Panasonic®
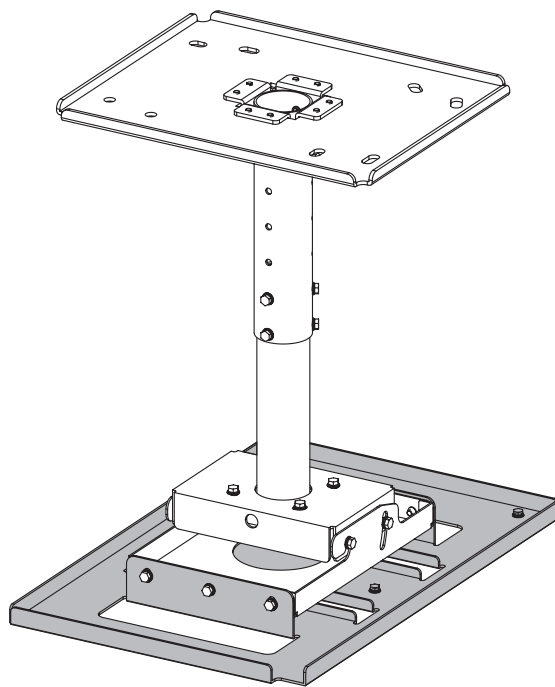
Installation Instructions

Projector Mount Bracket

Model No. ET-PKD520B

* The figure above shows this product combined with the separately sold ET-PKD520H Ceiling Mount Bracket (for High 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 manual to the certified personnel and have them perform the procedure.

- To installation personnel
  Read the "Installation Instructions" thoroughly and then perform the operation 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

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 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 trip or fall down, and an injury may result.

Do not loosen or remove the unit 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 be exposed to oily smoke, steam, or excessive heat.
- Failure to obey may result in fire or electric shock. In addition, oil will cause the plastic to deteriorate, which may result in a drop hazard.

Do not allow children to reach the supplied screws and metal fittings.
- These items can cause personal injury if swallowed.
- If swallowed, seek medical help immediately.

Do not disassemble or modify the projector mount bracket.
- The projector may be damaged or fall down, and an injury may result.

CAUTION:

Install only the designated projector.
Install only using the designated method.
- Failure to obey may result in dropping, damage to the projector, or injury.

Do not install the ceiling mount bracket in a place which may impede projector ventilation.
- If this is not observed, 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.

Always use the supplied parts when performing installation.
- Otherwise, this may cause damaged projector to fall and cause injury.

Install the mounting screws and power cable in such a way that they will not make contact with the inside metals of the ceiling.
- Electric shocks may result from contact with any metal objects inside the ceiling.

- ■ **Panasonic Connect Co., Ltd. disclaims all liability for any accidents or any damage caused by the installation of the ceiling mount bracket using methods that are not described in these Installation Instructions or methods that do not use the parts specified in these Instructions.**

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

Product components

This is a projector mount bracket for installing projectors.
Use this together with the ceiling mount bracket for high ceilings or low ceilings (sold separately).

■ Supported ceiling mount brackets and projectors

● Ceiling Mount Bracket
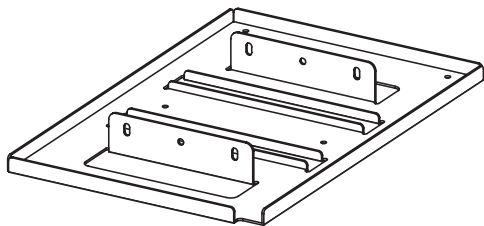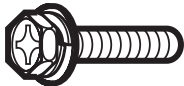ET-PKD520H / ET-PKD520S
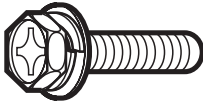
● Projector
PT-RQ13K / PT-RZ12K / PT-RS11K / PT-DZ21K2 / PT-DS20K2 / PT-DW17K2 / PT-DZ16K2 / PT-DZ21K / PT-DS20K / PT-DW17K / PT-DZ16K / PT-RZ21K / PT-RS20K

Note
- Products not listed above may be supported in some cases. For details, refer to the operating instructions of your ceiling mount bracket (for high ceilings or for low ceilings) and projector.

■ Structural components

Check that the package contains the following parts. The number enclosed in < > is the quantity.

Projector mount bracket <1>	This is used to install the projector itself. The bracket has a function for adjusting horizontal tilt.
Hex head bolt, captive washer <6> (M6 × 30)	These are used to mount the bracket onto the projector.
Hex head bolt, captive washer <4> (M10 × 40)	Prevents the projector from falling.
Wire rope <4> Approx. 2.0 mm (3/32") wire diameter, 800 mm (31-1/2") length	

- Tightening torque for the screws are M6: 4±0.5 N•m, M10 (3/8"): 20±1 N•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 a lens other than the ET-D75LE95 / ET-D75LE90 Fixed-focus lens>

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

Establish the dimensions after assessing the area possible for installation.

The zoom function of the lens allows you to adjust the projection distance. Fine adjust while checking the projected image.

When an ET-D75LE95 / ET-D75LE90 fixed-focus lens is attached, the dimensional relationship between the screen and the projector will differ. "\<When using a lens other than the ET-D75LE95 / ET-D75LE90 Fixed-focus lens>" (➡ page 9)

■ Dimensional reationship diagram

● The illustration shows the ET-PKD520H ceiling mount bracket mounted on a projector.

(Units: mm ("))
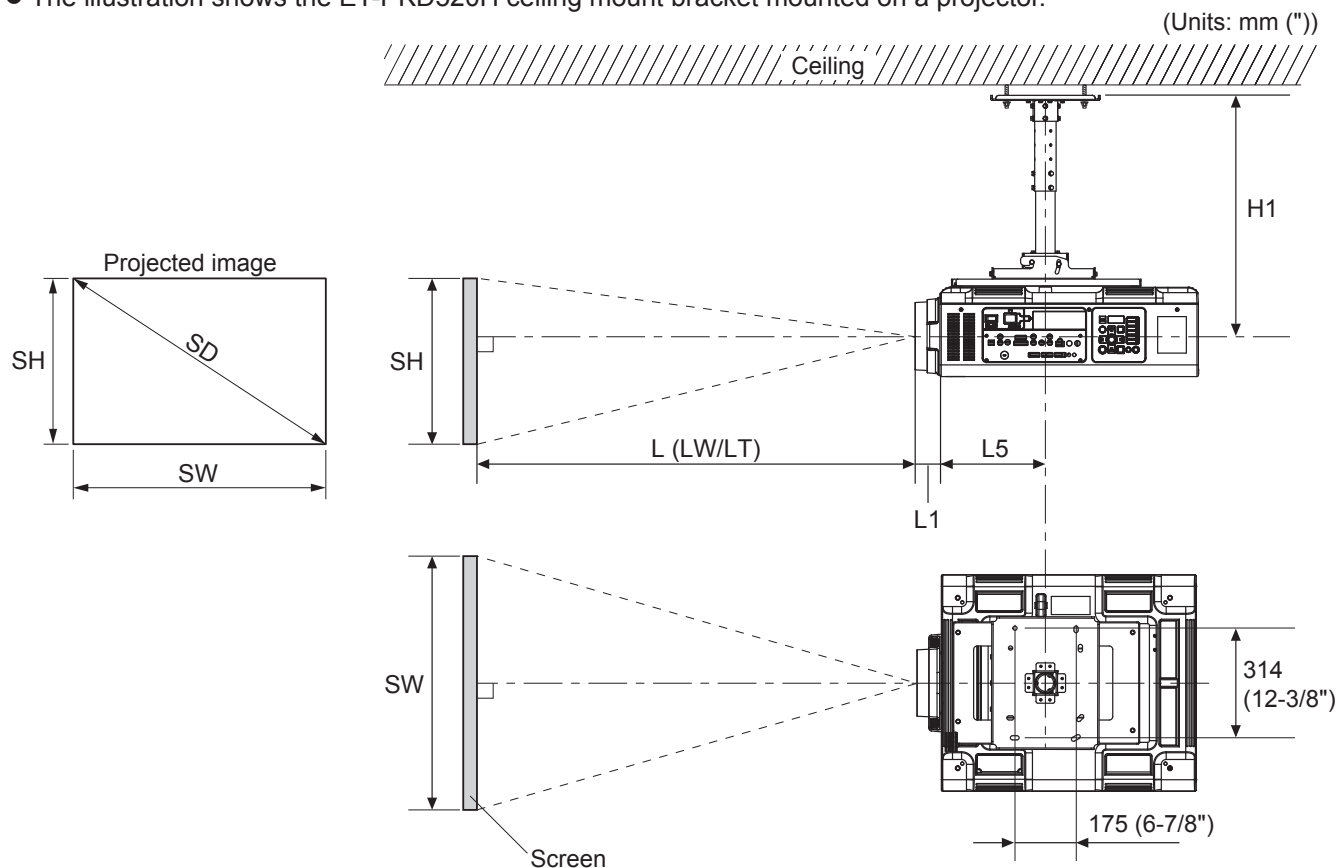
Note

● 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	Image height	L1	Lens protrusion dimension (from front of set to tip of lens)
SW	Image width	L5	From front center of the attachment plate to front of projector
SD	Projected image size	H1	From lens center to attachment plate (includes the thickness of the attachment plate)
L	Projection distance		

Attention

● Install the projector with at least 500 mm (19-11/16") gap from the surrounding walls or objects in order to ensure that the air intake/exhaust ports of the projector will not be blocked.

● Avoid setting up in places which are subject to sudden temperature changes, such as near an air conditioner or lighting equipment (studio lamps, etc.).

Note

● When [GEOMETRY] is used, correction is performed in the direction that results in a screen smaller than the specified screen size.

● The illustrations of projectors in this manual are for informational purposes only and do not represent a specific model. Configurations may vary with the model.

# Standard installation dimensions (continued)

■ Dimensional relationship

● H1 and L5 values (Unit: m)

		PT-RQ13K / RZ12K / RS11K / RZ21K / RS20K	PT-DZ21K2 / DS20K2 / DW17K2 / DZ16K2 / DZ21K / DS20K / DW17K / DZ16K
ET-PKD520H	H1	0.561 – 0.681	0.560 – 0.680
	L5	0.298	0.298
ET-PKD520S	H1	0.248	0.247
	L5	0.298	0.298

● L1 values (Unit: m)

	PT-RQ13K / RZ12K / RS11K / DZ21K2 / DS20K2 / DW17K2 / DZ16K2 / DZ21K / DS20K / DW17K / DZ16K / RZ21K / RS20K
ET-D75LE6	0.212
ET-D75LE8	0.254
ET-D75LE10	0.125
ET-D75LE20	0.121
ET-D75LE30	0.121
ET-D75LE40	0.124
ET-D75LE50	0.203

● Formulas for calculating projection distance by projection lens

Check the projected image size SD (m) and use the following formula to determine projection distance.

(Values obtained by the calculation formulas in the tables below contain a slight error.)

When calculating a projection distance using image size designation (value in inches), multiply the value in inches by 0.0254 and substitute it into SD in the formula for calculating the projection distance.

> **Note**
>
> ● The throw ratios are based on values during projection of 3.81 m (150") projected image size.

PT-RZ12K / DZ21K2 / DZ21K / RZ21K (Unit: m)

Projection Lens	Throw ratio	Aspect ratio	Projection distance (L) formula	
			Min. (LW)	Max. (LT)
ET-D75LE6	0.924 – 1.10 : 1	16 : 10	$= 0.7979 \times SD - 0.0566$	$= 0.9559 \times SD - 0.0736$
		16 : 9	$= 0.8201 \times SD - 0.0566$	$= 0.9825 \times SD - 0.0736$
	1.12 – 1.32 : 1	4 : 3	$= 0.9032 \times SD - 0.0566$	$= 1.0822 \times SD - 0.0736$
ET-D75LE10	1.30 – 1.67 : 1	16 : 10	$= 1.1186 \times SD - 0.0857$	$= 1.4458 \times SD - 0.1085$
		16 : 9	$= 1.1497 \times SD - 0.0857$	$= 1.4860 \times SD - 0.1085$
	1.56 – 2.01 : 1	4 : 3	$= 1.2663 \times SD - 0.0857$	$= 1.6367 \times SD - 0.1085$
ET-D75LE20	1.67 – 2.41 : 1	16 : 10	$= 1.4312 \times SD - 0.0832$	$= 2.0795 \times SD - 0.1162$
		16 : 9	$= 1.4709 \times SD - 0.0832$	$= 2.1373 \times SD - 0.1162$
	2.00 – 2.90 : 1	4 : 3	$= 1.6202 \times SD - 0.0832$	$= 2.3542 \times SD - 0.1162$
ET-D75LE30	2.40 – 4.66 : 1	16 : 10	$= 2.0647 \times SD - 0.1131$	$= 4.0041 \times SD - 0.1765$
	2.41 – 4.66 : 1	16 : 9	$= 2.1221 \times SD - 0.1131$	$= 4.1155 \times SD - 0.1765$
	2.89 – 5.60 : 1	4 : 3	$= 2.3374 \times SD - 0.1131$	$= 4.5330 \times SD - 0.1765$
ET-D75LE40	4.62 – 7.38 : 1	16 : 10	$= 3.9532 \times SD - 0.1577$	$= 6.3027 \times SD - 0.1615$
		16 : 9	$= 4.0631 \times SD - 0.1577$	$= 6.4779 \times SD - 0.1615$
	5.55 – 8.86 : 1	4 : 3	$= 4.4754 \times SD - 0.1577$	$= 7.1351 \times SD - 0.1615$
ET-D75LE8	7.34 – 13.8 : 1	16 : 10	$= 6.3193 \times SD - 0.3862$	$= 11.8400 \times SD - 0.3598$
		16 : 9	$= 6.4950 \times SD - 0.3862$	$= 12.1692 \times SD - 0.3598$
	8.82 – 16.6 : 1	4 : 3	$= 7.1540 \times SD - 0.3862$	$= 13.4039 \times SD - 0.3598$
ET-D75LE50	0.694 : 1	16 : 10	$= 0.6072 \times SD - 0.0713$	
	0.695 : 1	16 : 9	$= 0.6240 \times SD - 0.0713$	
	0.836 : 1	4 : 3	$= 0.6873 \times SD - 0.0713$	

PT-RS11K / DS20K2 / DS20K / RS20K

(Unit: m)

Projection Lens	Throw ratio	Aspect ratio	Projection distance (L) formula	
			Min. (LW)	Max. (LT)
ET-D75LE6	1.01 – 1.19 : 1	4 : 3	= 0.8150 × SD − 0.0566	= 0.9764 × SD − 0.0736
		16 : 9	= 0.8877 × SD − 0.0566	= 1.0636 × SD − 0.0736
ET-D75LE10	1.41 – 1.81 : 1	4 : 3	= 1.1425 × SD − 0.0857	= 1.4767 × SD − 0.1085
		16 : 9	= 1.2446 × SD − 0.0857	= 1.6086 × SD − 0.1085
ET-D75LE20	1.80 – 2.61 : 1	4 : 3	= 1.4618 × SD − 0.0832	= 2.1241 × SD − 0.1162
	1.81 – 2.61 : 1	16 : 9	= 1.5924 × SD − 0.0832	= 2.3137 × SD − 0.1162
ET-D75LE30	2.60 – 5.05 : 1	4 : 3	= 2.1089 × SD − 0.1131	= 4.0899 × SD − 0.1765
	2.61 – 5.05 : 1	16 : 9	= 2.2972 × SD − 0.1131	= 4.4552 × SD − 0.1765
ET-D75LE40	5.00 – 7.99 : 1	4 : 3	= 4.0379 × SD − 0.1577	= 6.4377 × SD − 0.1615
		16 : 9	= 4.3985 × SD − 0.1577	= 7.0126 × SD − 0.1615
ET-D75LE8	7.95 – 14.9 : 1	4 : 3	= 6.4547 × SD − 0.3862	= 12.0937 × SD − 0.3598
	7.96 – 15.0 : 1	16 : 9	= 7.0312 × SD − 0.3862	= 13.1737 × SD − 0.3598
ET-D75LE50	0.752 : 1	4 : 3	= 0.6202 × SD − 0.0713	
	0.754 : 1	16 : 9	= 0.6755 × SD − 0.0713	

PT-DW17K2 / DW17K

(Unit: m)

Projection Lens	Throw ratio	Aspect ratio	Projection distance (L) formula	
			Min. (LW)	Max. (LT)
ET-D75LE6	1.0 – 1.2 : 1	16 : 9	= 0.9094 × SD − 0.0566	= 1.0906 × SD − 0.0736
	1.4 – 1.6 : 1	4 : 3	= 1.1142 × SD − 0.0566	= 1.3346 × SD − 0.0736
ET-D75LE10	1.4 – 1.9 : 1	16 : 9	= 1.2759 × SD − 0.0857	= 1.6491 × SD − 0.1085
	1.9 – 2.5 : 1	4 : 3	= 1.5620 × SD − 0.0857	= 2.0190 × SD − 0.1085
ET-D75LE20	1.8 – 2.7 : 1	16 : 9	= 1.6324 × SD − 0.0832	= 2.3720 × SD − 0.1162
	2.5 – 3.6 : 1	4 : 3	= 1.9986 × SD − 0.0832	= 2.9040 × SD − 0.1162
ET-D75LE30	2.7 – 5.2 : 1	16 : 9	= 2.3550 × SD − 0.1131	= 4.5673 × SD − 0.1765
	3.6 – 6.9 : 1	4 : 3	= 2.8833 × SD − 0.1131	= 5.5917 × SD − 0.1765
ET-D75LE40	5.1 – 8.2 : 1	16 : 9	= 4.5092 × SD − 0.1577	= 7.1891 × SD − 0.1615
	6.8 – 10.9 : 1	4 : 3	= 5.5206 × SD − 0.1577	= 8.8016 × SD − 0.1615
ET-D75LE8	8.2 – 15.4 : 1	16 : 9	= 7.2087 × SD − 0.3862	= 13.5039 × SD − 0.3598
	10.9 – 20.5 : 1	4 : 3	= 8.8228 × SD − 0.3862	= 16.5354 × SD − 0.3598
ET-D75LE50	0.8 : 1	16 : 9	= 0.6925 × SD − 0.0713	
	1.0 : 1	4 : 3	= 0.8479 × SD − 0.0713	

PT-DZ16K2 / DZ16K

(Unit: m)

Projection Lens	Throw ratio	Aspect ratio	Projection distance (L) formula	
			Min. (LW)	Max. (LT)
ET-D75LE6	0.9 – 1.1 : 1	16 : 9	= 0.8201 × SD − 0.0566	= 0.9825 × SD − 0.0736
	1.2 – 1.5 : 1	4 : 3	= 1.0036 × SD − 0.0566	= 1.2024 × SD − 0.0736
ET-D75LE10	1.3 – 1.7 : 1	16 : 9	= 1.1497 × SD − 0.0857	= 1.4860 × SD − 0.1085
	1.7 – 2.2 : 1	4 : 3	= 1.4070 × SD − 0.0857	= 1.8186 × SD − 0.1085
ET-D75LE20	1.7 – 2.4 : 1	16 : 9	= 1.4709 × SD − 0.0832	= 2.1373 × SD − 0.1162
	2.2 – 3.2 : 1	4 : 3	= 1.8002 × SD − 0.0832	= 2.6157 × SD − 0.1162
ET-D75LE30	2.4 – 4.7 : 1	16 : 9	= 2.1221 × SD − 0.1131	= 4.1155 × SD − 0.1765
	3.2 – 6.2 : 1	4 : 3	= 2.5971 × SD − 0.1131	= 5.0367 × SD − 0.1765
ET-D75LE40	4.6 – 7.4 : 1	16 : 9	= 4.0631 × SD − 0.1577	= 6.4779 × SD − 0.1615
	6.2 – 9.9 : 1	4 : 3	= 4.9726 × SD − 0.1577	= 7.9279 × SD − 0.1615
ET-D75LE8	7.3 – 13.8 : 1	16 : 9	= 6.4950 × SD − 0.3862	= 12.1692 × SD − 0.3598
	9.8 – 18.5 : 1	4 : 3	= 7.9489 × SD − 0.3862	= 14.8932 × SD − 0.3598
ET-D75LE50	0.7 : 1	16 : 9	= 0.6240 × SD − 0.0713	
	0.9 : 1	4 : 3	= 0.7637 × SD − 0.0713	

Standard installation dimensions (continued)

PT-RQ13K (Unit: m)

Projection Lens	Throw ratio	Aspect ratio	Projection distance (L) formula	
			Min. (LW)	Max. (LT)
ET-D75LE6	1.0 – 1.2 : 1	16 : 10	= 0.8549 × SD − 0.0566	= 1.0242 × SD − 0.0736
		16 : 9	= 0.8786 × SD − 0.0566	= 1.0527 × SD − 0.0736
	1.2 – 1.4 : 1	4 : 3	= 0.9679 × SD − 0.0566	= 1.1596 × SD − 0.0736
ET-D75LE10	1.4 – 1.8 : 1	16 : 10	= 1.1985 × SD − 0.0857	= 1.5490 × SD − 0.1085
		16 : 9	= 1.2318 × SD − 0.0857	= 1.5921 × SD − 0.1085
	1.7 – 2.2 : 1	4 : 3	= 1.3569 × SD − 0.0857	= 1.7538 × SD − 0.1085
ET-D75LE20	1.8 – 2.6 : 1	16 : 10	= 1.5334 × SD − 0.0832	= 2.2280 × SD − 0.1162
		16 : 9	= 1.5760 × SD − 0.0832	= 2.2900 × SD − 0.1162
	2.1 – 3.1 : 1	4 : 3	= 1.7361 × SD − 0.0832	= 2.5226 × SD − 0.1162
ET-D75LE30	2.6 – 5.0 : 1	16 : 10	= 2.2121 × SD − 0.1131	= 4.2901 × SD − 0.1765
		16 : 9	= 2.2736 × SD − 0.1131	= 4.4094 × SD − 0.1765
	3.1 – 6.0 : 1	4 : 3	= 2.5046 × SD − 0.1131	= 4.8573 × SD − 0.1765
ET-D75LE40	4.9 – 7.9 : 1	16 : 10	= 4.2356 × SD − 0.1577	= 6.7529 × SD − 0.1615
		16 : 9	= 4.3534 × SD − 0.1577	= 6.9406 × SD − 0.1615
	5.9 – 9.5 : 1	4 : 3	= 4.7955 × SD − 0.1577	= 7.6456 × SD − 0.1615
ET-D75LE8	7.9 – 13.8 : 1	16 : 10	= 6.7707 × SD − 0.3862	= 12.6858 × SD − 0.3598
		16 : 9	= 6.9590 × SD − 0.3862	= 13.0385 × SD − 0.3598
	9.5 – 13.8 : 1	4 : 3	= 7.6658 × SD − 0.3862	= 14.3627 × SD − 0.3598
ET-D75LE50	0.7 : 1	16 : 10	= 0.6505 × SD − 0.0713	
		16 : 9	= 0.6686 × SD − 0.0713	
	0.9 : 1	4 : 3	= 0.7365 × SD − 0.0713	

Standard installation dimensions (continued)

<When using the ET-D75LE95 / ET-D75LE90 Fixed-focus lens>

The dimensional relationship between the screen and the projector is shown below.
Establish the dimensions after assessing the area possible for installation.

■ Dimensional relationship diagram

● The illustration shows the ET-PKD520H ceiling mount bracket mounted on a projector.

(Units: mm ("))

Ceiling

For the ET-PKD520H:
419 - 539*(16-1/2" - 21-7/32")

For the ET-PKD520S: 106*(4-3/16")

* Includes the thickness of the attachment plate.

L4

H1

A1

L5

Projected image

SH

SD

SH

L3

L1

SW

L2

SW

314
(12-3/8")

175 (6-7/8")

Screen

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	Image height		L4	From screen to rear of projector
SW	Image width		L5	From center of attachment plate to front of projector
SD	Projected image size		A1	From top edge of screen to top of projector
L1	Projection distance (from screen to mirror reflective surface*)		H1	From bottom of set (the surface in contact with this product) to top of projector
L2	From screen to tip of lens			
L3	From screen to front of projector			

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

Attention

- Install the projector with at least 500 mm (19-11/16") gap from the surrounding walls or objects in order to ensure that the air intake/exhaust ports of the projector will not be blocked.
- Avoid setting up in places which are subject to sudden temperature changes, such as near an air conditioner or lighting equipment (studio lamps, etc.).
- Regardless of the projector model, set up the projector so that the projected image is rectangular and the back of the projector and the screen are parallel. Depending on your projector, however, keystone distortion correction via the [GEOMETRY] function may be possible, even after setup. For details, refer to "Setting up" in the operating instructions of the projector.

Note

- Dimension L4 is not the distance from the projector rear panel to the wall, but the distance from the projector rear panel to the screen.
- When [GEOMETRY] is used, correction is performed in the direction that results in a screen smaller than the specified screen size.
- The illustrations of projectors in this manual are for informational purposes only and do not represent a specific model. Configurations may vary with the model.

■ **Dimensional relationship**

● H1 and L5 values   (Unit: m)

	PT-RQ13K / RZ12K / RS11K / RZ21K / RS20K	PT-DZ21K2 / DS20K2 / DW17K2 / DZ16K2 / DZ21K / DS20K / DW17K / DZ16K
H1	0.270	0.255
L5	0.298	0.298

● L1, A1 calculation formula

Check the projected image size SD (m) and use each formula to determine projection distance (L1) and top of set to top edge of screen (A1).

By determining L1 and A1, you can calculate all other dimensions.

(Values obtained by the calculation formulas contain a slight error.)

When calculating a projection distance using image size designation (value in inches), multiply the value in inches by 0.0254 and substitute it into SD in the formula for calculating the projection distance.

PT-RZ12K / RZ21K   (Unit: m)

		Aspect ratio 16 : 10 (Throw ratio [0.36 : 1])	Aspect ratio 16 : 9 (Throw ratio [0.36 : 1])	Aspect ratio 4 : 3 (Throw ratio [0.44 : 1])
L1		$= 0.303 \times SD + 0.020$	$= 0.312 \times SD + 0.020$	$= 0.343 \times SD + 0.020$
A1	Min.	$= 0.229 \times SH - 0.128$	$= 0.254 \times SH - 0.128$	$= 0.229 \times SH - 0.128$
	Max.	$= 0.283 \times SH - 0.128$	$= 0.370 \times SH - 0.128$	$= 0.283 \times SH - 0.128$

PT-RS11K / RS20K   (Unit: m)

		Aspect ratio 4 : 3 (Throw ratio [0.39 : 1])	Aspect ratio 16 : 9 (Throw ratio [0.39 : 1])
L1		$= 0.310 \times SD + 0.020$	$= 0.337 \times SD + 0.020$
A1	Min.	$= 0.206 \times SH - 0.128$	$= 0.275 \times SH - 0.128$
	Max.		$= 0.441 \times SH - 0.128$

PT-DZ21K2 / DZ21K   (Unit: m)

		Aspect ratio 16 : 10 (Throw ratio [0.36 : 1])	Aspect ratio 16 : 9 (Throw ratio [0.36 : 1])	Aspect ratio 4 : 3 (Throw ratio [0.44 : 1])
L1		$= 0.303 \times SD + 0.020$	$= 0.312 \times SD + 0.020$	$= 0.343 \times SD + 0.020$
A1	Min.	$= 0.229 \times SH - 0.114$	$= 0.254 \times SH - 0.114$	$= 0.229 \times SH - 0.114$
	Max.	$= 0.283 \times SH - 0.114$	$= 0.370 \times SH - 0.114$	$= 0.283 \times SH - 0.114$

Standard installation dimensions (continued)

PT-DS20K2 / DS20K (Unit: m)

		Aspect ratio 4 : 3 (Throw ratio [0.39 : 1])	Aspect ratio 16 : 9 (Throw ratio [0.39 : 1])
L1		= 0.310 × SD + 0.020	= 0.337 × SD + 0.020
A1	Min.	= 0.206 × SH − 0.114	= 0.275 × SH − 0.114
	Max.		= 0.441 × SH − 0.114

PT-DW17K2 / DW17K (Unit: m)

		Aspect ratio 16 : 9 (Throw ratio [0.40 : 1])	Aspect ratio 4 : 3 (Throw ratio [0.54 : 1])
L1		= 0.346 × SD + 0.020	= 0.423 × SD + 0.020
A1	Min.	= 0.282 × SH − 0.114	
	Max.	= 0.466 × SH − 0.114	

PT-DZ16K2 / DZ16K (Unit: m)

		Aspect ratio 16 : 9 (Throw ratio [0.36 : 1])	Aspect ratio 4 : 3 (Throw ratio [0.48 : 1])
L1		= 0.312 × SD + 0.020	= 0.381 × SD + 0.020
A1	Min.	= 0.254 × SH − 0.114	
	Max.	= 0.370 × SH − 0.114	

PT-RQ13K (Unit: m)

		Aspect ratio 16 : 10 (Throw ratio [0.39 : 1])	Aspect ratio 16 : 9 (Throw ratio [0.39 : 1])	Aspect ratio 4 : 3 (Throw ratio [0.47 : 1])
L1		= 0.325 × SD + 0.020	= 0.334 × SD + 0.020	= 0.368 × SD + 0.020
A1	Min.	= 0.245 × SH − 0.128	= 0.272 × SH − 0.128	= 0.245 × SH − 0.128
	Max.	= 0.339 × SH − 0.128	= 0.432 × SH − 0.128	= 0.339 × SH − 0.128

● L2, L3, and L4 calculation formula (Unit: m)

	PT-RQ13K / RZ12K / RS11K / RZ21K / RS20K	PT-DZ21K2 / DS20K2 / DW17K2 / DZ16K2 / DZ21K / DS20K / DW17K / DZ16K
L2	= L1 + 0.029	= L1 + 0.029
L3	= L1 − 0.277	= L1 − 0.277
L4	= L1 − 1.002	= L1 − 1.007

Installation

After checking the height, width, and structure of the installation location while referring to "Standard installation dimensions" on pages 5 to 11, determine the appropriate positions for setting up the screen and installing the projector.

● The [GEOMETRY] function cannot be used when projecting images in the simultaneous format with a PT-RQ13K series DLP™ Projector. When installing the unit on a PT-RQ13K series projector and projecting images in the simultaneous format, obey the following to prevent distortion in the projected image.
  - Use a flat screen.
  - Install the projector so that the front side of the projector is parallel to the screen.
  - Install the projector so that the image can be projected within the range of shift adjustment by moving the lens position.

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.

Installation (continued)

Screws tightening torques

M6.........................4±0.5 N•m
M10 and 3/8" ....20±1 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).

"FRONT" inscription

Projector mount bracket
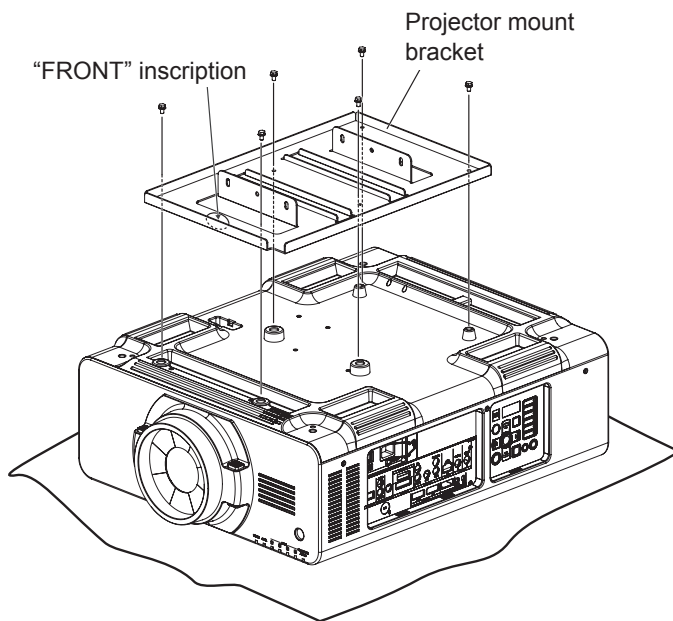
1) Place the projector upside-down onto a piece of soft material.

2) Firmly secure the projector mount bracket to the bottom of the projector using the six supplied captive washer hex head bolts (M6 × 30) as shown in the figure on the left.

Attaching the wire rope to the projector

Attach the drop-prevention wire rope to the projector (sold separately).

Adjustment feet (four)
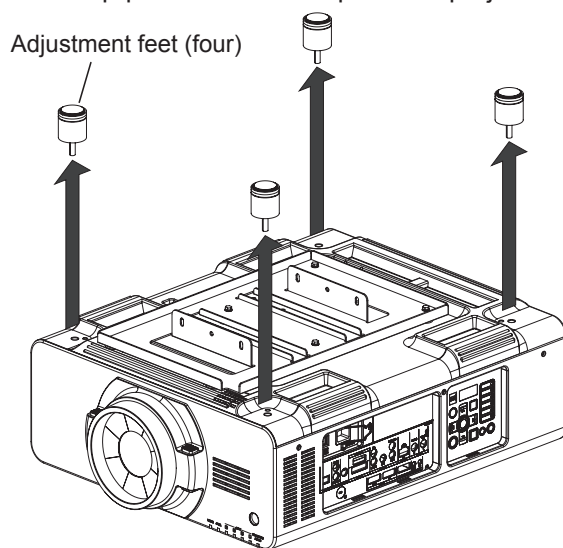
1) Turn the adjustable feet (four) counterclockwise to remove it from the projector.

Attention

● The removed adjustable feet are necessary for floor installations, so be sure to store them safely.

Installation (continued)

Hex head bolt, captive washer (M10×40)

Wire rope

Ferrule
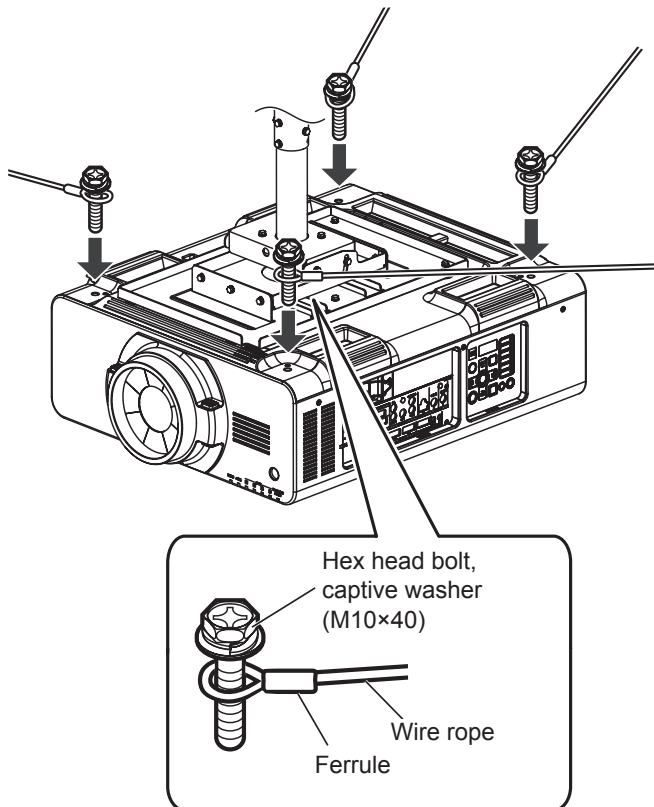
2) As shown in the figure on the left, pass the supplied hex head bolts with washers (M10 × 40) through the rings in the supplied wire rope, and secure the bolts to the threaded holes in which the adjustable feet were previously attached.

Attention

● Be sure to use the supplied hex head bolts with washers and wire rope.
● Secure the supplied hex head bolts with washers (M10 × 40) firmly.
● Stretch the wire ropes with the ferrules pointing toward the outside of the projector.
● For information on how to join this product to the ceiling mount bracket (for high ceilings or for low ceilings) (separately sold) and how to attach the wire rope in the ceiling, refer to the installation instructions or other instructions supplied with the ceiling mount bracket (for high ceilings or for low ceilings).

Note

● The illustration shows an installation using the ET-PKD520H ceiling bracket for high ceilings.

Specifications

External dimensions	Width: 350 mm (13-25/32") Height: 52.5 mm (2-1/16") Depth: 535 mm (21-1/16")
Weight	Approx. 4.1 kg (9.04 lbs.)