

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**

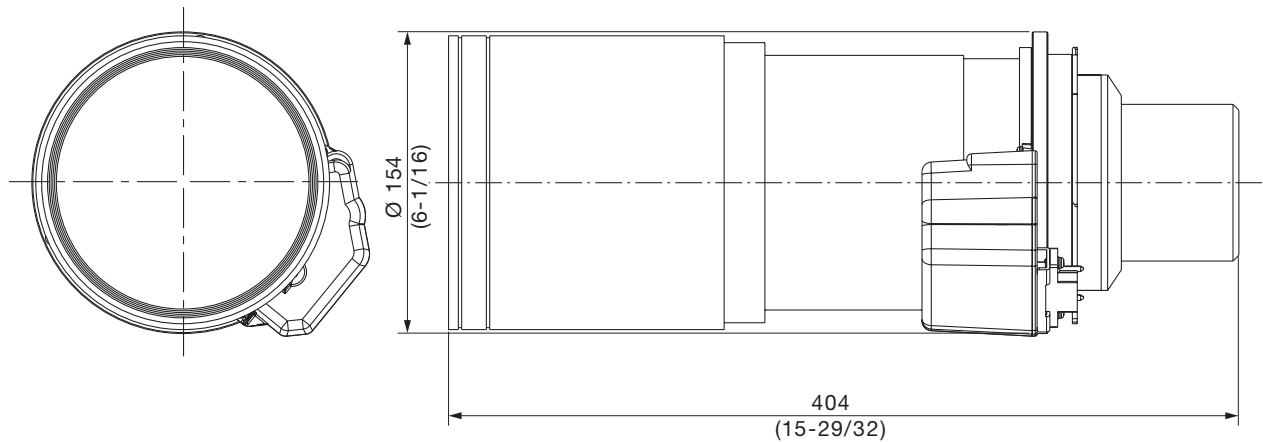
F value:	2.5–2.7
Focal distance (f):	154– 289 mm
Throw ratio:	7.87-14.8:1 for PT-RQ32K/RQ22K (16:10 aspect ratio) 7.34-13.8:1 for PT-RZ31K/RZ21K (16:10 aspect ratio) 7.95-14.9:1 for PT-RS30K/RS20K (4:3 aspect ratio)
Auto Lens Identification function	Compatible models : PT-RQ32K/RZ31K/RS30K/RS22K/RZ21K/RS20K
Dimensions (W × H × D):	154 × 154 × 404 mm (6-1/16 × 6-1/16 × 15-29/32 inches)
Weight:	Approximately 8.5 kg* (18.7 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.

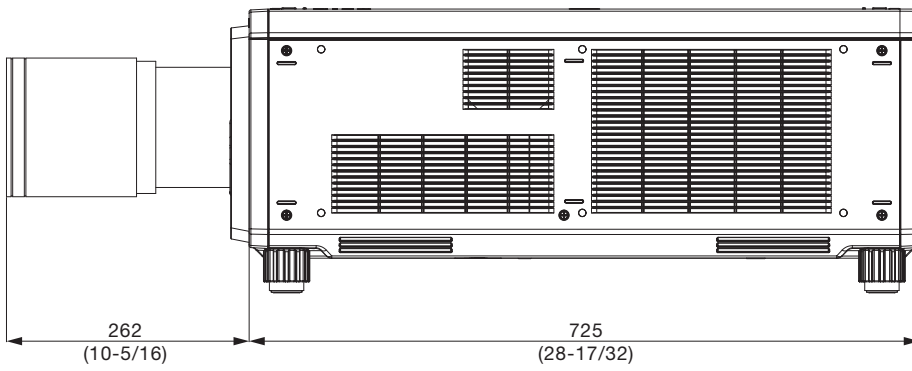
**Dimensions**



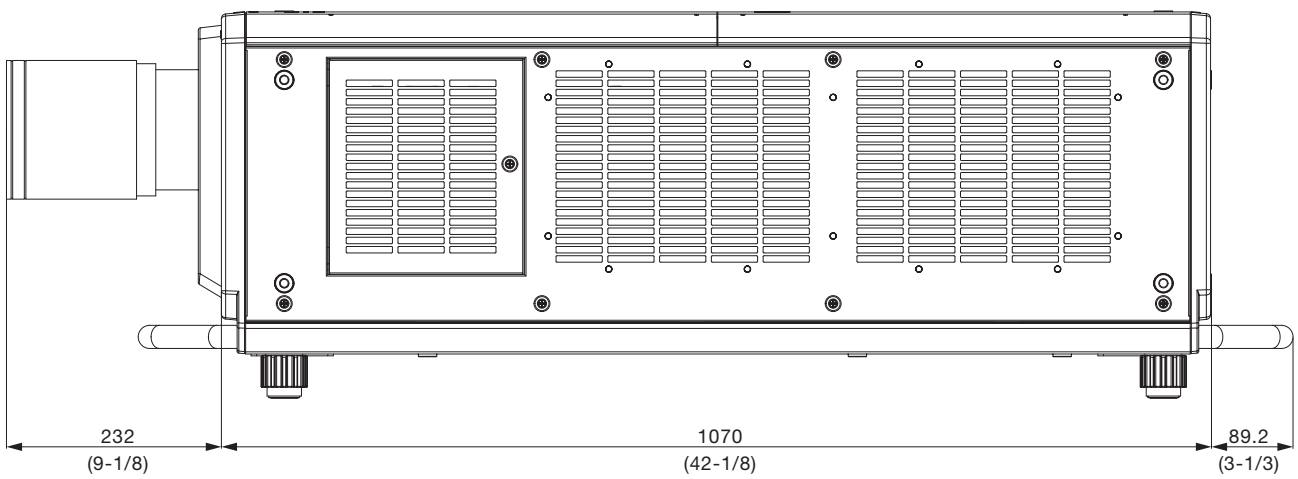
unit : mm (inch)  
**NOTE:** This illustration is not drawn to scale.

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

[Group A]



[Group B]

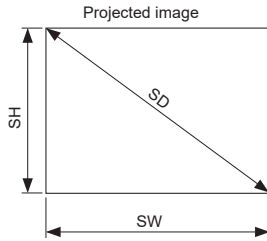


unit : mm (inch)  
NOTE: This illustration is not drawn to scale.

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

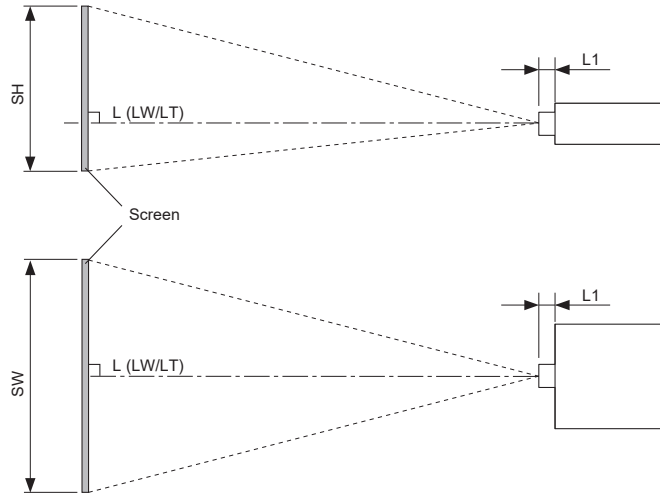
Zoom Lens

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	0.254
PT-RQ32K/RZ31K/RS30K	0.224

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[7.87-14.8:1]		PT-RZ31K/RZ21K (WUXGA; 1920×1200) Throw ratio[7.34-13.8:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]
			1.778 m / 70"	0.942 (3.09)	1.508 (4.95)	11.65 (38.2)
2.032 m / 80"	1.077 (3.53)	1.723 (5.65)	13.37 (43.9)	25.42 (83.4)	12.45 (40.8)	23.70 (77.8)
2.286 m / 90"	1.212 (3.98)	1.939 (6.36)	15.09 (49.5)	28.64 (94.0)	14.06 (46.1)	26.71 (87.6)
2.540 m / 100"	1.346 (4.42)	2.154 (7.07)	16.81 (55.2)	31.86 (104.5)	15.66 (51.4)	29.71 (97.5)
3.048 m / 120"	1.615 (5.30)	2.585 (8.48)	20.25 (66.4)	38.31 (125.7)	18.88 (61.9)	35.73 (117.2)
3.810 m / 150"	2.019 (6.62)	3.231 (10.60)	25.41 (83.4)	47.97 (157.4)	23.69 (77.7)	44.75 (146.8)
5.080 m / 200"	2.692 (8.83)	4.308 (14.13)	34.01 (111.6)	64.08 (210.2)	31.72 (104.1)	59.79 (196.2)
6.350 m / 250"	3.365 (11.04)	5.385 (17.67)	42.61 (139.8)	80.19 (263.1)	39.74 (130.4)	74.82 (245.5)
7.620 m / 300"	4.039 (13.25)	6.462 (21.20)	51.21 (168.0)	96.31 (316.0)	47.77 (156.7)	89.86 (294.8)
8.890 m / 350"	4.712 (15.46)	7.539 (24.73)	59.81 (196.2)	112.42 (368.8)	55.79 (183.0)	104.90 (344.2)
10.160 m / 400"	5.385 (17.67)	8.616 (28.27)	68.40 (224.4)	128.53 (421.7)	63.82 (209.4)	119.94 (393.5)
12.700 m / 500"	6.731 (22.08)	10.770 (35.33)	85.60 (280.8)	160.75 (527.4)	79.87 (262.0)	150.01 (492.2)
15.240 m / 600"	8.077 (26.50)	12.923 (42.40)	102.80 (337.3)	192.97 (633.1)	95.92 (314.7)	180.08 (590.8)
17.780 m / 700"	9.423 (30.92)	15.077 (49.47)	120.00 (393.7)	—	111.97 (367.4)	—
20.320 m / 800"	10.770 (35.33)	17.231 (56.53)	137.19 (450.1)	—	128.02 (420.0)	—
22.860 m / 900"	12.116 (39.75)	19.385 (63.60)	154.39 (506.5)	—	144.07 (472.7)	—
25.400 m / 1000"	13.462 (44.17)	21.539 (70.67)	171.59 (563.0)	—	160.13 (525.4)	—

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 (1400×788)	
			Throw ratio[7.87-14.8:1]		Throw ratio[7.34-13.8:1]		Throw ratio[7.96-15.0:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]	Min [LW]	Max [LT]
1.778 m / 70°	0.872 (2.86)	1.550 (5.09)	11.99 (39.3)	22.82 (74.9)	11.16 (36.6)	21.28 (69.8)	12.12 (39.8)	23.06 (75.7)
2.032 m / 80°	0.996 (3.27)	1.771 (5.81)	13.75 (45.1)	26.13 (85.7)	12.81 (42.0)	24.37 (80.0)	13.90 (45.6)	26.41 (86.6)
2.286 m / 90°	1.121 (3.68)	1.992 (6.54)	15.52 (50.9)	29.45 (96.6)	14.46 (47.4)	27.46 (90.1)	15.69 (51.5)	29.76 (97.6)
2.540 m / 100°	1.245 (4.08)	2.214 (7.26)	17.29 (56.7)	32.76 (107.5)	16.11 (52.9)	30.55 (100.2)	17.47 (57.3)	33.10 (108.6)
3.048 m / 120°	1.494 (4.90)	2.657 (8.72)	20.82 (68.3)	39.38 (129.2)	19.41 (63.7)	36.73 (120.5)	21.04 (69.0)	39.79 (130.5)
3.810 m / 150°	1.868 (6.13)	3.321 (10.90)	26.13 (85.7)	49.32 (161.8)	24.36 (79.9)	46.00 (150.9)	26.40 (86.6)	49.83 (163.5)
5.080 m / 200°	2.491 (8.17)	4.428 (14.53)	34.97 (114.7)	65.88 (216.1)	32.61 (107.0)	61.46 (201.6)	35.33 (115.9)	66.56 (218.4)
6.350 m / 250°	3.113 (10.21)	5.535 (18.16)	43.80 (143.7)	82.43 (270.4)	40.86 (134.1)	76.91 (252.3)	44.26 (145.2)	83.29 (273.3)
7.620 m / 300°	3.736 (12.26)	6.641 (21.79)	52.64 (172.7)	98.99 (324.8)	49.11 (161.1)	92.37 (303.1)	53.19 (174.5)	100.02 (328.1)
8.890 m / 350°	4.358 (14.30)	7.748 (25.42)	61.48 (201.7)	115.55 (379.1)	57.35 (188.2)	107.82 (353.7)	62.12 (203.8)	116.75 (383.0)
10.160 m / 400°	4.981 (16.34)	8.855 (29.05)	70.32 (230.7)	132.11 (433.4)	65.60 (215.2)	123.28 (404.5)	71.05 (233.1)	133.49 (438.0)
12.700 m / 500°	6.226 (20.43)	11.069 (36.32)	87.99 (288.7)	165.23 (542.1)	82.10 (269.4)	154.19 (505.9)	88.91 (291.7)	166.95 (547.7)
15.240 m / 600°	7.472 (24.51)	13.283 (43.58)	105.67 (346.7)	198.35 (650.8)	98.60 (323.5)	185.10 (607.3)	106.77 (350.3)	200.41 (657.5)
17.780 m / 700°	8.717 (28.60)	15.497 (50.84)	123.34 (404.7)	—	115.10 (377.6)	—	124.63 (408.9)	—
20.320 m / 800°	9.962 (32.68)	17.710 (58.10)	141.02 (462.7)	—	131.59 (431.7)	—	142.49 (467.5)	—
22.860 m / 900°	11.207 (36.77)	19.924 (65.37)	158.70 (520.7)	—	148.09 (485.9)	—	160.35 (526.1)	—
25.400 m / 1000°	12.453 (40.86)	22.138 (72.63)	176.37 (578.6)	—	164.59 (540.0)	—	178.21 (584.7)	—

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[9.46-17.8:1]		Throw ratio[8.82-16.6:1]		Throw ratio[7.95-14.9:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]	Min [LW]	Max [LT]
1.778 m / 70°	1.067 (3.50)	1.422 (4.67)	13.24 (43.4)	25.18 (82.6)	12.33 (40.5)	23.47 (77.0)	11.09 (36.4)	21.14 (69.4)
2.032 m / 80°	1.219 (4.00)	1.626 (5.33)	15.19 (49.8)	28.83 (94.6)	14.15 (46.4)	26.88 (88.2)	12.73 (41.8)	24.21 (79.4)
2.286 m / 90°	1.372 (4.50)	1.829 (6.00)	17.14 (56.2)	32.47 (106.5)	15.97 (52.4)	30.28 (99.3)	14.37 (47.1)	27.29 (89.5)
2.540 m / 100°	1.524 (5.00)	2.032 (6.67)	19.08 (62.6)	36.12 (118.5)	17.78 (58.3)	33.69 (110.5)	16.01 (52.5)	30.36 (99.6)
3.048 m / 120°	1.829 (6.00)	2.438 (8.00)	22.98 (75.4)	43.42 (142.5)	21.42 (70.3)	40.50 (132.9)	19.29 (63.3)	36.50 (119.8)
3.810 m / 150°	2.286 (7.50)	3.048 (10.00)	28.82 (94.6)	54.36 (178.3)	26.87 (88.2)	50.71 (166.4)	24.21 (79.4)	45.72 (150.0)
5.080 m / 200°	3.048 (10.00)	4.064 (13.33)	38.56 (126.5)	72.60 (238.2)	35.96 (118.0)	67.73 (222.2)	32.40 (106.3)	61.08 (200.4)
6.350 m / 250°	3.810 (12.50)	5.080 (16.67)	48.29 (158.4)	90.84 (298.0)	45.04 (147.8)	84.75 (278.1)	40.60 (133.2)	76.44 (250.8)
7.620 m / 300°	4.572 (15.00)	6.096 (20.00)	58.03 (190.4)	109.08 (357.9)	54.13 (177.6)	101.78 (333.9)	48.80 (160.1)	91.79 (301.1)
8.890 m / 350°	5.334 (17.50)	7.112 (23.33)	67.76 (222.3)	127.32 (417.7)	63.21 (207.4)	118.80 (389.8)	57.00 (187.0)	107.15 (351.5)
10.160 m / 400°	6.096 (20.00)	8.128 (26.67)	77.50 (254.3)	145.57 (477.6)	72.30 (237.2)	135.82 (445.6)	65.19 (213.9)	122.51 (401.9)
12.700 m / 500°	7.620 (25.00)	10.160 (33.33)	96.97 (318.1)	182.05 (597.3)	90.47 (296.8)	169.87 (557.3)	81.59 (267.7)	153.23 (502.7)
15.240 m / 600°	9.144 (30.00)	12.192 (40.00)	116.44 (382.0)	218.53 (717.0)	108.64 (356.4)	203.91 (669.0)	97.98 (321.5)	183.95 (603.5)
17.780 m / 700°	10.668 (35.00)	14.224 (46.67)	135.91 (445.9)	—	126.81 (416.0)	—	114.38 (375.3)	—
20.320 m / 800°	12.192 (40.00)	16.256 (53.33)	155.38 (509.8)	—	144.98 (475.7)	—	130.77 (429.0)	—
22.860 m / 900°	13.716 (45.00)	18.288 (60.00)	174.85 (573.7)	—	163.15 (535.3)	—	147.17 (482.8)	—
25.400 m / 1000°	15.240 (50.00)	20.320 (66.67)	194.32 (637.5)	—	181.33 (594.9)	—	163.56 (536.6)	—

## Zoom Lens

### Calculation of the projection distance

Aspect ratio 16:10

unit: meters

PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1720 - 0.3862$
	maximum*	$LT (m) = (\text{diagonal screen size in inches}) \times 0.3222 - 0.3598$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1605 - 0.3862$
	maximum*	$LT (m) = (\text{diagonal screen size in inches}) \times 0.3007 - 0.3598$

Aspect ratio 16:9

unit: meters

PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1768 - 0.3862$
	maximum*	$LT (m) = (\text{diagonal screen size in inches}) \times 0.3312 - 0.3598$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1650 - 0.3862$
	maximum*	$LT (m) = (\text{diagonal screen size in inches}) \times 0.3091 - 0.3598$
PT-RS30K/RS20K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1786 - 0.3862$
	maximum*	$LT (m) = (\text{diagonal screen size in inches}) \times 0.3346 - 0.3598$

Aspect ratio 4:3

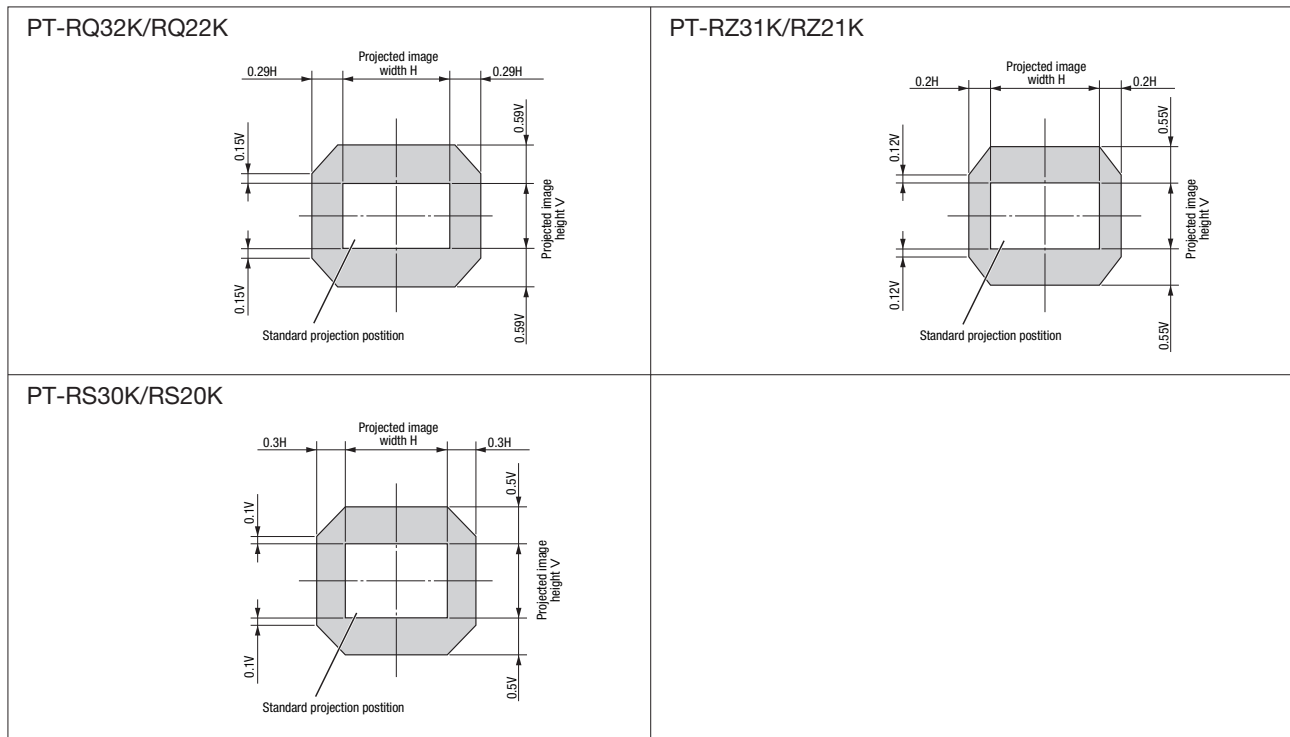
unit: meters

PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1947 - 0.3862$
	maximum*	$LT (m) = (\text{diagonal screen size in inches}) \times 0.3648 - 0.3598$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1817 - 0.3862$
	maximum*	$LT (m) = (\text{diagonal screen size in inches}) \times 0.3405 - 0.3598$
PT-RS30K/RS20K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1639 - 0.3862$
	maximum*	$LT (m) = (\text{diagonal screen size in inches}) \times 0.3072 - 0.3598$

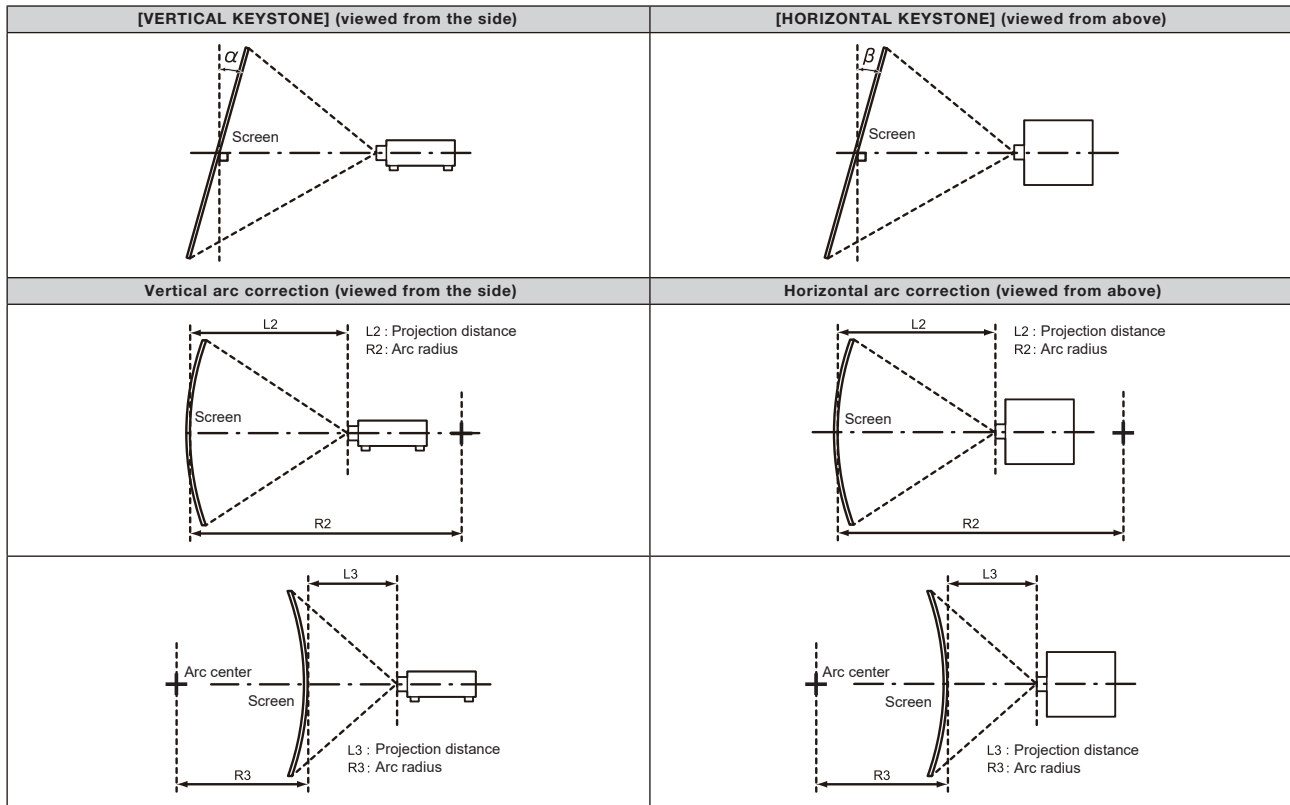
\* The supported screen size range for the telephoto end (maximum throw ratio) of the ET-D3LET80 is 1.78 m (70") to 15.24 m (600").

### Shift range

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



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	± 40	± 15	± 20	± 15	0.2	0.4	0.2	0.3
PT-RZ31K/RZ21K RS30K/RS20K	± 40	± 15	± 20	± 15	0.2	0.4	0.2	0.3

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	± 45	± 40	± 20	± 15	0.2	0.3	0.1	0.2
PT-RZ31K/RZ21K RS30K/RS20K	± 45	± 40	± 20	± 15	0.2	0.3	0.1	0.2