

Zoom Lens

This zoom lens is designed for use with Panasonic’s applicable projectors. The lens makes it possible to vary the projection distance by changing the focal distance.

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

**Specifications**

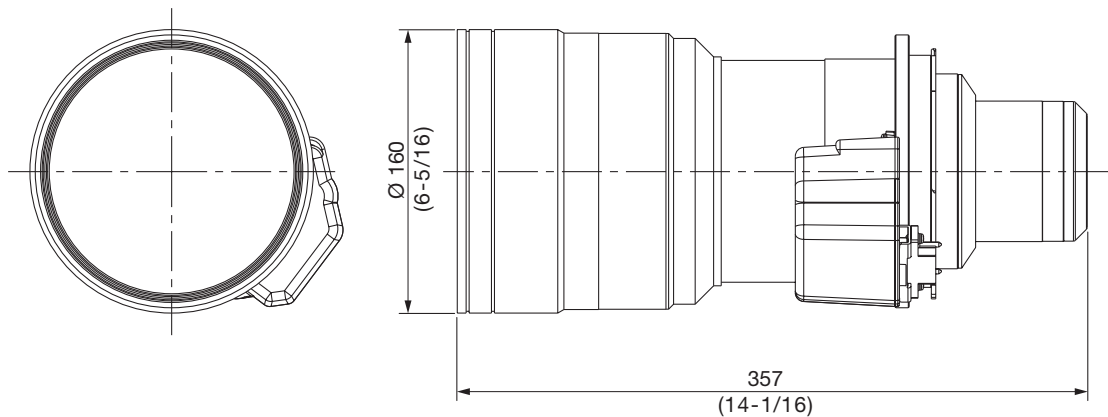
F value:	2.5
Focal distance (f):	19.6– 23.5 mm
Throw ratio:	0.991-1.18:1 for PT-RQ32K/RQ22K (16:10 aspect ratio) 0.924-1.10:1 for PT-RZ31K/RZ21K (16:10 aspect ratio) 1.01-1.19:1 for PT-RS30K/RS20K (4:3 aspect ratio)
Auto Lens Identification function	Compatible models : PT-RQ32K/RZ31K/RS30K/RQ22K/RZ21K/RS20K
Dimensions (W × H × D):	160 × 160 × 357 mm (6-5/16 × 6-5/16 × 14-1/16 inches)
Weight:	Approximately 8.7 kg* (19.2 lbs*)
Applicable projector	[Group A] PT-RZ21K/RS20K PT-RQ22K [Group B] PT-RZ31K/RS30K PT-RQ32K

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PT-RQ35K/RZ34K/RQ25K/RZ24K/RQ18K/RZ17K/RZ16K  
For these projectors see the individual spec files of the projectors

\*Average value. May differ depending on the actual unit.  
The throw ratio is an approximate value calculated by dividing the screen width by the projection distance.

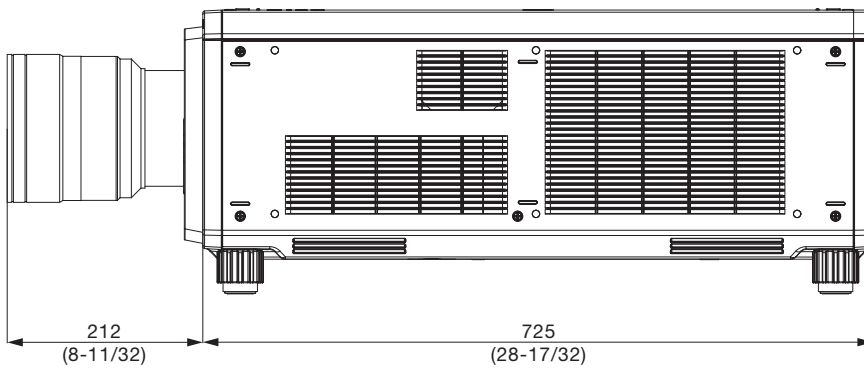
**Dimensions**



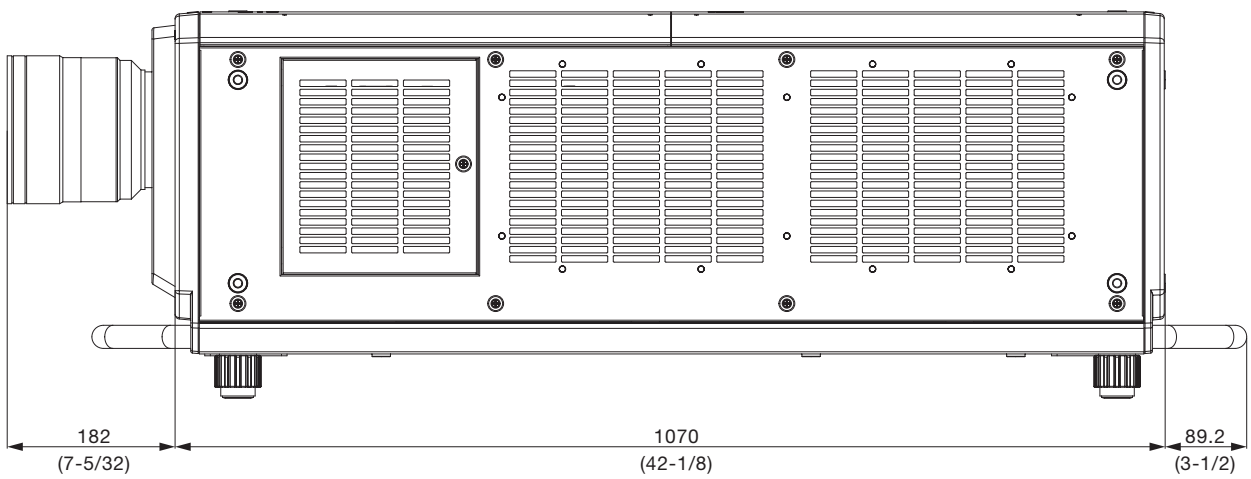
unit : mm (inch)  
**NOTE:** This illustration is not drawn to scale.

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

[Group A]



[Group B]

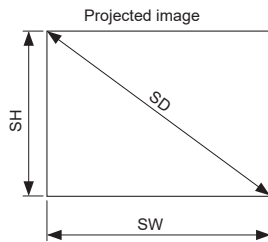


unit : mm (inch)  
NOTE: This illustration is not drawn to scale.

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

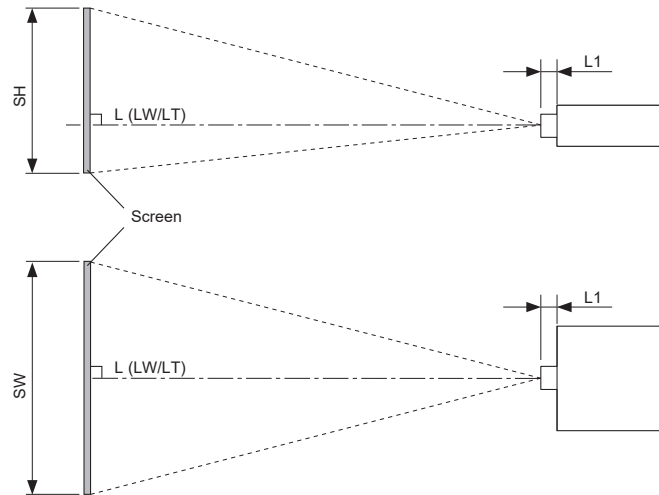
Zoom Lens

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.



L	Projection distance
	LW Minimum distance
	LT Maximum distance
L1	Lens protrusion dimension
SH	Projected image height
SW	Projected image width
SD	Projected image size

(Unit: m)

Projector model	Dimension for L1 (approximate value)
PT-RQ22K/RZ21K/RS20K	0.212
PT-RQ32K/RZ31K/RS30K	0.182

Projection distance

PT-RQ32K/RQ22K/RZ31K/RZ21K  
Aspect ratio 16:10

unit: meters (feet)

Projection size (Diagonal) [SD]	Projection size (Height) [SH]	Projection size (Width) [SW]	PT-RQ32K/RQ22K (2560×1600) Throw ratio[0.991-1.18:1]		PT-RZ31K/RZ21K (WUXGA; 1920×1200) Throw ratio[0.924-1.10:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]
			1.778 m / 70"	0.942 (3.09)	1.508 (4.95)	1.46 (4.8)
2.032 m / 80"	1.077 (3.53)	1.723 (5.65)	1.68 (5.5)	2.01 (6.6)	1.56 (5.1)	1.87 (6.1)
2.286 m / 90"	1.212 (3.98)	1.939 (6.36)	1.90 (6.2)	2.27 (7.4)	1.77 (5.8)	2.11 (6.9)
2.540 m / 100"	1.346 (4.42)	2.154 (7.07)	2.11 (6.9)	2.53 (8.3)	1.97 (6.5)	2.35 (7.7)
3.048 m / 120"	1.615 (5.30)	2.585 (8.48)	2.55 (8.4)	3.05 (10.0)	2.38 (7.8)	2.84 (9.3)
3.810 m / 150"	2.019 (6.62)	3.231 (10.60)	3.20 (10.5)	3.83 (12.6)	2.98 (9.8)	3.57 (11.7)
5.080 m / 200"	2.692 (8.83)	4.308 (14.13)	4.29 (14.1)	5.13 (16.8)	4.00 (13.1)	4.78 (15.7)
6.350 m / 250"	3.365 (11.04)	5.385 (17.67)	5.37 (17.6)	6.43 (21.1)	5.01 (16.4)	6.00 (19.7)
7.620 m / 300"	4.039 (13.25)	6.462 (21.20)	6.46 (21.2)	7.73 (25.4)	6.02 (19.8)	7.21 (23.7)
8.890 m / 350"	4.712 (15.46)	7.539 (24.73)	7.54 (24.7)	9.03 (29.6)	7.04 (23.1)	8.42 (27.6)
10.160 m / 400"	5.385 (17.67)	8.616 (28.27)	8.63 (28.3)	10.33 (33.9)	8.05 (26.4)	9.64 (31.6)
12.700 m / 500"	6.731 (22.08)	10.770 (35.33)	10.80 (35.4)	12.93 (42.4)	10.08 (33.1)	12.07 (39.6)
15.240 m / 600"	8.077 (26.50)	12.923 (42.40)	12.97 (42.6)	15.53 (51.0)	12.10 (39.7)	14.49 (47.5)
17.780 m / 700"	9.423 (30.92)	15.077 (49.47)	15.14 (49.7)	18.14 (59.5)	14.13 (46.4)	16.92 (55.5)
20.320 m / 800"	10.770 (35.33)	17.231 (56.53)	17.31 (56.8)	20.74 (68.0)	16.16 (53.0)	19.35 (63.5)
22.860 m / 900"	12.116 (39.75)	19.385 (63.60)	19.49 (63.9)	23.34 (76.6)	18.18 (59.6)	21.78 (71.5)
25.400 m / 1000"	13.462 (44.17)	21.539 (70.67)	21.66 (71.1)	25.94 (85.1)	20.21 (66.3)	24.21 (79.4)

Zoom Lens

PT-RQ32K/RQ22K/RZ31K/RZ21K/RS30K/RS20K  
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 (1440×788)	
			Throw ratio[0.992-1.18:1]		Throw ratio[7.34-13.8:1]		Throw ratio[1.01-1.19:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]	Min [LW]	Max [LT]
1.778 m / 70"	0.872 (2.86)	1.550 (5.09)	1.51 (5.0)	1.80 (5.9)	1.40 (4.6)	1.67 (5.5)	1.52 (5.0)	1.82 (6.0)
2.032 m / 80"	0.996 (3.27)	1.771 (5.81)	1.73 (5.7)	2.07 (6.8)	1.61 (5.3)	1.92 (6.3)	1.75 (5.7)	2.09 (6.9)
2.286 m / 90"	1.121 (3.68)	1.992 (6.54)	1.95 (6.4)	2.33 (7.6)	1.82 (6.0)	2.17 (7.1)	1.97 (6.5)	2.36 (7.7)
2.540 m / 100"	1.245 (4.08)	2.214 (7.26)	2.18 (7.2)	2.60 (8.5)	2.03 (6.7)	2.42 (7.9)	2.20 (7.2)	2.63 (8.6)
3.048 m / 120"	1.494 (4.90)	2.657 (8.72)	2.62 (8.6)	3.13 (10.3)	2.44 (8.0)	2.92 (9.6)	2.65 (8.7)	3.17 (10.4)
3.810 m / 150"	1.868 (6.13)	3.321 (10.90)	3.29 (10.8)	3.94 (12.9)	3.07 (10.1)	3.67 (12.0)	3.33 (10.9)	3.98 (13.1)
5.080 m / 200"	2.491 (8.17)	4.428 (14.53)	4.41 (14.5)	5.27 (17.3)	4.11 (13.5)	4.92 (16.1)	4.45 (14.6)	5.33 (17.5)
6.350 m / 250"	3.113 (10.21)	5.535 (18.16)	5.52 (18.1)	6.61 (21.7)	5.15 (16.9)	6.17 (20.2)	5.58 (18.3)	6.68 (21.9)
7.620 m / 300"	3.736 (12.26)	6.641 (21.79)	6.64 (21.8)	7.95 (26.1)	6.19 (20.3)	7.41 (24.3)	6.71 (22.0)	8.03 (26.3)
8.890 m / 350"	4.358 (14.30)	7.748 (25.42)	7.75 (25.4)	9.28 (30.4)	7.23 (23.7)	8.66 (28.4)	7.84 (25.7)	9.38 (30.8)
10.160 m / 400"	4.981 (16.34)	8.855 (29.05)	8.87 (29.1)	10.62 (34.8)	8.28 (27.2)	9.91 (32.5)	8.96 (29.4)	10.73 (35.2)
12.700 m / 500"	6.226 (20.43)	11.069 (36.32)	11.10 (36.4)	13.30 (43.6)	10.36 (34.0)	12.40 (40.7)	11.22 (36.8)	13.43 (44.1)
15.240 m / 600"	7.472 (24.51)	13.283 (43.58)	13.33 (43.7)	15.97 (52.4)	12.44 (40.8)	14.90 (48.9)	13.47 (44.2)	16.14 (53.0)
17.780 m / 700"	8.717 (28.60)	15.497 (50.84)	15.57 (51.1)	18.64 (61.2)	14.52 (47.6)	17.39 (57.1)	15.73 (51.6)	18.84 (61.8)
20.320 m / 800"	9.962 (32.68)	17.710 (58.10)	17.80 (58.4)	21.32 (69.9)	16.61 (54.5)	19.89 (65.3)	17.98 (59.0)	21.54 (70.7)
22.860 m / 900"	11.207 (36.77)	19.924 (65.37)	20.03 (65.7)	23.99 (78.7)	18.69 (61.3)	22.39 (73.5)	20.24 (66.4)	24.24 (79.5)
25.400 m / 1000"	12.453 (40.86)	22.138 (72.63)	22.26 (73.0)	26.66 (87.5)	20.77 (68.1)	24.88 (81.6)	22.49 (73.8)	26.94 (88.4)

PT-RQ32K/RQ22K/RZ31K/RZ21K/RS30K/RS20K  
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 (SXGA+; 1400×1050)	
			Throw ratio[1.20-1.42:1]		Throw ratio[1.12-1.32:1]		Throw ratio[1.01-1.19:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]	Min [LW]	Max [LT]
1.778 m / 70"	1.067 (3.50)	1.422 (4.67)	1.66 (5.4)	1.99 (6.5)	1.55 (5.1)	1.85 (6.1)	1.39 (4.6)	1.66 (5.4)
2.032 m / 80"	1.219 (4.00)	1.626 (5.33)	1.91 (6.3)	2.28 (7.5)	1.78 (5.8)	2.13 (7.0)	1.60 (5.2)	1.91 (6.3)
2.286 m / 90"	1.372 (4.50)	1.829 (6.00)	2.16 (7.1)	2.58 (8.5)	2.01 (6.6)	2.40 (7.9)	1.81 (5.9)	2.16 (7.1)
2.540 m / 100"	1.524 (5.00)	2.032 (6.67)	2.40 (7.9)	2.87 (9.4)	2.24 (7.3)	2.68 (8.8)	2.01 (6.6)	2.41 (7.9)
3.048 m / 120"	1.829 (6.00)	2.438 (8.00)	2.89 (9.5)	3.46 (11.4)	2.70 (8.9)	3.22 (10.6)	2.43 (8.0)	2.90 (9.5)
3.810 m / 150"	2.286 (7.50)	3.048 (10.00)	3.63 (11.9)	4.34 (14.2)	3.38 (11.1)	4.05 (13.3)	3.05 (10.0)	3.65 (12.0)
5.080 m / 200"	3.048 (10.00)	4.064 (13.33)	4.86 (15.9)	5.82 (19.1)	4.53 (14.9)	5.42 (17.8)	4.08 (13.4)	4.89 (16.0)
6.350 m / 250"	3.810 (12.50)	5.080 (16.67)	6.09 (20.0)	7.29 (23.9)	5.68 (18.6)	6.80 (22.3)	5.12 (16.8)	6.13 (20.1)
7.620 m / 300"	4.572 (15.00)	6.096 (20.00)	7.32 (24.0)	8.76 (28.7)	6.83 (22.4)	8.17 (26.8)	6.15 (20.2)	7.37 (24.2)
8.890 m / 350"	5.334 (17.50)	7.112 (23.33)	8.55 (28.1)	10.23 (33.6)	7.97 (26.1)	9.55 (31.3)	7.19 (23.6)	8.61 (28.2)
10.160 m / 400"	6.096 (20.00)	8.128 (26.67)	9.78 (32.1)	11.71 (38.4)	9.12 (29.9)	10.92 (35.8)	8.22 (27.0)	9.85 (32.3)
12.700 m / 500"	7.620 (25.00)	10.160 (33.33)	12.24 (40.2)	14.65 (48.1)	11.41 (37.4)	13.67 (44.8)	10.29 (33.8)	12.33 (40.5)
15.240 m / 600"	9.144 (30.00)	12.192 (40.00)	14.69 (48.2)	17.60 (57.7)	13.71 (45.0)	16.42 (53.9)	12.36 (40.6)	14.81 (48.6)
17.780 m / 700"	10.668 (35.00)	14.224 (46.67)	17.15 (56.3)	20.54 (67.4)	16.00 (52.5)	19.17 (62.9)	14.43 (47.3)	17.29 (56.7)
20.320 m / 800"	12.192 (40.00)	16.256 (53.33)	19.61 (64.3)	23.49 (77.1)	18.30 (60.0)	21.92 (71.9)	16.50 (54.1)	19.77 (64.9)
22.860 m / 900"	13.716 (45.00)	18.288 (60.00)	22.07 (72.4)	26.43 (86.7)	20.59 (67.6)	24.66 (80.9)	18.57 (60.9)	22.25 (73.0)
25.400 m / 1000"	15.240 (50.00)	20.320 (66.67)	24.53 (80.5)	29.38 (96.4)	22.89 (75.1)	27.41 (89.9)	20.64 (67.7)	24.73 (81.1)

## Zoom Lens

### Calculation of the projection distance

Aspect ratio 16:10

unit: meters

PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0217 - 0.0566$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0260 - 0.0736$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0203 - 0.0566$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0243 - 0.0736$

Aspect ratio 16:9

unit: meters

PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0223 - 0.0566$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0267 - 0.0736$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0208 - 0.0566$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0250 - 0.0736$
PT-RS30K/RS20K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0225 - 0.0566$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0270 - 0.0736$

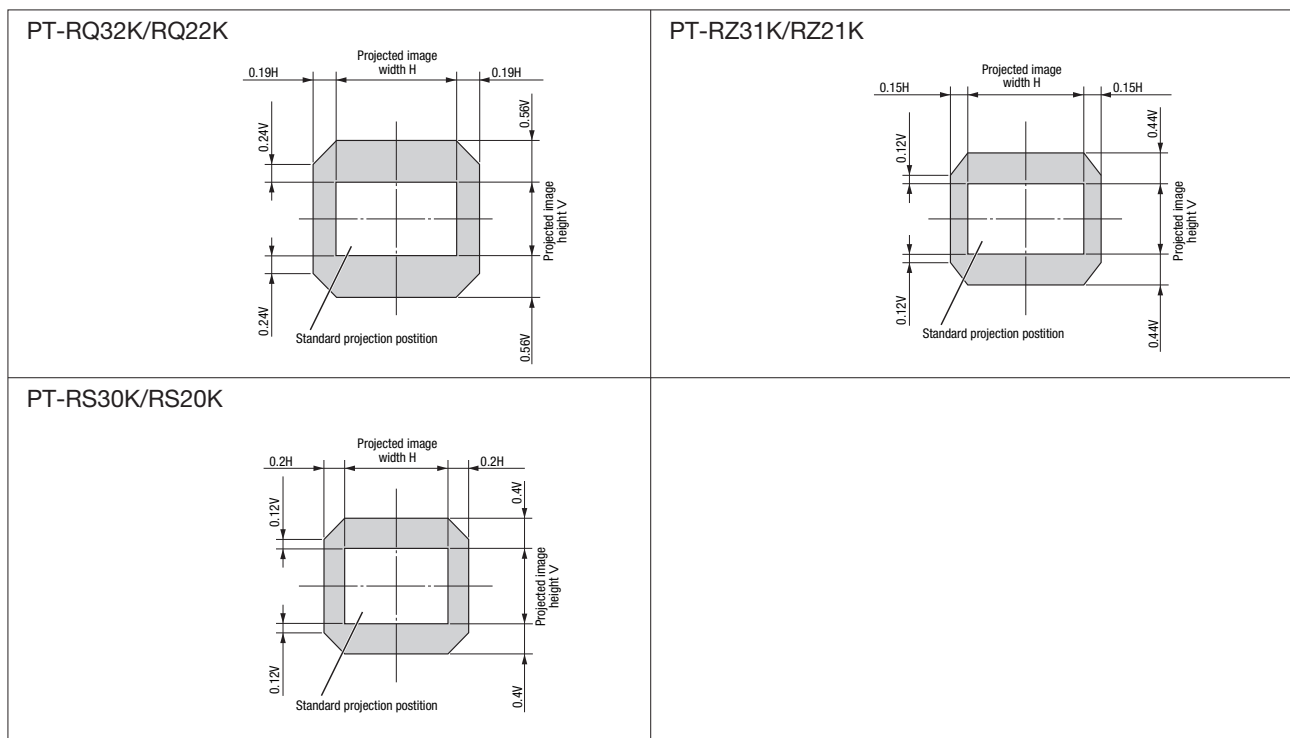
Aspect ratio 4:3

unit: meters

PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0246 - 0.0566$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0295 - 0.0736$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0229 - 0.0566$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0275 - 0.0736$
PT-RS30K/RS20K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0207 - 0.0566$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0248 - 0.0736$

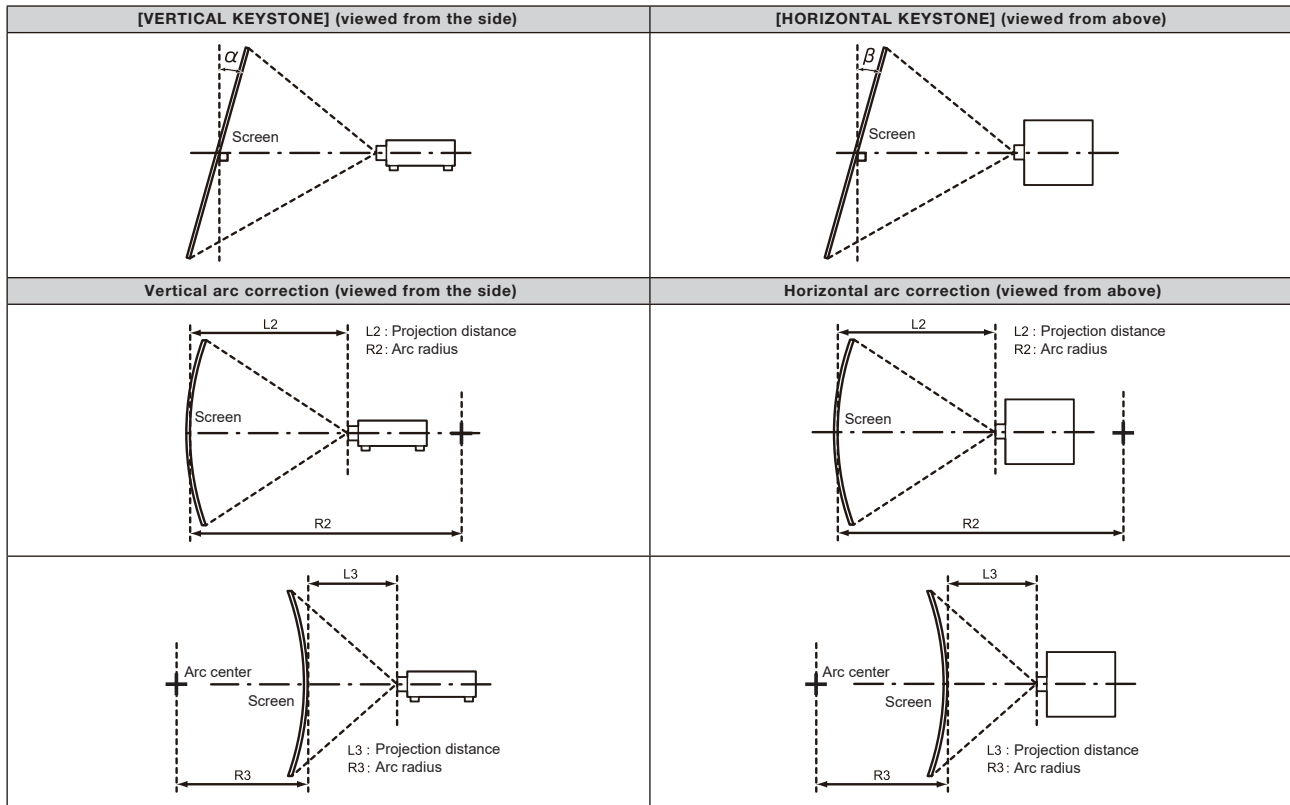
### Shift range

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



Zoom Lens

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	± 28	± 15	± 10	± 10	1.6	3.9	0.9	2.3
PT-RZ31K/RZ21K RS30K/RS20K	± 28	± 15	± 10	± 10	1.6	3.9	0.9	2.3

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	± 28	± 15	± 10	± 10	1.2	3.0	0.7	1.7
PT-RZ31K/RZ21K RS30K/RS20K	± 28	± 15	± 10	± 10	1.2	3.0	0.7	1.7