

- For the lens protrusion dimensions of the following projectors, refer to the operating instructions of the projector.

**Remarque**

- Pour les dimensions de la saillie de l'objectif des projecteurs suivants, reportez-vous au manuel d'utilisation du projecteur.

**Hinweis**

- Zu den Objektiv-Vorsprungmaßen der folgenden Projektoren siehe die Bedienungsanleitung des Projektors.

PT-MZ20K / PT-MZ17K / PT-MZ14K / PT-MZ11K / PT-MZ16K / PT-MZ13K / PT-MZ10K / PT-MZ880 / PT-MZ780 / PT-MZ680 / PT-MZ770 / PT-MW730 / PT-MZ670 / PT-MW630 / PT-MZ570 / PT-MW530



**■ Projected image size and Projection distance**  
**■ Taille de l'image projetée et Distance de projection**  
**■ Projektions-bildgröße und Projektionsabstand**

The dimensions of the following table contain a slight error.  
 Les dimensions du tableau suivant peuvent présenter un léger écart.  
 Die Abmessungen der folgenden Tabelle enthalten einen geringfügigen Fehler.

● PT-EZ770 / PT-EZ580

(Units / Unités / Einheiten : m)

Zoom lens Objectif-zoom Zoomobjektiv	Throw ratio Rapport de la distance de projection Projektionsverhältnis	Aspect ratio Rapport d'aspect Seitenverhältnis	Projection distance (L) formula Formule de calcul de la distance de projection (L) Formel für den Projektionsabstand (L)	
			Minimum / Mini. / Min. (LW)	Maximum / Maxi. / Max. (LT)
Standard zoom lens / Objectif- zoom standard / Standard- Zoomobjektiv	1.7 - 2.8 : 1	16 : 10	$L = 1.3900 \times SD - 0.0549$	$L = 2.3640 \times SD - 0.0482$
		16 : 9	$L = 1.4286 \times SD - 0.0549$	$L = 2.4297 \times SD - 0.0482$
	1.9 - 3.3 : 1	4 : 3	$L = 1.5736 \times SD - 0.0549$	$L = 2.6763 \times SD - 0.0482$
ET-ELW22	0.78 - 0.98 : 1	16 : 10	$L = 0.6904 \times SD - 0.0485$	$L = 0.8558 \times SD - 0.0455$
		16 : 9	$L = 0.7096 \times SD - 0.0485$	$L = 0.8796 \times SD - 0.0455$
	0.95 - 1.18 : 1	4 : 3	$L = 0.7816 \times SD - 0.0485$	$L = 0.9688 \times SD - 0.0455$
ET-ELW20	1.3 - 1.7 : 1	16 : 10	$L = 1.0557 \times SD - 0.0555$	$L = 1.4374 \times SD - 0.0534$
		16 : 9	$L = 1.0851 \times SD - 0.0555$	$L = 1.4774 \times SD - 0.0534$
	1.5 - 2.0 : 1	4 : 3	$L = 1.1952 \times SD - 0.0555$	$L = 1.6273 \times SD - 0.0534$
ET-ELT20	2.8 - 4.6 : 1	16 : 10	$L = 2.3662 \times SD - 0.1140$	$L = 3.8583 \times SD - 0.1129$
		16 : 9	$L = 2.4320 \times SD - 0.1140$	$L = 3.9656 \times SD - 0.1129$
	3.3 - 5.4 : 1	4 : 3	$L = 2.6788 \times SD - 0.1140$	$L = 4.3680 \times SD - 0.1129$
ET-ELT21	4.6 - 7.2 : 1	16 : 10	$L = 3.8667 \times SD - 0.2123$	$L = 6.1416 \times SD - 0.2108$
		16 : 9	$L = 3.9742 \times SD - 0.2123$	$L = 6.3123 \times SD - 0.2108$
	5.4 - 8.6 : 1	4 : 3	$L = 4.3775 \times SD - 0.2123$	$L = 6.9529 \times SD - 0.2108$
<b>Fixed-focus lens Objectif à mise au point fixe Feststehendes Objektiv</b>	<b>Throw ratio Rapport de la distance de projection Projektionsverhältnis</b>	<b>Aspect ratio Rapport d'aspect Seitenverhältnis</b>	<b>Projection distance (L) formula Formule de calcul de la distance de projection (L) Formel für den Projektionsabstand (L)</b>	
ET-ELW21	0.8 : 1	16 : 10	$L = 0.6763 \times SD - 0.0577$	
		16 : 9	$L = 0.6951 \times SD - 0.0577$	
	0.9 : 1	4 : 3	$L = 0.7656 \times SD - 0.0577$	

● PT-EW730 / PT-EW640 / PT-EW540

(Units / Unités / Einheiten : m)

Zoom lens Objectif-zoom Zoomobjektiv	Throw ratio Rapport de la distance de projection Projektionsverhältnis	Aspect ratio Rapport d'aspect Seitenverhältnis	Projection distance (L) formula Formule de calcul de la distance de projection (L) Formel für den Projektionsabstand (L)	
			Minimum / Mini. / Min. (LW)	Maximum / Maxi. / Max. (LT)
Standard zoom lens / Objectif-zoom standard / Standard-Zoomobjektiv	1.7 - 2.8 : 1	16 : 10	$L = 1.4062 \times SD - 0.0504$	$L = 2.3944 \times SD - 0.0497$
		16 : 9	$L = 1.4452 \times SD - 0.0504$	$L = 2.4609 \times SD - 0.0497$
	2.0 - 3.4 : 1	4 : 3	$L = 1.5919 \times SD - 0.0504$	$L = 2.7106 \times SD - 0.0497$
ET-ELW22	0.78 - 0.98 : 1	16 : 10	$L = 0.6931 \times SD - 0.0484$	$L = 0.8591 \times SD - 0.0454$
		16 : 9	$L = 0.7123 \times SD - 0.0484$	$L = 0.8830 \times SD - 0.0454$
	0.95 - 1.19 : 1	4 : 3	$L = 0.7846 \times SD - 0.0484$	$L = 0.9726 \times SD - 0.0454$
ET-ELW20	1.3 - 1.7 : 1	16 : 10	$L = 1.0702 \times SD - 0.0554$	$L = 1.4530 \times SD - 0.0534$
		16 : 9	$L = 1.1000 \times SD - 0.0554$	$L = 1.4934 \times SD - 0.0534$
	1.5 - 2.0 : 1	4 : 3	$L = 1.2116 \times SD - 0.0554$	$L = 1.6449 \times SD - 0.0534$
ET-ELT20	2.8 - 4.6 : 1	16 : 10	$L = 2.3952 \times SD - 0.1139$	$L = 3.9041 \times SD - 0.1128$
		16 : 9	$L = 2.4617 \times SD - 0.1139$	$L = 4.0126 \times SD - 0.1128$
	3.3 - 5.5 : 1	4 : 3	$L = 2.7115 \times SD - 0.1139$	$L = 4.4197 \times SD - 0.1128$
ET-ELT21	4.6 - 7.2 : 1	16 : 10	$L = 3.9138 \times SD - 0.2127$	$L = 6.2152 \times SD - 0.2107$
		16 : 9	$L = 4.0226 \times SD - 0.2127$	$L = 6.3880 \times SD - 0.2107$
	5.4 - 8.7 : 1	4 : 3	$L = 4.4307 \times SD - 0.2127$	$L = 7.0361 \times SD - 0.2107$
<b>Fixed-focus lens Objectif à mise au point fixe Feststehendes Objektiv</b>	<b>Throw ratio Rapport de la distance de projection Projektionsverhältnis</b>	<b>Aspect ratio Rapport d'aspect Seitenverhältnis</b>	<b>Projection distance (L) formula Formule de calcul de la distance de projection (L) Formel für den Projektionsabstand (L)</b>	
ET-ELW21	0.8 : 1	16 : 10	$L = 0.6842 \times SD - 0.0572$	
		16 : 9	$L = 0.7032 \times SD - 0.0572$	
	0.9 : 1	4 : 3	$L = 0.7746 \times SD - 0.0572$	

● PT-EX800 / PT-EX610 / PT-EX510

(Units / Unités / Einheiten : m)

Zoom lens Objectif-zoom Zoomobjektiv	Throw ratio Rapport de la distance de projection Projektionsverhältnis	Aspect ratio Rapport d'aspect Seitenverhältnis	Projection distance (L) formula Formule de calcul de la distance de projection (L) Formel für den Projektionsabstand (L)	
			Minimum / Mini. / Min. (LW)	Maximum / Maxi. / Max. (LT)
Standard zoom lens / Objectif-zoom standard / Standard-Zoomobjektiv	1.7 - 2.8 : 1	4 : 3	$L = 1.3346 \times SD - 0.0553$	$L = 2.2677 \times SD - 0.0480$
		16 : 9	$L = 1.4541 \times SD - 0.0553$	$L = 2.4707 \times SD - 0.0480$
ET-ELW22	0.8 - 1.0 : 1	4 : 3	$L = 0.6656 \times SD - 0.0489$	$L = 0.8250 \times SD - 0.0458$
		16 : 9	$L = 0.7252 \times SD - 0.0489$	$L = 0.8989 \times SD - 0.0458$
ET-ELW20	1.3 - 1.7 : 1	4 : 3	$L = 1.0118 \times SD - 0.0558$	$L = 1.3780 \times SD - 0.0540$
		16 : 9	$L = 1.1024 \times SD - 0.0558$	$L = 1.5013 \times SD - 0.0540$
ET-ELT20	2.8 - 4.6 : 1	4 : 3	$L = 2.2693 \times SD - 0.1142$	$L = 3.7031 \times SD - 0.1129$
		16 : 9	$L = 2.4724 \times SD - 0.1142$	$L = 4.0346 \times SD - 0.1129$
ET-ELT21	4.6 - 7.2 : 1	4 : 3	$L = 3.7091 \times SD - 0.2132$	$L = 5.8937 \times SD - 0.2109$
		16 : 9	$L = 4.0339 \times SD - 0.2132$	$L = 6.4212 \times SD - 0.2109$
<b>Fixed-focus lens Objectif à mise au point fixe Feststehendes Objektiv</b>	<b>Throw ratio Rapport de la distance de projection Projektionsverhältnis</b>	<b>Aspect ratio Rapport d'aspect Seitenverhältnis</b>	<b>Projection distance (L) formula Formule de calcul de la distance de projection (L) Formel für den Projektionsabstand (L)</b>	
ET-ELW21	0.8 : 1	4 : 3	$L = 0.6496 \times SD - 0.0585$	
		16 : 9	$L = 0.7078 \times SD - 0.0585$	

● PT-EZ590 / PT-EW650 / PT-EW550

(Units / Unités / Einheiten : m)

Zoom lens Objectif-zoom Zoomobjektiv	Throw ratio Rapport de la distance de projection Projektionsverhältnis	Aspect ratio Rapport d'aspect Seitenverhältnis	Projection distance (L) formula Formule de calcul de la distance de projection (L) Formel für den Projektionsabstand (L)	
			Minimum / Mini. / Min. (LW)	Maximum / Maxi. / Max. (LT)
Standard zoom lens / Objectif- zoom standard / Standard- Zoomobjektiv	1.22 - 2.26 : 1	16 : 10	$L = 1.0433 \times SD - 0.0326$	$L = 1.9341 \times SD - 0.0328$
		16 : 9	$L = 1.0724 \times SD - 0.0326$	$L = 1.9878 \times SD - 0.0328$
	1.46 - 2.72 : 1	4 : 3	$L = 1.1811 \times SD - 0.0326$	$L = 2.1895 \times SD - 0.0328$
ET-ELW31	0.74 - 0.96 : 1	16 : 10	$L = 0.6373 \times SD - 0.0324$	$L = 0.8295 \times SD - 0.0344$
	0.88 - 1.15 : 1	16 : 9	$L = 0.6550 \times SD - 0.0324$	$L = 0.8526 \times SD - 0.0344$
		4 : 3	$L = 0.7215 \times SD - 0.0324$	$L = 0.9391 \times SD - 0.0344$
ET-ELW30	0.96 - 1.22 : 1	16 : 10	$L = 0.7978 \times SD - 0.0326$	$L = 1.0395 \times SD - 0.0341$
		16 : 9	$L = 0.8199 \times SD - 0.0326$	$L = 1.0684 \times SD - 0.0341$
	1.11 - 1.45 : 1	4 : 3	$L = 0.9031 \times SD - 0.0326$	$L = 1.1768 \times SD - 0.0341$
ET-ELT30	2.23 - 4.02 : 1	16 : 10	$L = 1.9341 \times SD - 0.1109$	$L = 3.4825 \times SD - 0.1364$
		16 : 9	$L = 1.9879 \times SD - 0.1109$	$L = 3.5793 \times SD - 0.1364$
	2.67 - 4.84 : 1	4 : 3	$L = 2.1896 \times SD - 0.1109$	$L = 3.9424 \times SD - 0.1364$
ET-ELT31	4.02 - 7.20 : 1	16 : 10	$L = 3.3622 \times SD + 0.1001$	$L = 6.1287 \times SD + 0.0940$
		16 : 9	$L = 3.4557 \times SD + 0.1001$	$L = 6.2991 \times SD + 0.0940$
	4.82 - 8.73 : 1	4 : 3	$L = 3.8063 \times SD + 0.1001$	$L = 6.9382 \times SD + 0.0940$

● PT-EX620 / PT-EX520

(Units / Unités / Einheiten : m)

Zoom lens Objectif-zoom Zoomobjektiv	Throw ratio Rapport de la distance de projection Projektionsverhältnis	Aspect ratio Rapport d'aspect Seitenverhältnis	Projection distance (L) formula Formule de calcul de la distance de projection (L) Formel für den Projektionsabstand (L)	
			Minimum / Mini. / Min. (LW)	Maximum / Maxi. / Max. (LT)
Standard zoom lens / Objectif- zoom standard / Standard- Zoomobjektiv	1.32 - 2.44 : 1	4 : 3	$L = 1.0630 \times SD - 0.0332$	$L = 1.9706 \times SD - 0.0334$
		16 : 9	$L = 1.1581 \times SD - 0.0332$	$L = 2.1469 \times SD - 0.0334$
ET-ELW31	0.79 - 1.08 : 1	4 : 3	$L = 0.6493 \times SD - 0.0330$	$L = 0.8452 \times SD + 0.0350$
		16 : 9	$L = 0.7074 \times SD - 0.0330$	$L = 0.9208 \times SD + 0.0350$
ET-ELW30	1.00 - 1.30 : 1	4 : 3	$L = 0.8128 \times SD - 0.0333$	$L = 1.0591 \times SD - 0.0347$
		16 : 9	$L = 0.8855 \times SD - 0.0333$	$L = 1.1539 \times SD - 0.0347$
ET-ELT30	2.39 - 4.36 : 1	4 : 3	$L = 1.9706 \times SD - 0.1130$	$L = 3.5456 \times SD - 0.1114$
	2.40 - 4.37 : 1	16 : 9	$L = 2.1469 \times SD - 0.1130$	$L = 3.8628 \times SD - 0.1114$
ET-ELT31	4.34 - 7.86 : 1	4 : 3	$L = 3.4264 \times SD + 0.1005$	$L = 6.2453 \times SD + 0.0941$
		16 : 9	$L = 3.7330 \times SD + 0.1005$	$L = 6.8041 \times SD + 0.0941$

● PT-FZ570 / PT-FW530 / PT-EZ57

(Units / Unités / Einheiten : m)

Zoom lens Objectif-zoom Zoomobjektiv	Throw ratio Rapport de la distance de projection Projektionsverhältnis	Aspect ratio Rapport d'aspect Seitenverhältnis	Projection distance (L) formula Formule de calcul de la distance de projection (L) Formel für den Projektionsabstand (L)	
			Minimum / Mini. / Min. (LW)	Maximum / Maxi. / Max. (LT)
Standard zoom lens / Objectif- zoom standard / Standard- Zoomobjektiv	1.22 - 2.26 : 1	16 : 10	$L = 1.0433 \times SD - 0.0326$	$L = 1.9341 \times SD - 0.0328$
		16 : 9	$L = 1.0724 \times SD - 0.0326$	$L = 1.9878 \times SD - 0.0328$
	1.46 - 2.72 : 1	4 : 3	$L = 1.1811 \times SD - 0.0326$	$L = 2.1895 \times SD - 0.0328$

● PT-FX500

(Units / Unités / Einheiten : m)

Zoom lens Objectif-zoom Zoomobjektiv	Throw ratio Rapport de la distance de projection Projektionsverhältnis	Aspect ratio Rapport d'aspect Seitenverhältnis	Projection distance (L) formula Formule de calcul de la distance de projection (L) Formel für den Projektionsabstand (L)	
			Minimum / Mini. / Min. (LW)	Maximum / Maxi. / Max. (LT)
Standard zoom lens / Objectif- zoom standard / Standard- Zoomobjektiv	1.32 - 2.44 : 1	4 : 3	$L = 1.0630 \times SD - 0.0332$	$L = 1.9706 \times SD - 0.0334$
		16 : 9	$L = 1.1581 \times SD - 0.0332$	$L = 2.1469 \times SD - 0.0334$

**Note**

- For the diagonal length of the projection area and the projection distance of the following projectors, refer to the operating instructions of the projector.

**Remarque**

- Pour la longueur diagonale de la zone de projection et la distance de projection des projecteurs suivants, reportez-vous au manuel d'utilisation du projecteur.

**Hinweis**

- Zur Länge der Diagonalen des Projektionsbereichs und dem Projektionsabstand siehe die Bedienungsanleitung des Projektors.

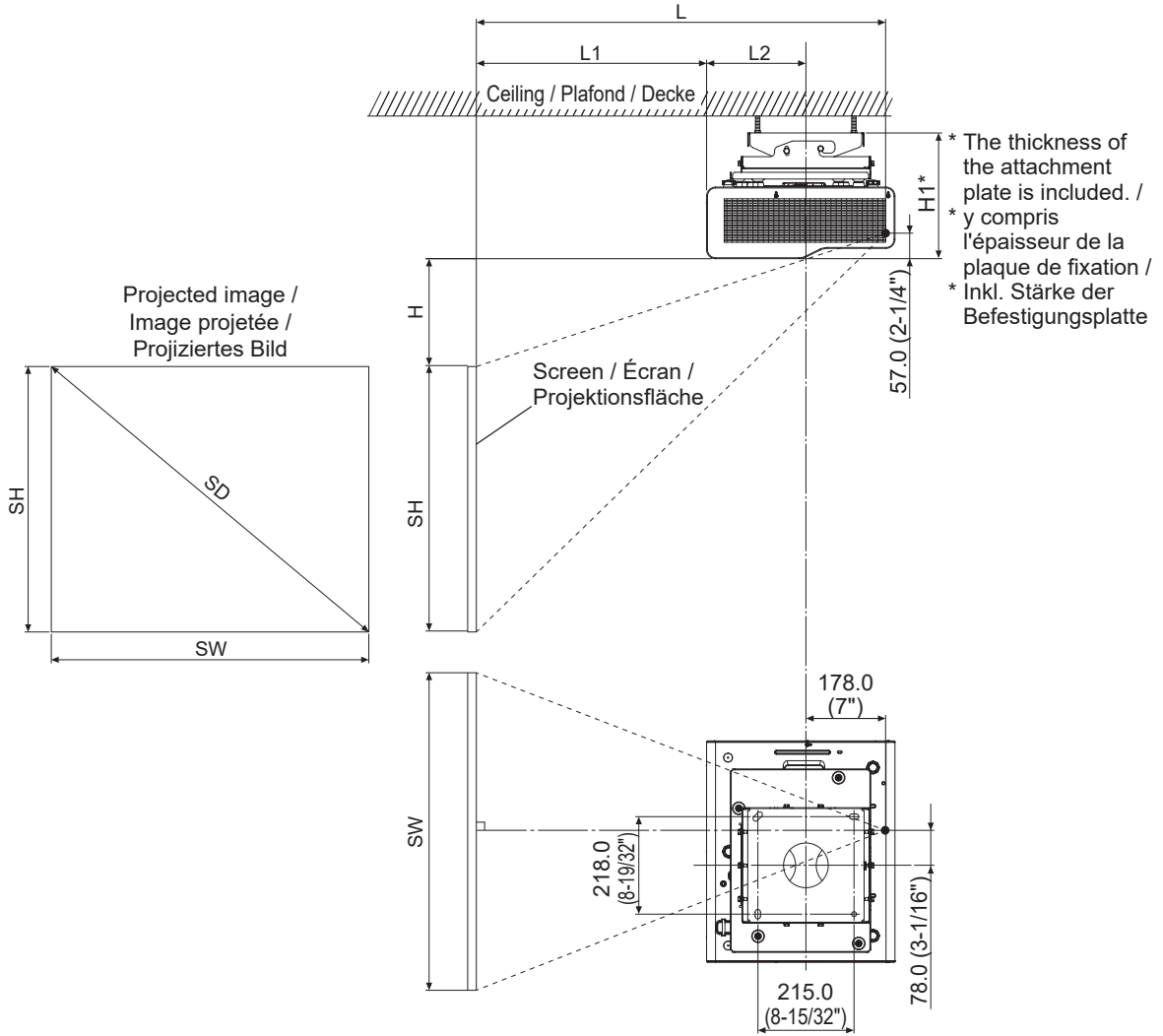
PT-MZ20K / PT-MZ17K / PT-MZ14K / PT-MZ11K / PT-MZ16K / PT-MZ13K / PT-MZ10K / PT-MZ880 / PT-MZ780 / PT-MZ680 / PT-MZ770 / PT-MW730 / PT-MZ670 / PT-MW630 / PT-MZ570 / PT-MW530

<When using the PT-CMZ50 projector>  
 <Lorsque vous utilisez le projecteur PT-CMZ50>  
 <Bei Verwendung des Projektors PT-CMZ50>

- Dimensional relationship
- Relations dimensionnelles
- Verhältnis der Abmessungen

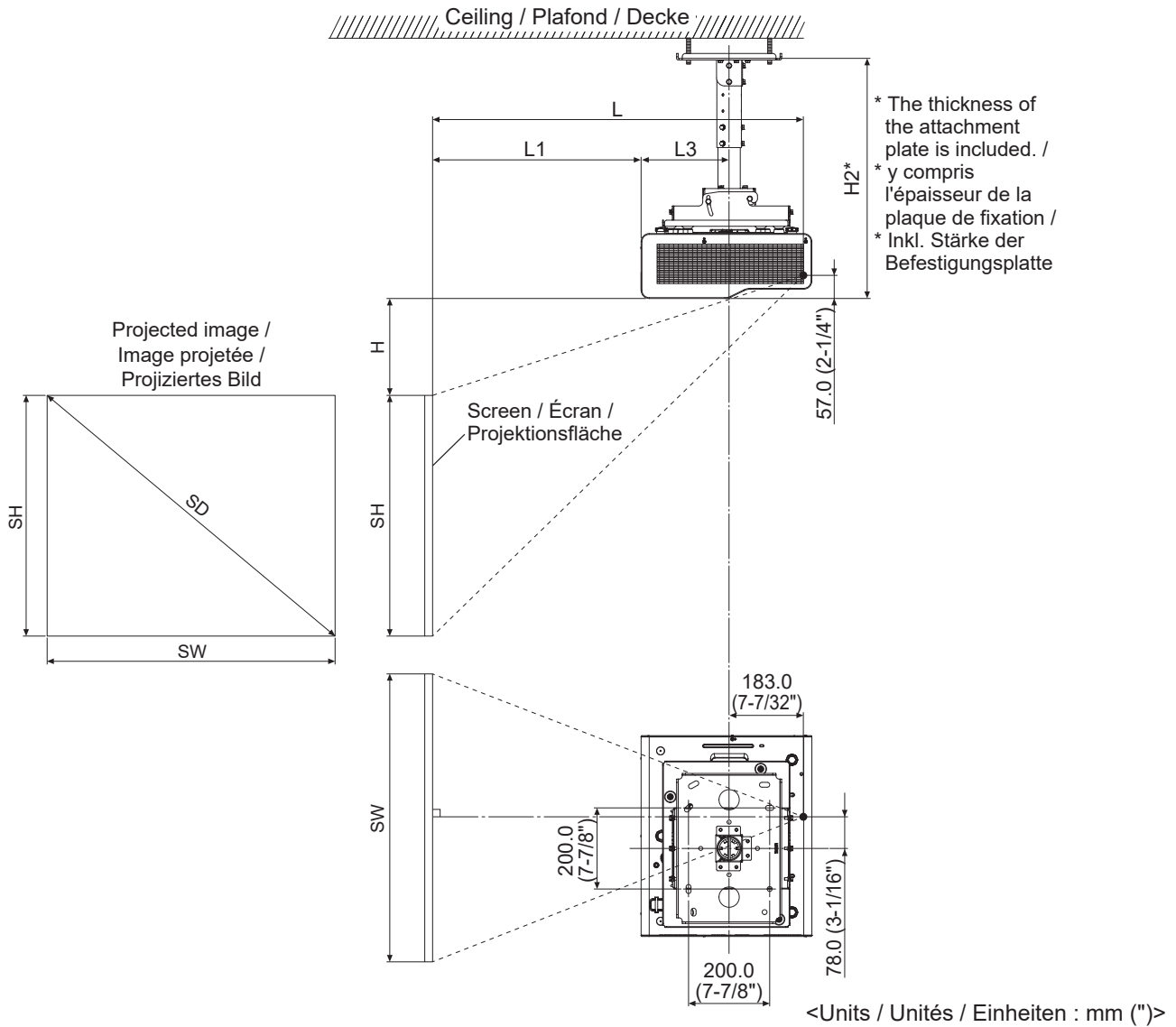
The dimensional relationship between the screen and projection is shown below.  
 Le rapport dimensionnel entre l'écran et la projection est montré comme suit.  
 Das maßstäbliche Verhältnis zwischen der Projektionsfläche und der Projektion wird unten aufgeführt.

(when using the ceiling mount bracket ET-PKD120S (for low ceilings))  
 (lors de l'utilisation du support de montage au plafond ET-PKD120S (pour plafond bas))  
 (bei Verwendung der Aufhängevorrichtung ET-PKD120S (für niedrige Decken))



<Units / Unités / Einheiten : mm (")>

(when using the ceiling mount bracket ET-PKD120H (for high ceilings))  
 (lors de l'utilisation du support de montage au plafond ET-PKD120H (pour plafond élevé))  
 (bei Verwendung der Aufhängevorrichtung ET-PKD120H (für hohe Decken))



SH	Height of the projection area / Hauteur de la zone de projection / Höhe des Projektionsbereichs
SW	Width of the projection area / Largeur de la zone de projection / Breite des Projektionsbereichs
SD	Diagonal length of the projection area (m) / Longueur diagonale de la zone de projection (m) / Länge der Diagonalen des Projektionsbereichs (m)
L	Projection distance (from screen to mirror reflective surface*1) (m) / Distance de projection (de l'écran à la surface réfléchissante du miroir*1) (m) / Projektionsabstand (vom Bildschirm zur spiegelreflektierenden Oberfläche*1) (m)
H	Distance from the top of projector to top edge of screen (m) / Distance du dessus du projecteur au bord supérieur de l'objectif (m) / Abstand von Oberseite des Projektors zum oberen Bildschirmrand (m)
H1 / H2	Distance from the top of projector to attachment plate (includes plate thickness) (mm) / Distance du dessus du projecteur à la plaque de fixation (y compris l'épaisseur de la plaque de fixation) (mm) / Abstand von Oberseite des Projektors zur Befestigungsplatte (beinhaltet die Dicke der Befestigungsplatte) (mm)
L1	Distance from the screen to rear of projector (m) / Distance de l'écran à l'arrière du projecteur (m) / Abstand vom Bildschirm zur Rückseite des Projektors (m)
L2 / L3	Distance from the center of attachment plate to the rear end of projector (mm) / La distance du centre de la plaque de fixation à l'extrémité arrière du projecteur (mm) / Abstand von der Mitte der Befestigungsplatte bis zum hinteren Ende des Projektors (mm)

\*1: The mirror reflective surface is inside the fixed-focus lens, and is not visible from the outside. / La surface réfléchissante du miroir se trouve à l'intérieur de l'objectif à mise au point fixe et n'est pas visible de l'extérieur. / Die spiegelreflektierende Oberfläche befindet sich im Inneren des feststehenden Objektivs und ist von außen nicht sichtbar.

● Values of H1/H2 and L2/L3

● Valeurs H1/H2 et L2/L3

● Werte H1/H2 und L2/L3

● PT-CMZ50

Ceiling Mount Bracket / Support de montage au plafond / Aufhängevorrichtung	(Units / Unités / Einheiten : mm)			
ET-PKD120S	H1	281	L2	222
ET-PKD120H	H2	524 - 604	L3	217

■ Projected image size and Projection distance

■ Taille de l'image projetée et Distance de projection

■ Projektions-bildgröße und Projektionsabstand

The dimensions of the following table contain a slight error.

Les dimensions du tableau suivant peuvent présenter un léger écart.

Die Abmessungen der folgenden Tabelle enthalten einen geringfügigen Fehler.

Dimensions in the tables are values when Digital Zoom Extender function is disabled by setting the [POSITION] menu → [SCREEN ADJUSTMENT] → [DIGITAL ZOOM EXTENDER] to [OFF] on the projector.

Les dimensions dans les tableaux sont des valeurs lorsque la fonction d'extenseur zoom numérique est désactivée en réglant le menu [POSITION] → [RÉGLAGE DE L'ÉCRAN] → [EXTENSEUR ZOOM NUMÉRIQUE] sur [NON] sur le projecteur.

Die in den Tabellen angegebenen Abmessungen beziehen sich auf Werte, wenn die Digitalzoom-Extender-Funktion deaktiviert ist, d. h. wenn das Menü [POSITION] → [BILDSCHIRMANPASSUNG] → [DIGITALZOOM-EXTENDER] am Projektor auf [AUS] gesetzt ist.

● PT-CMZ50

(Units / Unités / Einheiten : m)

Aspect ratio / Rapport d'aspect / Seitenverhältnis	16 : 10	16 : 9	4 : 3
Height of the projection area (SH) Hauteur de la zone de projection (SH) Höhe des Projektionsbereichs (SH)	= 0.530 × SD	= 0.490 × SD	= 0.6 × SD
Width of the projection area (SW) Largeur de la zone de projection (SW) Breite des Projektionsbereichs (SW)	= 0.848 × SD	= 0.872 × SD	= 0.8 × SD
Projection distance (L) Distance de projection (L) Projektionsabstand (L)	= 0.1782 × SD + 0.0485	= 0.1831 × SD + 0.0485	= 0.2017 × SD + 0.0485
Distance from the screen to rear of projector (L1) Distance de l'écran à l'arrière du projecteur (L1) Abstand vom Bildschirm zur Rückseite des Projektors (L1)	= 0.0100 + (L - 0.4105)		
Distance from the top of projector to top edge of screen (H) Distance du dessus du projecteur au bord supérieur de l'objectif (H) Abstand von Oberseite des Projektors zum oberen Bildschirmrand (H)	= 0.0933 × SD - 0.0562	= 0.1231 × SD - 0.0562	= 0.1056 × SD - 0.0562

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# Panasonic Connect Co., Ltd.

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