

**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**

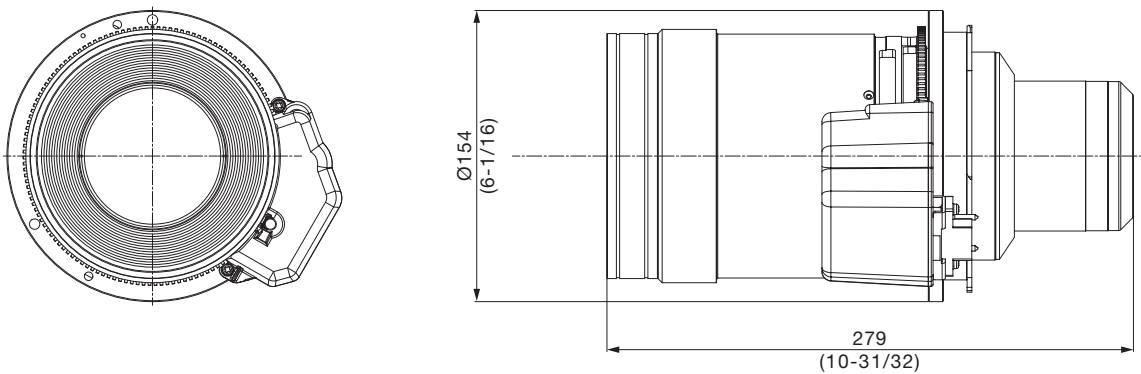
F value:	2.5
Focal distance (f):	96.6– 154.9 mm
Throw ratio:	4.94-7.94:1 for PT-RQ32K/RQ22K (16:10 aspect ratio) 4.61-7.41:1 for PT-RZ31K/RZ21K (16:10 aspect ratio) 4.99-8.02:1 for PT-RS30K/RS20K (4:3 aspect ratio)
Auto Lens Identification Function	Compatible models : PT-RQ32K/RZ31K/RS30K/RQ22K/RZ21K/RS20K
Dimensions (W × H × D):	154 × 154 × 279mm (6-1/16 × 6-1/16 × 10-31/32 inches) (without protrusion parts)
Weight:	Approximately 5.0 kg* (11.0 lbs*)
Applicable projector	[Group A] PT-RZ21K/RS20K PT-RQ22K [Group B] PT-RZ31K/RS30K PT-RQ32K

-----

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.

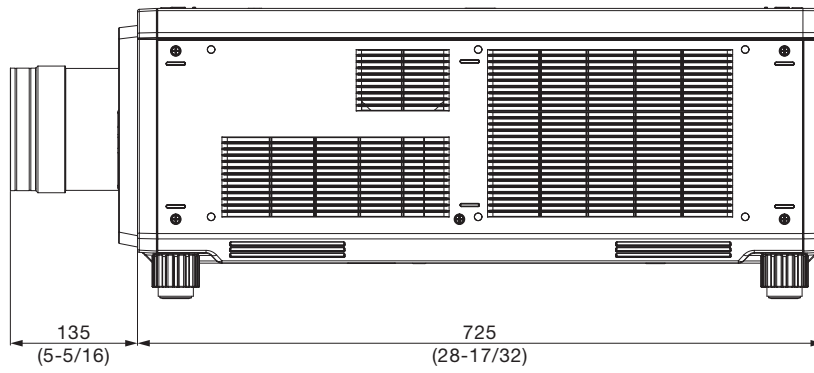
**Dimensions**



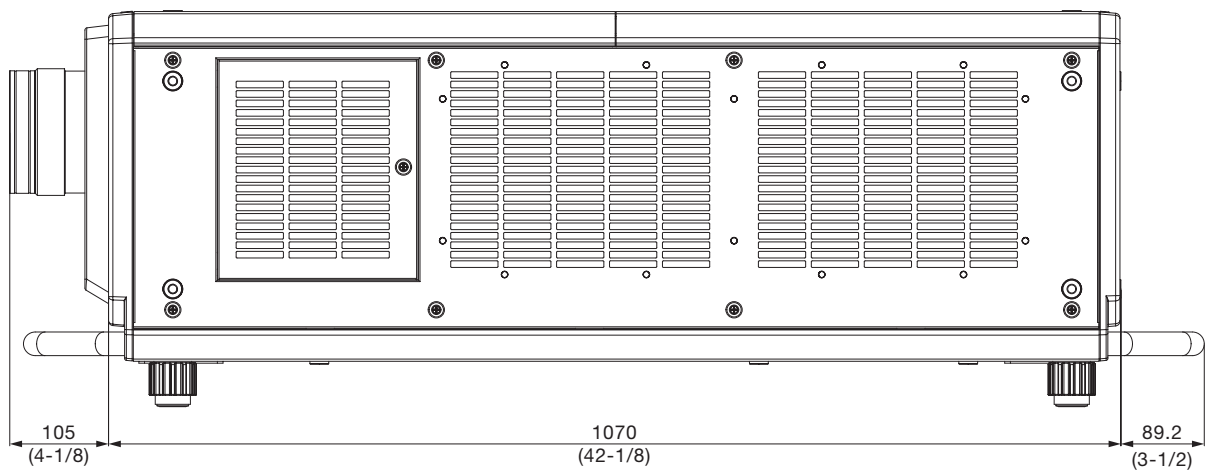
unit : mm (inch)  
**NOTE:** This illustration is not drawn to scale.

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

[Group A]



[Group B]

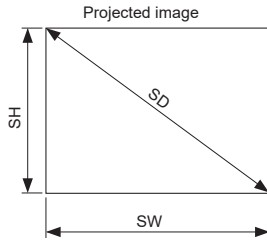


unit : mm (inch)  
NOTE: This illustration is not drawn to scale.

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

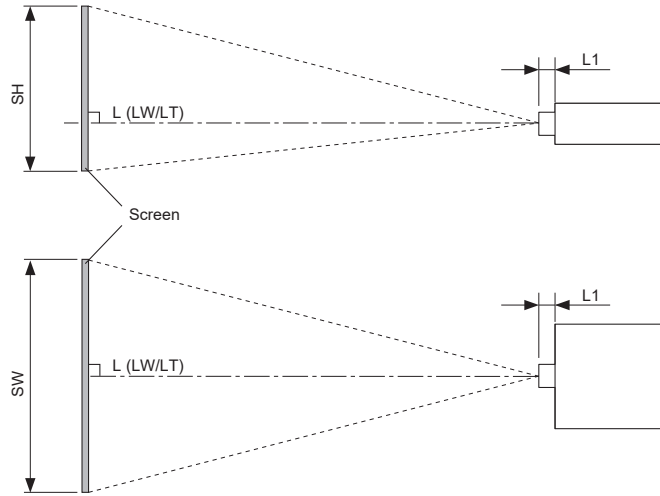
## Zoom Lens

### 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	0.135
PT-RQ32K/RZ31K/RS30K	0.105

### Projection distance

PT-RQ32K/R22K/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)		PT-RZ31K/RZ21K (WUXGA; 1920×1200)	
			Throw ratio[4.94-7.94:1]		Throw ratio[4.61-7.41:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]
1.778 m / 70"	0.942 (3.09)	1.508 (4.95)	7.36 (24.2)	11.88 (39.0)	6.86 (22.5)	11.08 (36.4)
2.032 m / 80"	1.077 (3.53)	1.723 (5.65)	8.43 (27.7)	13.60 (44.6)	7.86 (25.8)	12.68 (41.6)
2.286 m / 90"	1.212 (3.98)	1.939 (6.36)	9.51 (31.2)	15.33 (50.3)	8.86 (29.1)	14.29 (46.9)
2.540 m / 100"	1.346 (4.42)	2.154 (7.07)	10.58 (34.7)	17.05 (55.9)	9.87 (32.4)	15.90 (52.2)
3.048 m / 120"	1.615 (5.30)	2.585 (8.48)	12.73 (41.8)	20.50 (67.3)	11.87 (38.9)	19.12 (62.7)
3.810 m / 150"	2.019 (6.62)	3.231 (10.60)	15.96 (52.4)	25.67 (84.2)	14.88 (48.8)	23.94 (78.5)
5.080 m / 200"	2.692 (8.83)	4.308 (14.13)	21.33 (70.0)	34.28 (112.5)	19.90 (65.3)	31.99 (105.0)
6.350 m / 250"	3.365 (11.04)	5.385 (17.67)	26.71 (87.6)	42.90 (140.8)	24.92 (81.8)	40.03 (131.3)
7.620 m / 300"	4.039 (13.25)	6.462 (21.20)	32.08(105.3)	51.52 (169.0)	29.93 (98.2)	48.07 (157.7)
8.890 m / 350"	4.712 (15.46)	7.539 (24.73)	37.46(122.9)	60.14 (197.3)	34.95(114.7)	56.12 (184.1)
10.160 m / 400"	5.385 (17.67)	8.616 (28.27)	42.83(140.5)	68.75 (225.6)	39.97(131.1)	64.16 (210.5)
12.700 m / 500"	6.731 (22.08)	10.770 (35.33)	53.58(175.8)	85.99 (282.1)	50.00(164.0)	80.24 (263.3)
15.240 m / 600"	8.077 (26.50)	12.923 (42.40)	64.34(211.1)	103.22 (338.7)	60.03(197.0)	96.33 (316.0)
17.780 m / 700"	9.423 (30.92)	15.077 (49.47)	75.09(246.4)	120.46 (395.2)	70.07(229.9)	112.42 (368.8)
20.320 m / 800"	10.770 (35.33)	17.231 (56.53)	85.84(281.6)	137.69 (451.7)	80.10(262.8)	128.50 (421.6)
22.860 m / 900"	12.116 (39.75)	19.385 (63.60)	96.59(316.9)	154.93 (508.3)	90.14(295.7)	144.59 (474.4)
25.400 m /1000"	13.462 (44.17)	21.539 (70.67)	107.34(352.2)	172.16 (564.8)	100.17(328.6)	160.67 (527.1)

## 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[4.95-7.94:1]		Throw ratio[4.61-7.41:1]		Throw ratio[5.00-8.02:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]	Min [LW]	Max [LT]
1.778 m / 70"	0.872 (2.86)	1.550 (5.09)	7.57 (24.8)	11.88 (39.0)	7.05 (23.1)	11.39 (37.4)	7.65 (25.1)	12.34 (40.5)
2.032 m / 80"	0.996 (3.27)	1.771 (5.81)	8.67 (28.4)	13.60 (44.6)	8.08 (26.5)	13.04 (42.8)	8.76 (28.7)	14.13 (46.4)
2.286 m / 90"	1.121 (3.68)	1.992 (6.54)	9.78 (32.1)	15.33 (50.3)	9.11 (29.9)	14.70 (48.2)	9.88 (32.4)	15.92 (52.2)
2.540 m / 100"	1.245 (4.08)	2.214 (7.26)	10.88 (35.7)	17.05 (55.9)	10.15 (33.3)	16.35 (53.6)	11.00 (36.1)	17.71 (58.1)
3.048 m / 120"	1.494 (4.90)	2.657 (8.72)	13.09 (43.0)	20.50 (67.3)	12.21 (40.1)	19.66 (64.5)	13.23 (43.4)	21.29 (69.9)
3.810 m / 150"	1.868 (6.13)	3.321 (10.90)	16.41 (53.8)	25.67 (84.2)	15.30 (50.2)	24.61 (80.7)	16.58 (54.4)	26.66 (87.5)
5.080 m / 200"	2.491 (8.17)	4.428 (14.53)	21.93 (72.0)	34.28 (112.5)	20.46 (67.1)	32.88 (107.9)	22.16 (72.7)	35.61 (116.8)
6.350 m / 250"	3.113 (10.21)	5.535 (18.16)	27.46 (90.1)	42.90 (140.8)	25.61 (84.0)	41.15 (135.0)	27.74 (91.0)	44.56 (146.2)
7.620 m / 300"	3.736 (12.26)	6.641 (21.79)	32.98(108.2)	51.52 (169.0)	30.77(101.0)	49.41 (162.1)	33.32(109.3)	55.51 (175.6)
8.890 m / 350"	4.358 (14.30)	7.748 (25.42)	38.51(126.4)	60.14 (197.3)	35.93(117.9)	57.68 (189.2)	38.91(127.7)	62.46 (204.9)
10.160 m / 400"	4.981 (16.34)	8.855 (29.05)	44.03(144.5)	68.75 (225.6)	41.08(134.8)	65.95 (216.4)	44.49(146.0)	71.41 (234.3)
12.700 m / 500"	6.226 (20.43)	11.069 (36.32)	55.08(180.7)	85.99 (282.1)	51.40(168.6)	82.48 (270.6)	55.65(182.6)	89.30 (293.0)
15.240 m / 600"	7.472 (24.51)	13.283 (43.58)	66.13(217.0)	103.22 (338.7)	61.71(202.5)	99.01 (324.8)	66.82(219.2)	107.20 (351.7)
17.780 m / 700"	8.717 (28.60)	15.497 (50.84)	77.18(253.2)	120.46 (395.2)	72.02(236.3)	115.55 (379.1)	77.98(255.8)	125.10 (410.4)
20.320 m / 800"	9.962 (32.68)	17.710 (58.10)	88.23(289.5)	137.69 (451.7)	82.33(270.1)	132.08 (433.3)	89.14(292.5)	143.00 (469.2)
22.860 m / 900"	11.207 (36.77)	19.924 (65.37)	99.28(325.7)	154.93 (508.3)	92.65(304.0)	148.61 (487.6)	100.31(329.1)	160.89 (527.9)
25.400 m / 1000"	12.453 (40.86)	22.138 (72.63)	110.33(362.0)	172.16 (564.8)	102.96(337.8)	165.15 (541.8)	111.47(365.7)	178.79 (586.6)

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[5.94-9.54:1]		Throw ratio[5.54-8.90:1]		Throw ratio[4.99-8.02:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]	Min [LW]	Max [LT]
1.778 m / 70"	1.067 (3.50)	1.422 (4.67)	8.35 (27.4)	13.47 (44.2)	7.78 (25.5)	12.56 (41.2)	7.01 (23.0)	11.32 (37.1)
2.032 m / 80"	1.219 (4.00)	1.626 (5.33)	9.57 (31.4)	15.43 (50.6)	8.92 (29.3)	14.38 (47.2)	8.03 (26.4)	12.96 (42.5)
2.286 m / 90"	1.372 (4.50)	1.829 (6.00)	10.79 (35.4)	17.38 (57.0)	10.06 (33.0)	16.20 (53.2)	9.06 (29.7)	14.60 (47.9)
2.540 m / 100"	1.524 (5.00)	2.032 (6.67)	12.00 (39.4)	19.33 (63.4)	11.19 (36.7)	18.03 (59.2)	10.08 (33.1)	16.25 (53.3)
3.048 m / 120"	1.829 (6.00)	2.438 (8.00)	14.44 (47.4)	23.23 (76.2)	13.46 (44.2)	21.67 (71.1)	12.13 (39.8)	19.53 (64.1)
3.810 m / 150"	2.286 (7.50)	3.048 (10.00)	18.09 (59.4)	29.08 (95.4)	16.87 (55.4)	27.13 (89.0)	15.21 (49.9)	24.46 (80.3)
5.080 m / 200"	3.048 (10.00)	4.064 (13.33)	24.18 (79.3)	38.84 (127.4)	22.55 (74.0)	36.24 (118.9)	20.33 (66.7)	32.68 (107.2)
6.350 m / 250"	3.810 (12.50)	5.080 (16.67)	30.26 (99.3)	48.60 (159.5)	28.23 (92.6)	45.34 (148.8)	25.45 (83.5)	40.89 (134.2)
7.620 m / 300"	4.572 (15.00)	6.096 (20.00)	36.35(119.3)	58.35 (191.4)	33.91(111.3)	54.45 (178.6)	30.58(100.3)	49.11 (161.1)
8.890 m / 350"	5.334 (17.50)	7.112 (23.33)	42.43(139.2)	68.11 (223.5)	39.59(129.9)	63.55 (208.5)	35.70(117.1)	57.32 (188.1)
10.160 m / 400"	6.096 (20.00)	8.128 (26.67)	48.52(159.2)	77.87 (255.5)	45.27(148.5)	72.66 (238.4)	40.83(134.0)	65.54 (215.0)
12.700 m / 500"	7.620 (25.00)	10.160 (33.33)	60.69(199.1)	97.38 (319.5)	56.63(185.8)	90.87 (298.1)	51.08(167.6)	81.97 (268.9)
15.240 m / 600"	9.144 (30.00)	12.192 (40.00)	72.86(239.0)	116.89 (383.5)	67.99(223.1)	109.08 (357.9)	61.32(201.2)	98.40 (322.8)
17.780 m / 700"	10.668 (35.00)	14.224 (46.67)	85.03(279.0)	136.41 (447.5)	79.35(260.3)	127.29 (417.6)	71.57(234.8)	114.83 (376.7)
20.320 m / 800"	12.192 (40.00)	16.256 (53.33)	97.20(318.9)	155.92 (511.6)	90.70(297.6)	145.50 (477.4)	81.82(268.4)	131.26 (430.6)
22.860 m / 900"	13.716 (45.00)	18.288 (60.00)	109.38(358.9)	175.43 (575.6)	102.06(334.8)	163.71 (537.1)	92.07(302.1)	147.69 (484.6)
25.400 m / 1000"	15.240 (50.00)	20.320 (66.67)	121.55(398.8)	194.95 (639.6)	113.42(372.1)	181.92 (596.9)	102.32(335.7)	164.12 (538.5)

## Zoom Lens

### Calculation of the projection distance

Aspect ratio 16:10

unit: meters

PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1075 - 0.1673$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.1723 - 0.1846$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1003 - 0.1673$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.1609 - 0.1846$

Aspect ratio 16:9

unit: meters

PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1105 - 0.1673$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.1771 - 0.1846$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1031 - 0.1673$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.1653 - 0.1846$
PT-RS30K/RS20K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1116 - 0.1673$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.1790 - 0.1846$

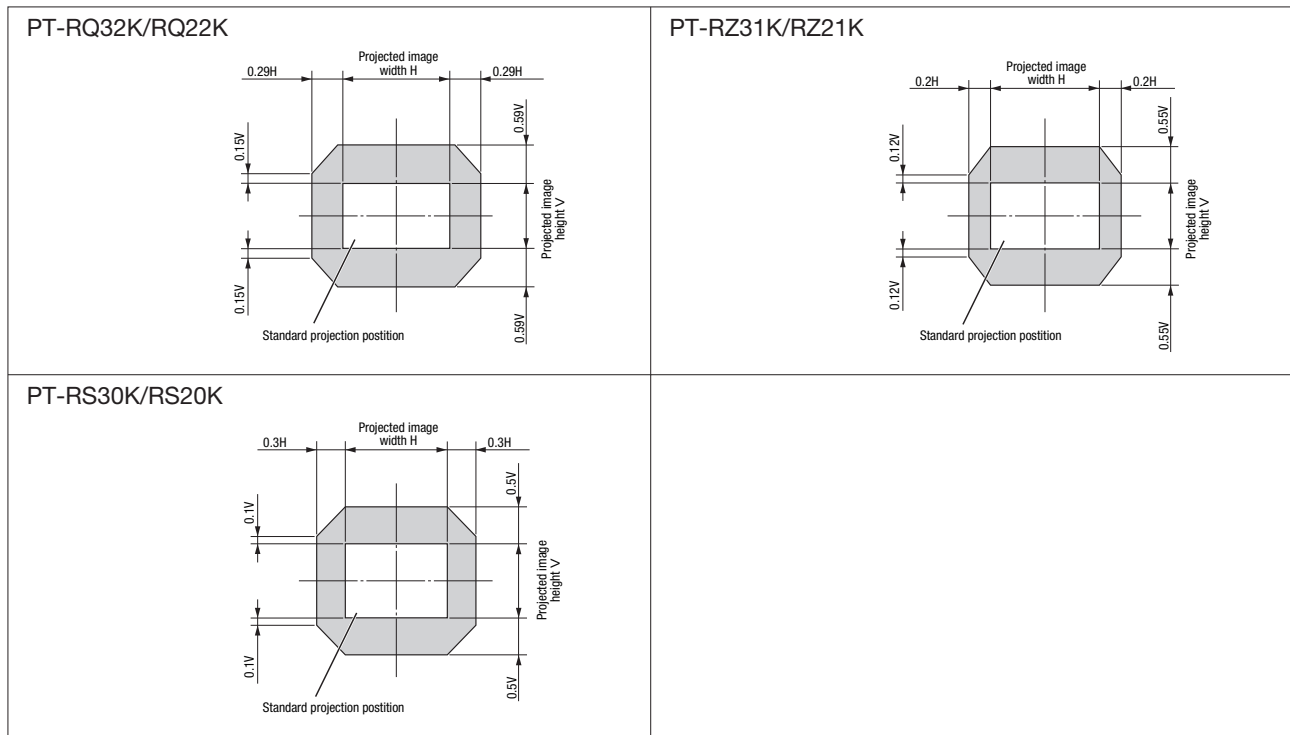
Aspect ratio 4:3

unit: meters

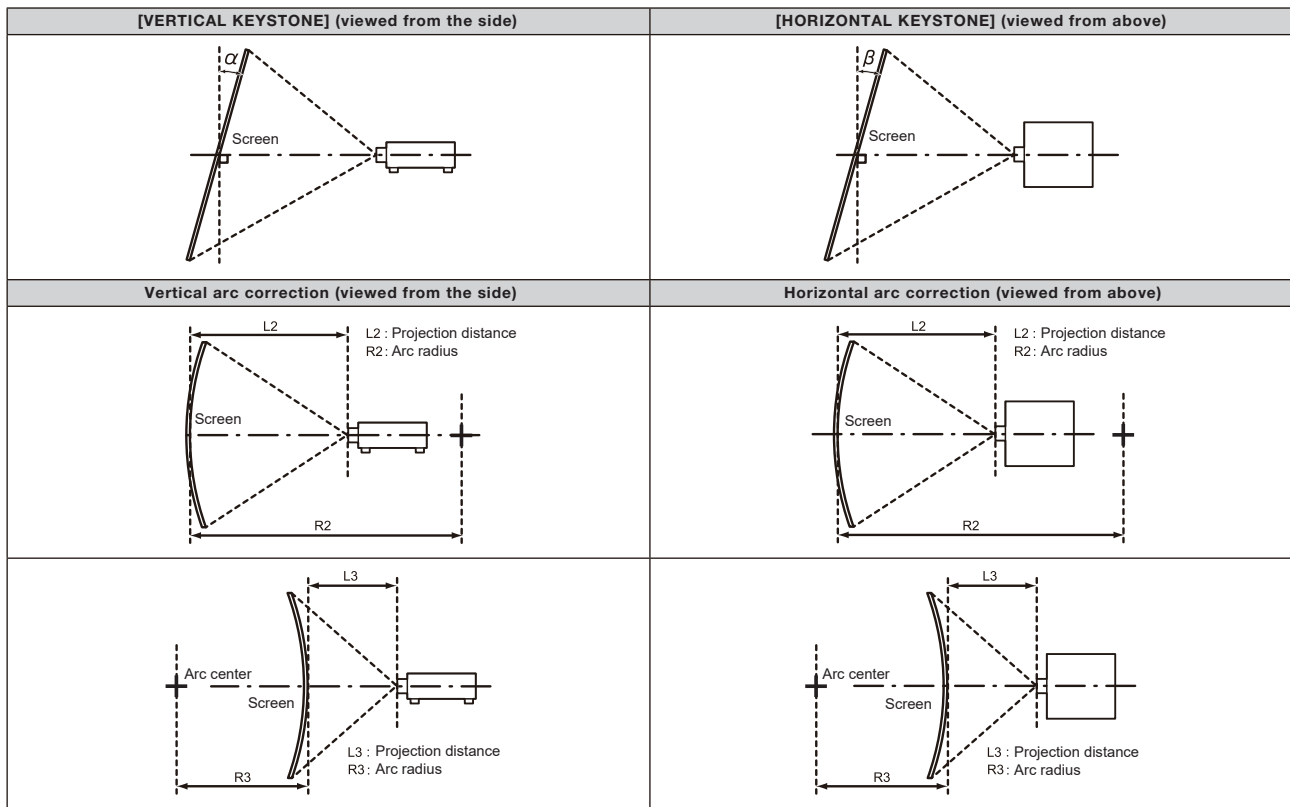
PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1217 - 0.1673$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.1951 - 0.1846$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1136 - 0.1673$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.1821 - 0.1846$
PT-RS30K/RS20K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.1025 - 0.1673$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.1643 - 0.1846$

### 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	0.4	0.7	0.2	0.4
PT-RZ31K/RZ21K RS30K/RS20K	± 40	± 15	± 20	± 15	0.4	0.7	0.2	0.4

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	± 30	± 20	± 15	0.3	0.5	0.2	0.3
PT-RZ31K/RZ21K RS30K/RS20K	± 45	± 40	± 20	± 15	0.3	0.5	0.2	0.3