

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.

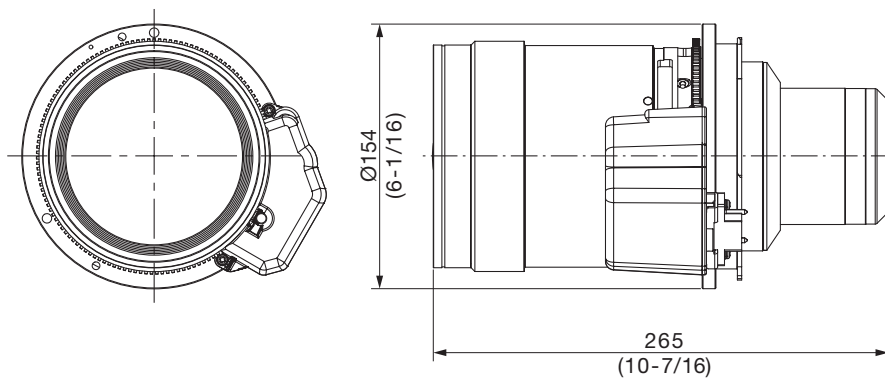
NOTE: Please use the lens only on the specified Panasonic projector.

Specifications

F value:	2.5
Focal distance (f):	35.0– 50.9 mm
Throw ratio:	1.79–2.59:1 for PT-RQ32K/RQ22K (16:10 aspect ratio) 1.67–2.41:1 for PT-RZ31K/RZ21K (16:10 aspect ratio) 1.80–2.61:1 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 × 265 mm (6-1/16 × 6-1/16 × 10-7/16 inches)
Weight:	Approximately 5.2 kg* (11.5 lbs*)
Applicable projector	[Group A] PT-RZ21K/RS20K PT-RQ22K [Group B] PT-RZ31K/RS30K PT-RQ32K
	----- PT-RQ35K/RZ34K/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.

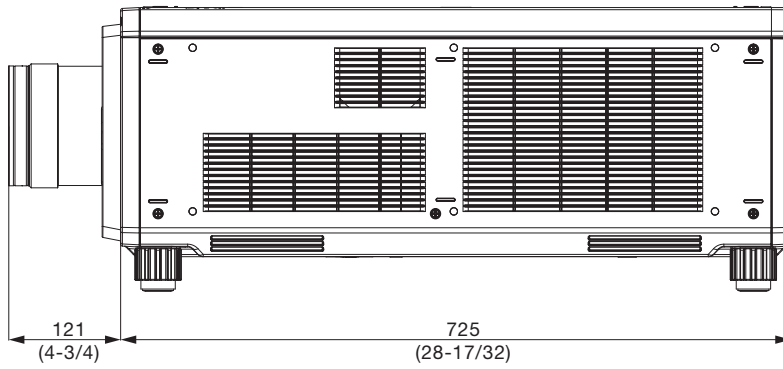
Dimensions



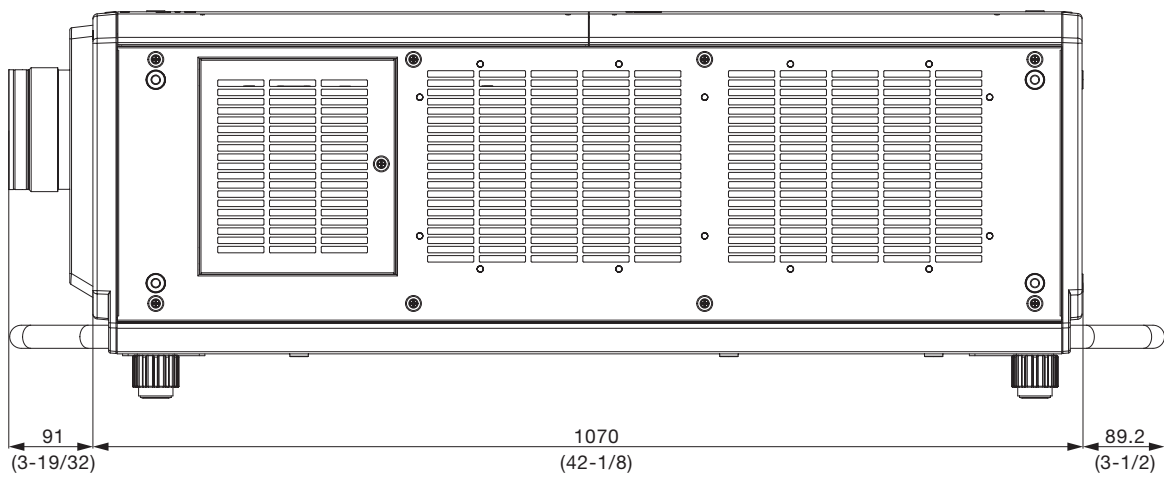
unit : mm (inch)
NOTE: This illustration is not drawn to scale.

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

[Group A]



[Group B]

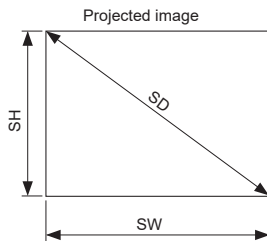


unit : mm (inch)
 NOTE: This illustration is not drawn to scale.

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

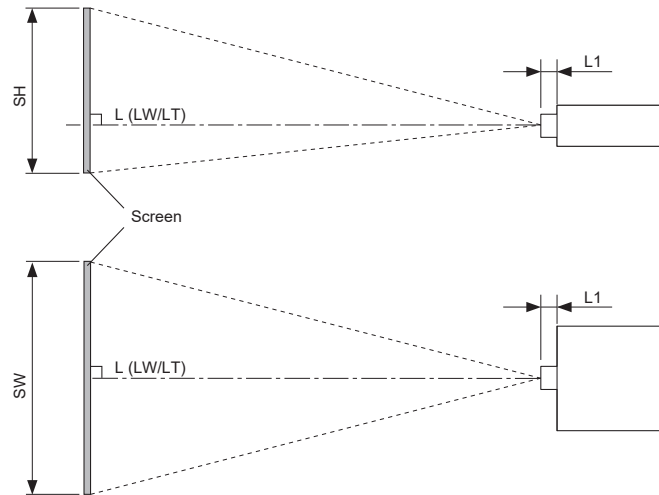
Zoom Lens

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	0.121
PT-RQ32K/RZ31K/RS30K	0.091

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)		PT-RZ31K/RZ21K (WUXGA; 1920×1200)	
			Throw ratio[1.79-2.59:1]		Throw ratio[1.67-2.41:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]
1.778 m / 70"	0.942 (3.09)	1.508 (4.95)	2.64 (8.7)	3.85 (12.6)	2.46 (8.1)	3.58 (11.7)
2.032 m / 80"	1.077 (3.53)	1.723 (5.65)	3.03 (9.9)	4.41 (14.5)	2.82 (9.3)	4.11 (13.5)
2.286 m / 90"	1.212 (3.98)	1.939 (6.36)	3.42 (11.2)	4.98 (16.3)	3.19 (10.5)	4.64 (15.2)
2.540 m / 100"	1.346 (4.42)	2.154 (7.07)	3.81 (12.5)	5.54 (18.2)	3.55 (11.6)	5.17 (17.0)
3.048 m / 120"	1.615 (5.30)	2.585 (8.48)	4.59 (15.1)	6.67 (21.9)	4.28 (14.0)	6.22 (20.4)
3.810 m / 150"	2.019 (6.62)	3.231 (10.60)	5.76 (18.9)	8.37 (27.5)	5.37 (17.6)	7.81 (25.6)
5.080 m / 200"	2.692 (8.83)	4.308 (14.13)	7.71 (25.3)	11.20 (36.7)	7.19 (23.6)	10.45 (34.3)
6.350 m / 250"	3.365 (11.04)	5.385 (17.67)	9.65 (31.7)	14.03 (46.0)	9.00 (29.5)	13.09 (42.9)
7.620 m / 300"	4.039 (13.25)	6.462 (21.20)	11.60 (38.1)	16.86 (55.3)	10.82 (35.5)	15.73 (51.6)
8.890 m / 350"	4.712 (15.46)	7.539 (24.73)	13.55 (44.5)	19.69 (64.6)	12.64 (41.5)	18.37 (60.3)
10.160 m / 400"	5.385 (17.67)	8.616 (28.27)	15.50 (50.9)	22.52 (73.9)	14.46 (47.4)	21.01 (68.9)
12.700 m / 500"	6.731 (22.08)	10.770 (35.33)	19.39 (63.6)	28.18 (92.5)	18.09 (59.4)	26.29 (86.3)
15.240 m / 600"	8.077 (26.50)	12.923 (42.40)	23.29 (76.4)	33.84 (111.0)	21.73 (71.3)	31.58 (103.6)
17.780 m / 700"	9.423 (30.92)	15.077 (49.47)	27.18 (89.2)	39.50 (129.6)	25.36 (83.2)	36.86 (120.9)
20.320 m / 800"	10.770 (35.33)	17.231 (56.53)	31.08 (102.0)	45.16 (148.2)	29.00 (95.1)	42.14 (138.3)
22.860 m / 900"	12.116 (39.75)	19.385 (63.60)	34.97 (114.7)	50.82 (166.7)	32.63 (107.1)	47.42 (155.6)
25.400 m / 1000"	13.462 (44.17)	21.539 (70.67)	38.86 (127.5)	56.48 (185.3)	36.27 (119.0)	52.70 (172.9)

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[1.79-2.59:1]		Throw ratio[1.67-2.41:1]		Throw ratio[1.81-2.61:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]	Min [LW]	Max [LT]
1.778 m / 70"	0.872 (2.86)	1.550 (5.09)	2.72 (8.9)	3.96 (13.0)	2.53 (8.3)	3.68 (12.1)	2.75 (9.0)	4.00 (13.1)
2.032 m / 80"	0.996 (3.27)	1.771 (5.81)	3.12 (10.2)	4.54 (14.9)	2.91 (9.5)	4.23 (13.9)	3.15 (10.3)	4.59 (15.1)
2.286 m / 90"	1.121 (3.68)	1.992 (6.54)	3.52 (11.5)	5.12 (16.8)	3.28 (10.8)	4.77 (15.6)	3.56 (11.7)	5.17 (17.0)
2.540 m / 100"	1.245 (4.08)	2.214 (7.26)	3.92 (12.9)	5.70 (18.7)	3.65 (12.0)	5.31 (17.4)	3.96 (13.0)	5.76 (18.9)
3.048 m / 120"	1.494 (4.90)	2.657 (8.72)	4.72 (15.5)	6.86 (22.5)	4.40 (14.4)	6.40 (21.0)	4.77 (15.6)	6.94 (22.8)
3.810 m / 150"	1.868 (6.13)	3.321 (10.90)	5.92 (19.4)	8.61 (28.2)	5.52 (18.1)	8.03 (26.3)	5.98 (19.6)	8.70 (28.5)
5.080 m / 200"	2.491 (8.17)	4.428 (14.53)	7.92 (26.0)	11.52 (37.8)	7.39 (24.2)	10.74 (35.2)	8.01 (26.3)	11.64 (38.2)
6.350 m / 250"	3.113 (10.21)	5.535 (18.16)	9.92 (32.5)	14.43 (47.3)	9.26 (30.4)	13.46 (44.2)	10.03 (32.9)	14.58 (47.8)
7.620 m / 300"	3.736 (12.26)	6.641 (21.79)	11.93 (39.1)	17.33 (56.9)	11.13 (36.5)	16.17 (53.1)	12.05 (39.5)	17.51 (57.4)
8.890 m / 350"	4.358 (14.30)	7.748 (25.42)	13.93 (45.7)	20.24 (66.4)	12.99 (42.6)	18.88 (61.9)	14.07 (46.2)	20.45 (67.1)
10.160 m / 400"	4.981 (16.34)	8.855 (29.05)	15.93 (52.3)	23.15 (76.0)	14.86 (48.8)	21.60 (70.9)	16.10 (52.8)	23.39 (76.7)
12.700 m / 500"	6.226 (20.43)	11.069 (36.32)	19.93 (65.4)	28.97 (95.0)	18.60 (61.0)	27.03 (88.7)	20.14 (66.1)	29.27 (96.0)
15.240 m / 600"	7.472 (24.51)	13.283 (43.58)	23.94 (78.5)	34.78 (114.1)	22.33 (73.3)	32.46 (106.5)	24.18 (79.3)	35.15 (115.3)
17.780 m / 700"	8.717 (28.60)	15.497 (50.84)	27.94 (91.7)	40.60 (133.2)	26.07 (85.5)	37.89 (124.3)	28.23 (92.6)	41.02 (134.6)
20.320 m / 800"	9.962 (32.68)	17.710 (58.10)	31.94(104.8)	46.42 (152.3)	29.81 (97.8)	43.31 (142.1)	32.27(105.9)	46.90 (153.9)
22.860 m / 900"	11.207 (36.77)	19.924 (65.37)	35.94(117.9)	52.23 (171.4)	33.54(110.0)	48.74 (159.9)	36.32(119.2)	52.78 (173.2)
25.400 m /1000"	12.453 (40.86)	22.138 (72.63)	39.95(131.1)	58.05 (190.5)	37.28(122.3)	54.17 (177.7)	40.36(132.4)	58.65 (192.4)

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[2.15-3.11:1]		Throw ratio[2.00-2.90:1]		Throw ratio[1.80-2.61:1]	
			Min [LW]	Max [LT]	Min [LW]	Max [LT]	Min [LW]	Max [LT]
1.778 m / 70"	1.067 (3.50)	1.422 (4.67)	3.00 (9.8)	4.37 (14.3)	2.80 (9.2)	4.07 (13.4)	2.52 (8.3)	3.66 (12.0)
2.032 m / 80"	1.219 (4.00)	1.626 (5.33)	3.44 (11.3)	5.01 (16.4)	3.21 (10.5)	4.67 (15.3)	2.89 (9.5)	4.20 (13.8)
2.286 m / 90"	1.372 (4.50)	1.829 (6.00)	3.89 (12.8)	5.65 (18.5)	3.62 (11.9)	5.27 (17.3)	3.26 (10.7)	4.74 (15.6)
2.540 m / 100"	1.524 (5.00)	2.032 (6.67)	4.33 (14.2)	6.29 (20.6)	4.03 (13.2)	5.86 (19.2)	3.63 (11.9)	5.28 (17.3)
3.048 m / 120"	1.829 (6.00)	2.438 (8.00)	5.21 (17.1)	7.57 (24.8)	4.86 (15.9)	7.06 (23.2)	4.37 (14.3)	6.36 (20.9)
3.810 m / 150"	2.286 (7.50)	3.048 (10.00)	6.53 (21.4)	9.49 (31.1)	6.09 (20.0)	8.85 (29.0)	5.49 (18.0)	7.98 (26.2)
5.080 m / 200"	3.048 (10.00)	4.064 (13.33)	8.74 (28.7)	12.70 (41.7)	8.15 (26.7)	11.84 (38.8)	7.34 (24.1)	10.67 (35.0)
6.350 m / 250"	3.810 (12.50)	5.080 (16.67)	10.94 (35.9)	15.90 (52.2)	10.20 (33.5)	14.83 (48.7)	9.20 (30.2)	13.37 (43.9)
7.620 m / 300"	4.572 (15.00)	6.096 (20.00)	13.15 (43.1)	19.11 (62.7)	12.26 (40.2)	17.82 (58.5)	11.06 (36.3)	16.07 (52.7)
8.890 m / 350"	5.334 (17.50)	7.112 (23.33)	15.35 (50.4)	22.31 (73.2)	14.32 (47.0)	20.81 (68.3)	12.91 (42.4)	18.77 (61.6)
10.160 m / 400"	6.096 (20.00)	8.128 (26.67)	17.56 (57.6)	25.51 (83.7)	16.38 (53.7)	23.80 (78.1)	14.77 (48.5)	21.46 (70.4)
12.700 m / 500"	7.620 (25.00)	10.160 (33.33)	21.96 (72.0)	31.92 (104.7)	20.49 (67.2)	29.78 (97.7)	18.48 (60.6)	26.86 (88.1)
15.240 m / 600"	9.144 (30.00)	12.192 (40.00)	26.37 (86.5)	38.33 (125.8)	24.61 (80.7)	35.76 (117.3)	22.19 (72.8)	32.25 (105.8)
17.780 m / 700"	10.668 (35.00)	14.224 (46.67)	30.78(101.0)	44.74 (146.8)	28.72 (94.2)	41.74 (136.9)	25.91 (85.0)	37.65 (123.5)
20.320 m / 800"	12.192 (40.00)	16.256 (53.33)	35.19(115.5)	51.14 (167.8)	32.84(107.7)	47.72 (156.6)	29.62 (97.2)	43.04 (141.2)
22.860 m / 900"	13.716 (45.00)	18.288 (60.00)	39.60(129.9)	57.55 (188.8)	36.95(121.2)	53.70 (176.2)	33.33(109.4)	48.44 (158.9)
25.400 m /1000"	15.240 (50.00)	20.320 (66.67)	44.01(144.4)	63.96 (209.8)	41.07(134.7)	59.68 (195.8)	37.05(121.6)	53.83 (176.6)

Zoom Lens

Calculation of the projection distance

Aspect ratio 16:10

unit: meters

PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0389 - 0.0832$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0566 - 0.1162$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0364 - 0.0832$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0528 - 0.1162$

Aspect ratio 16:9

unit: meters

PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0400 - 0.0832$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0582 - 0.1162$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0374 - 0.0832$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0543 - 0.1162$
PT-RS30K/RS20K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0404 - 0.0832$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0588 - 0.1162$

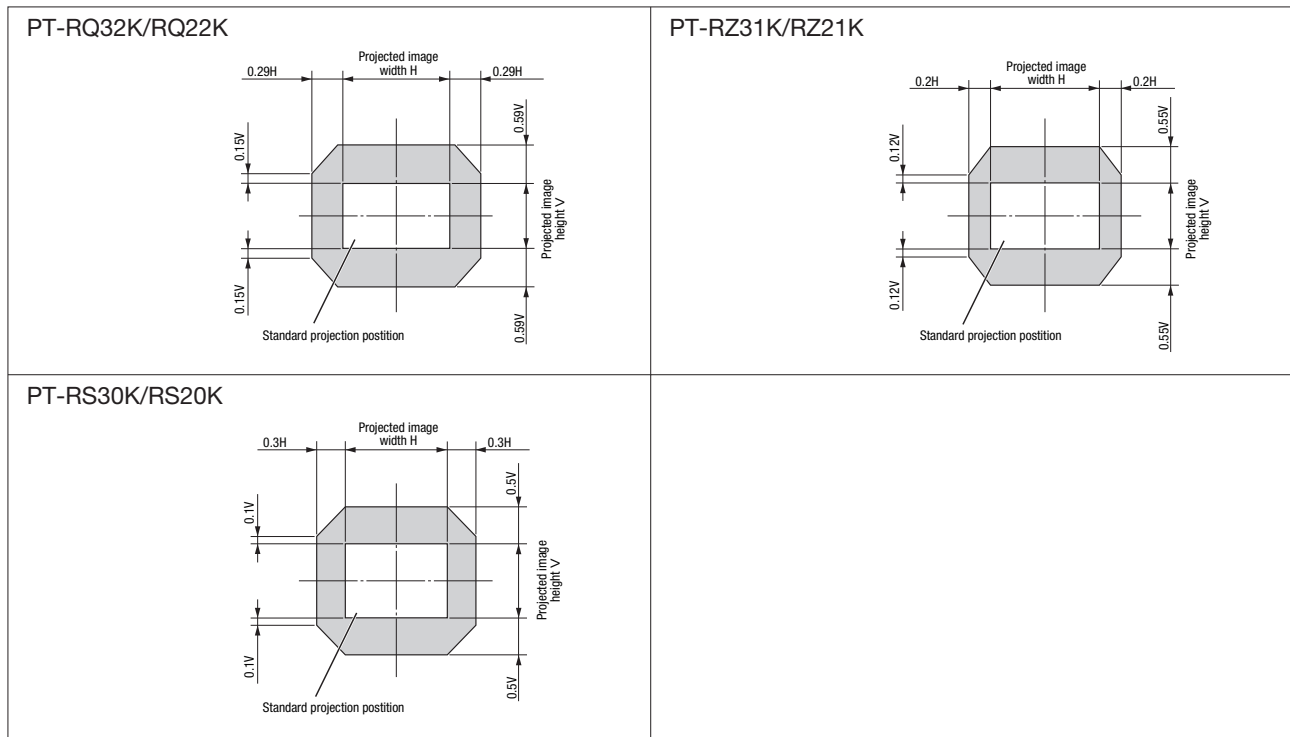
Aspect ratio 4:3

unit: meters

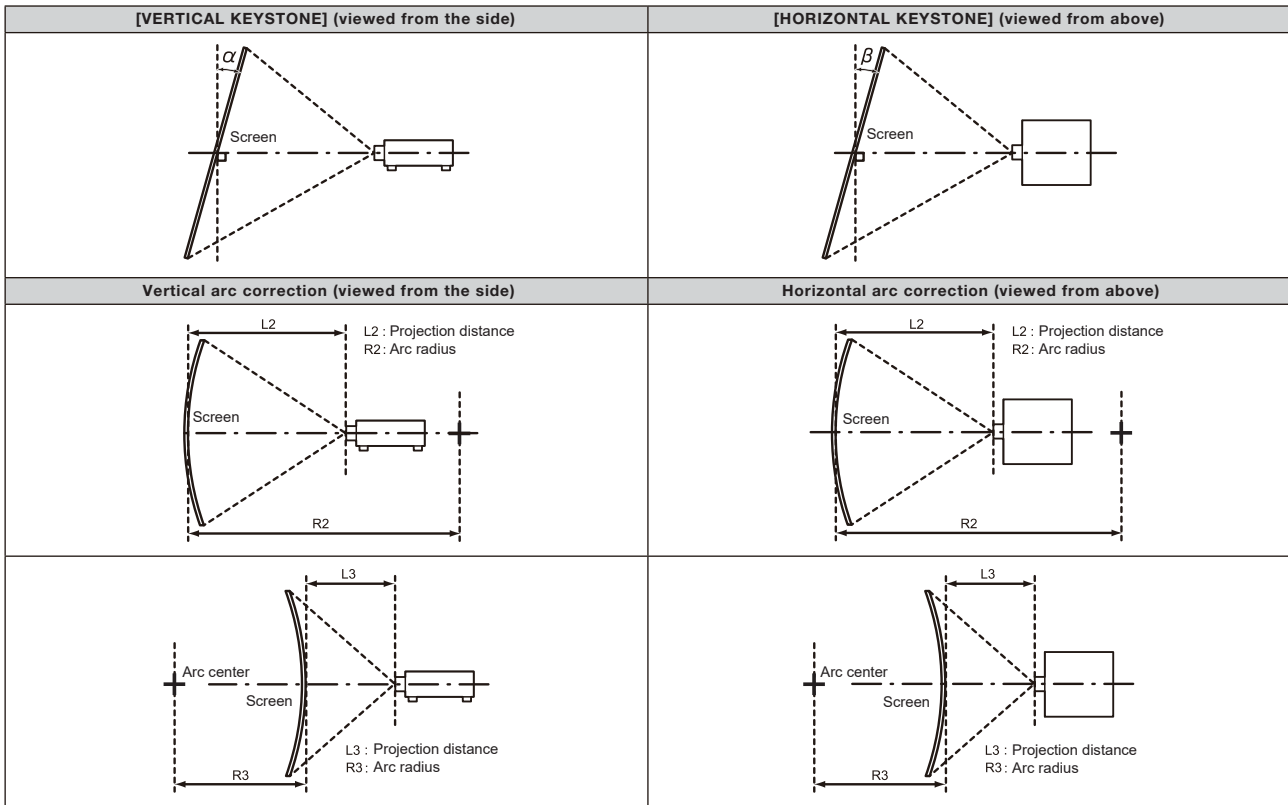
PT-RQ32K/RQ22K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0441 - 0.0832$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0641 - 0.1162$
PT-RZ31K/RZ21K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0412 - 0.0832$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0598 - 0.1162$
PT-RS30K/RS20K	minimum	$LW (m) = (\text{diagonal screen size in inches}) \times 0.0371 - 0.0832$
	maximum	$LT (m) = (\text{diagonal screen size in inches}) \times 0.0540 - 0.1162$

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 α (°)	Horizontal keystone correction angle β (°)	Vertical keystone correction angle α (°)	Horizontal keystone correction angle β (°)	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	± 15	± 10	0.9	1.7	0.5	1.0
PT-RZ31K/RZ21K RS30K/RS20K	± 40	± 15	± 20	± 15	0.9	1.7	0.5	1.0

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 α (°)	Horizontal keystone correction angle β (°)	Vertical keystone correction angle α (°)	Horizontal keystone correction angle β (°)	Min. value of R2/L2	Min. value of 3/L3	Min. value of R2/L2	Min. value of R3/L3
PT-RQ32K/RQ22K	± 40	± 20	± 15	± 10	0.7	1.3	0.4	0.7
PT-RZ31K/RZ21K RS30K/RS20K	± 40	± 40	± 20	± 15	0.7	1.3	0.4	0.7