

Zoom Lens

This zoom lens is designed for use with Panasonic’s applicable projectors. Powered Vertical and Horizontal lens-shift provides wide-range adjustment after projector installation, saving time and effort. ET-D3LEW200 further enhances flexibility with powered optical zoom.

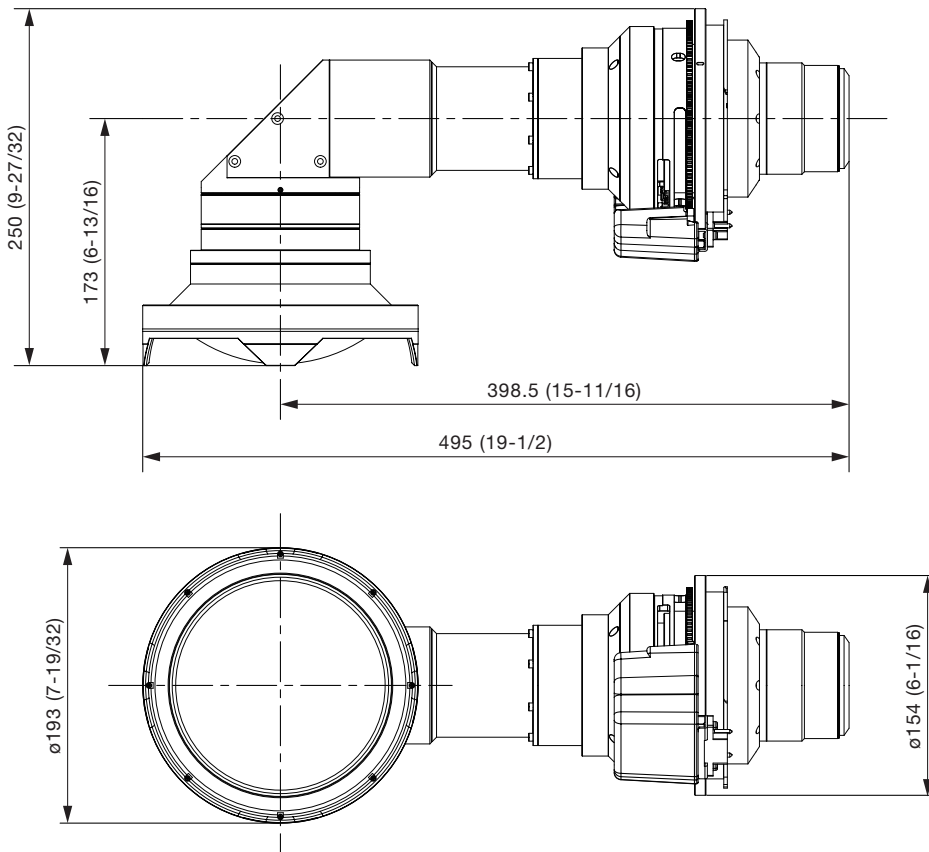
NOTE: Please use the lens only on the specified Panasonic projector.

Specifications

F value:	2.5
Focal Length (f)::	13.8–18.1 mm (17/32–23/32 inches)
Throw ratio:	0.693-0.913:1 for PT-RQ32K/RQ22K (16:10 aspect ratio) 0.645-0.850:1 for PT-RZ31K/RZ21K (16:10 aspect ratio) 0.699-0.921:1 for PT-RS30K/RS20K (4:3 aspect ratio)
Auto Lens Identification function	Compatible models : PT-RQ32K/RZ31K/RS30K/RQ22K/RZ21K/RS20K
Dimensions (W × H × D):	250 × 193 × 495 mm (9-27/32 × 7-19/32 × 19-1/2 inches)
Weight:	Approximately 9.0kg* (19.8 lbs*)
Applicable projector	[Group A] PT-RQ22K/RZ21K/RS20K [Group B] PT-RQ32K/RZ31K/RS30K

NOTE: When using Group B projectors, use of optional lens attachment ET-PLF20 may reduce lens vibration for some installation environments.

Dimensions

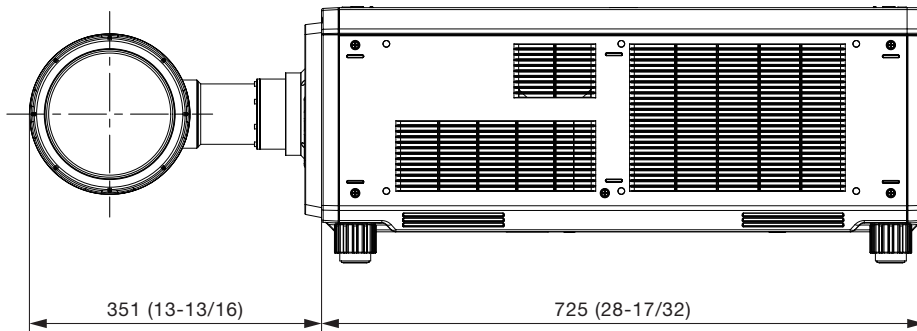


unit : mm (inch)

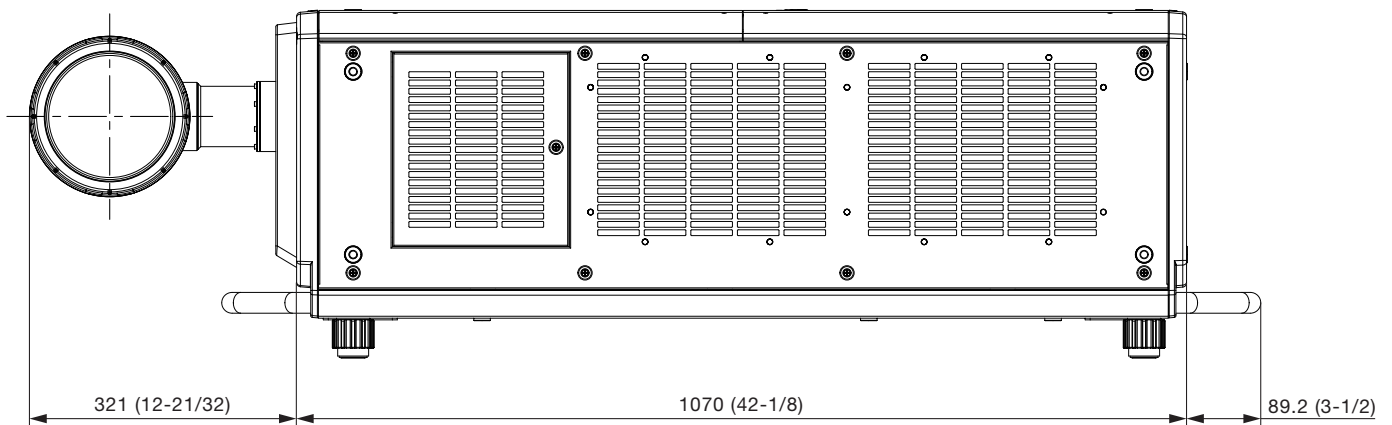
NOTE: This illustration is not drawn to scale.

NOTE: Weights and dimensions shown are approximate. Specifications subject to change without notice.

[Group A] PT-RQ22K/RZ21K/RS20K



[Group B] PT-RQ32K/RZ31K/RS30K

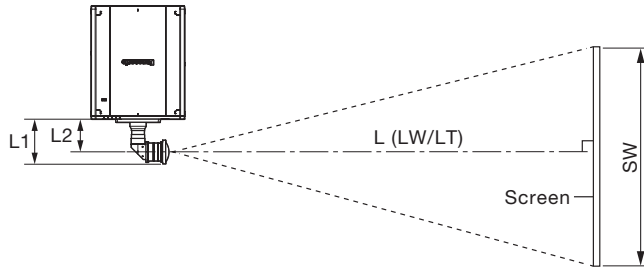
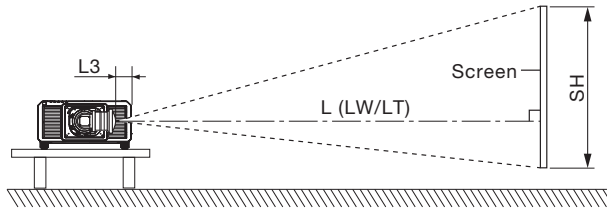
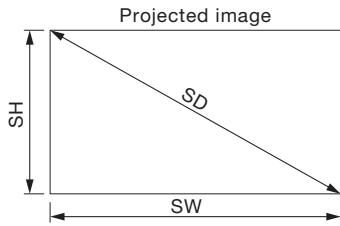


unit : mm (inch)

NOTE: This illustration is not drawn to scale.

NOTE: Weights and dimensions shown are approximate. Specifications subject to change without notice.

Projection relationships



**NOTE**

- This diagram assumes that the size and position of the projected image will be adjusted so that the image fills the entire screen.
- This illustration is not drawn to scale.
- The values are approximate.

L		Projection distance
	LW	Minimum distance
	LT	Maximum distance
L1		Distance from front of projector to edge of lens
L2		Distance from front of projector to center of lens
L3		Distance from side of projector to center of lens
SH		Projected image height
SW		Projected image width
SD		Projected image size

(Unit: m)

Projector model	L1	L2	L3
PT-RQ32K/RZ31K/RS30K	0.32	0.23	0.18
PT-RQ22K/RZ21K/RS20K	0.35	0.26	0.13

## Zoom Lens

### Projection distance

Aspect ratio 16:10

unit: meters (feet)

Projection size (Diagonal) [SD]	Projection size (Height) [SH]	Projection size (Width) [SW]	PT-RQ32K/RQ22K (2560×1600)		PT-RZ31K/RZ21K (1920×1200)	
			Throw ratio[0.693-0.913:1]		Throw ratio[0.645-0.850:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]
5.080 m / 200"	2.692 (8.83)	4.308 (14.13)	2.98 (9.78)	3.93 (12.89)	2.78 (9.12)	3.66 (12.01)
6.350 m / 250"	3.365 (11.04)	5.385 (17.67)	3.75 (12.30)	4.94 (16.21)	3.50 (11.48)	4.61 (15.12)
7.620 m / 300"	4.039 (13.25)	6.462 (21.20)	4.53 (14.86)	5.95 (19.52)	4.22 (13.84)	5.55 (18.21)
8.890 m / 350"	4.712 (15.46)	7.539 (24.73)	5.30 (17.39)	6.96 (22.83)	4.94 (16.21)	6.49 (21.29)
10.160 m / 400"	5.385 (17.67)	8.616 (28.27)	6.07 (19.91)	7.98 (26.18)	5.66 (18.57)	7.44 (24.41)
12.700 m / 500"	6.731 (22.08)	10.770 (35.33)	7.61 (24.97)	10.00 (32.81)	7.09 (23.26)	9.32 (30.58)
15.240 m / 600"	8.077 (26.50)	12.923 (42.40)	9.15 (30.02)	12.02 (39.44)	8.53 (27.99)	11.21 (36.78)

Aspect ratio 16:9

unit: meters (feet)

Projection size (Diagonal) [SD]	Projection size (Height) [SH]	Projection size (Width) [SW]	PT-RQ32K/RQ22K (2560×1440)		PT-RZ31K/RZ21K (1920×1080)		PT-RS30K/RS20K (1400×788)	
			Throw ratio[0.694-0.913:1]		Throw ratio[0.646-0.851:1]		Throw ratio[0.701-0.923:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]	Min [LW]	Max [LT]
5.080 m / 200"	2.491 (8.17)	4.428 (14.53)	3.07 (10.07)	4.05 (13.29)	2.86 (9.38)	3.77 (12.37)	3.10 (10.17)	4.09 (13.42)
6.350 m / 250"	3.113 (10.21)	5.535 (18.16)	3.86 (12.66)	5.08 (16.67)	3.60 (11.81)	4.74 (15.55)	3.90 (12.80)	5.14 (16.86)
7.620 m / 300"	3.736 (12.26)	6.641 (21.79)	4.65 (15.26)	6.12 (20.08)	4.34 (14.24)	5.71 (18.73)	4.70 (15.42)	6.19 (20.31)
8.890 m / 350"	4.358 (14.30)	7.748 (25.42)	5.45 (17.88)	7.16 (23.49)	5.08 (16.67)	6.68 (21.92)	5.50 (18.04)	7.24 (23.75)
10.160 m / 400"	4.981 (16.34)	8.855 (29.05)	6.24 (20.47)	8.20 (26.90)	5.82 (19.09)	7.65 (25.10)	6.30 (20.67)	8.29 (27.20)
12.700 m / 500"	6.226 (20.43)	11.069 (36.32)	7.82 (25.66)	10.28 (33.73)	7.29 (23.92)	9.58 (31.43)	7.91 (25.95)	10.38 (34.05)
15.240 m / 600"	7.472 (24.51)	13.283 (43.58)	9.41 (30.87)	12.35 (40.52)	8.77 (28.77)	11.52 (37.79)	9.51 (31.20)	12.48 (40.94)

Aspect ratio 4:3

unit: meters (feet)

Projection size (Diagonal) [SD]	Projection size (Height) [SH]	Projection size (Width) [SW]	PT-RQ32K/RQ22K (2133×1600)		PT-RZ31K/RZ21K (1600×1200)		PT-RS30K/RS20K (1400×1050)	
			Throw ratio[0.835-1.09:1]		Throw ratio[0.778-1.02:1]		Throw ratio[0.699-0.921:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]	Min [LW]	Max [LT]
5.080 m / 200"	3.048 (10.00)	4.064 (13.33)	3.39 (11.12)	4.47 (14.67)	3.16 (10.37)	4.16 (13.65)	2.84 (9.32)	3.75 (12.30)
6.350 m / 250"	3.810 (12.50)	5.080 (16.67)	4.26 (13.98)	5.61 (18.41)	3.97 (13.02)	5.23 (17.16)	3.57 (11.71)	4.82 (15.81)
7.620 m / 300"	4.572 (15.00)	6.096 (20.00)	5.14 (16.86)	6.76 (22.18)	4.79 (15.72)	6.30 (20.67)	4.31 (14.14)	5.78 (18.96)
8.890 m / 350"	5.334 (17.50)	7.112 (23.33)	6.01 (19.72)	7.90 (25.92)	5.60 (18.37)	7.37 (24.18)	5.04 (16.54)	6.74 (22.11)
10.160 m / 400"	6.096 (20.00)	8.128 (26.67)	6.88 (22.57)	9.04 (29.66)	6.42 (21.06)	8.43 (27.66)	5.78 (18.96)	7.71 (25.29)
12.700 m / 500"	7.620 (25.00)	10.160 (33.33)	8.63 (28.31)	11.33 (37.17)	8.05 (26.41)	10.57 (34.68)	7.25 (23.79)	9.63 (31.59)
15.240 m / 600"	9.144 (30.00)	12.192 (40.00)	10.37 (34.02)	13.62 (44.68)	9.67 (31.73)	12.70 (41.67)	8.72 (28.61)	11.39 (37.37)

Zoom Lens

Calculation of the projection distance

Aspect ratio 16:10

unit: meters

PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0154 - 0.1001$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0202 - 0.1076$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0144 - 0.1001$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0189 - 0.1076$

Aspect ratio 16:9

unit: meters

PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0159 - 0.1001$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0208 - 0.1076$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0148 - 0.1001$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0194 - 0.1076$
PT-RS20K/RS30K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0160 - 0.1001$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0210 - 0.1076$

Aspect ratio 4:3

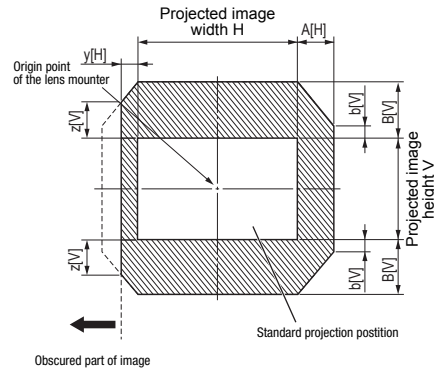
unit: meters

PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0175 - 0.1001$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0229 - 0.1076$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0163 - 0.1001$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0214 - 0.1076$
PT-RS20K/RS30K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0147 - 0.1001$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0193 - 0.1076$

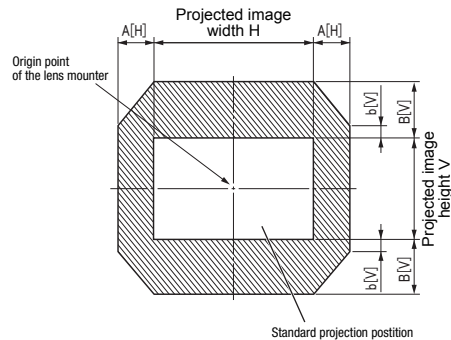
Shift range

Optical axis shift function allows to shift the position of a projected image as shown below.

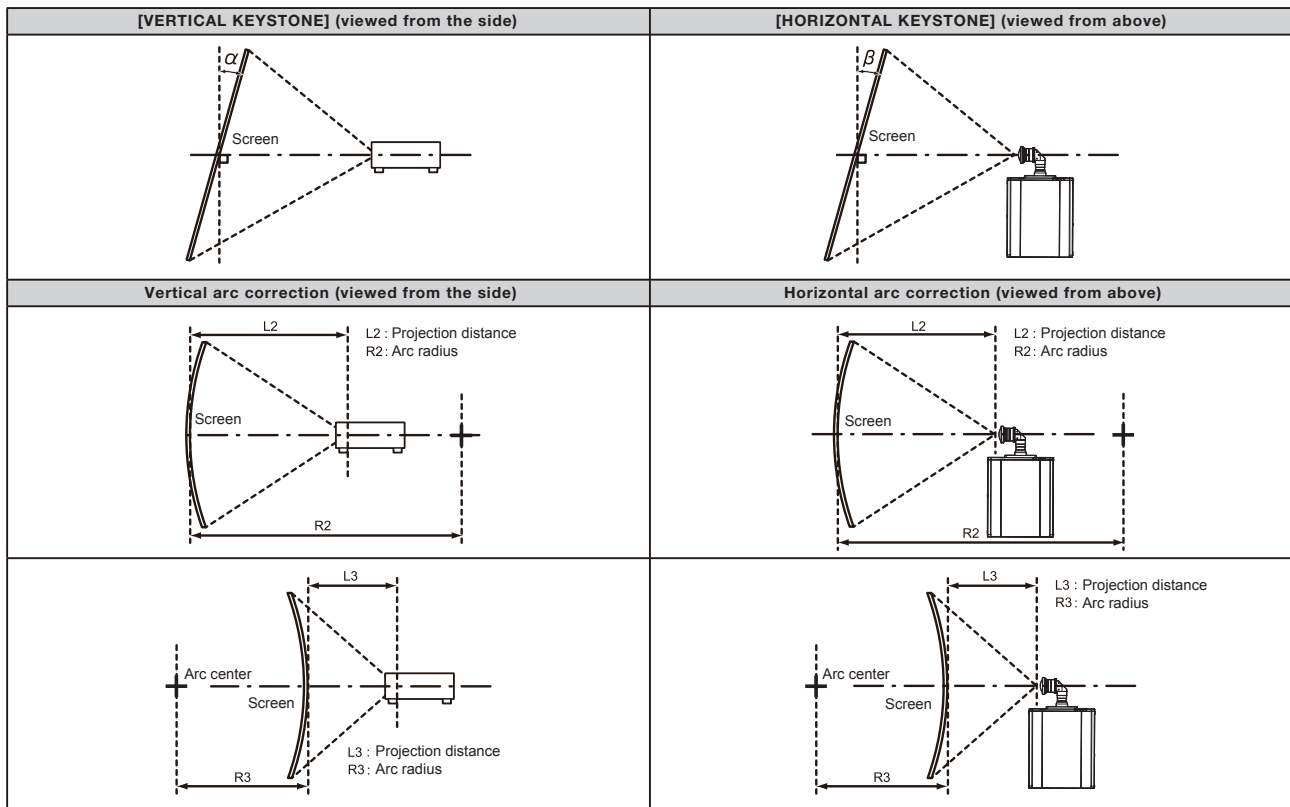
Projector model	A	B	b	y	z
PT-RZ31K	0.15	0.48	0.12	0.05	0.35
PT-RQ32K	0.19	0.56	0.24	0.1	0.39
PT-RS30K	0.18	0.4	0.12	0.14	0.18



Projector model	A	B	b
PT-RZ21K	0.15	0.48	0.12
PT-RQ22K	0.19	0.56	0.24
PT-RS20K	0.18	0.4	0.12



Keystone correction range



Standard status

Projector Model No.	Only [KEYSTONE] used		[KEYSTONE] and [CURVED CORRECTION] used together				Only [CURVED CORRECTION] used	
	Vertical keystone correction angle $\alpha$ (°)	Horizontal keystone correction angle $\beta$ (°)	Vertical keystone correction angle $\alpha$ (°)	Horizontal keystone correction angle $\beta$ (°)	Min. value of R2/L2	Min. value of 3/L3	Min. value of R2/L2	Min. value of R3/L3
PT-RQ32K/RQ22K/ RZ31K/RZ21K/ RS30K/RS20K	± 15	± 5	-	-	-	-	-	-

When using the optional upgrade kit (ET-UK20)

Projector Model No.	Only [KEYSTONE] used		[KEYSTONE] and [CURVED CORRECTION] used together				Only [CURVED CORRECTION] used	
	Vertical keystone correction angle $\alpha$ (°)	Horizontal keystone correction angle $\beta$ (°)	Vertical keystone correction angle $\alpha$ (°)	Horizontal keystone correction angle $\beta$ (°)	Min. value of R2/L2	Min. value of 3/L3	Min. value of R2/L2	Min. value of R3/L3
PT-RQ32K/RQ22K/ RZ31K/RZ21K/ RS30K/RS20K	± 15	± 5	-	-	-	-	-	-