

This zoom lens is designed for use with Panasonic's applicable projectors.

*\*Please use the lens only on the specified Panasonic projector.*

**Specifications** (Specifications subject to change without notice.)

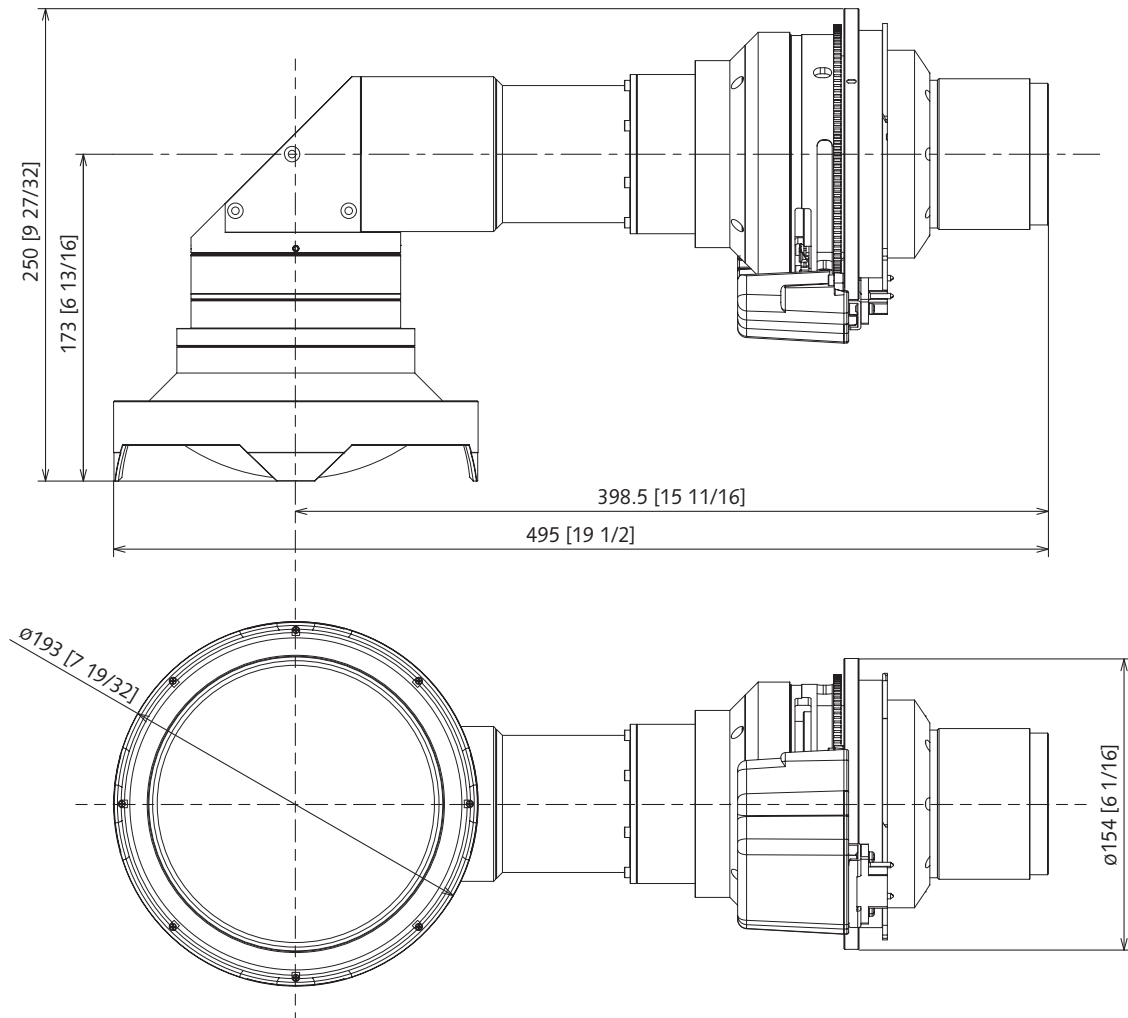
F-number	2.5	
Focal distance (f)	13.8-18.1 mm [17/32-23/32 in]	
Throw ratio	0.779-1.02:1	PT-RQ25K/RQ18K/RZ24K/RZ17K/RZ14K (16:10 aspect ratio)
	0.693-0.913:1	PT-RQ32K/RQ22K (16:10 aspect ratio)
	0.645-0.850:1	PT-RQ35K/RZ34K/RZ31K/RZ21K/RZ16K (16:10 aspect ratio)
	0.699-0.921:1	PT-RS30K/RS20K (4:3 aspect ratio)
Auto Lens Identification function Compatible models	PT-RQ35K/RZ34K/RQ25K/RZ24K/RQ18K/RZ17K/RZ16K/RZ14K/RQ32K/RZ31K/RS30K/RQ22K/RZ21K/RS20K	
Dimensions	Width	250 mm [9 27/32 in]
	Height	193 mm [7 19/32 in]
	Depth	495 mm [19 1/2 in]
Weight	Approximately 9.0kg (19.8 lbs)	
Applicable projector	Group A	PT-RQ22K/RZ21K/RS20K
	Group B	PT-RQ32K/RZ31K/RS30K
		PT-RQ35K/RZ34K/RQ25K/RZ24K/RQ18K/RZ17K/RZ16K/RZ14K
	<i>*For these projectors see the individual spec les of the projectors.</i>	

**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]  
This illustration is not drawn to scale.



Zoom Lens

Figure attached to the [Group A, PT-RQ22K/RZ21K/RS20K] projector

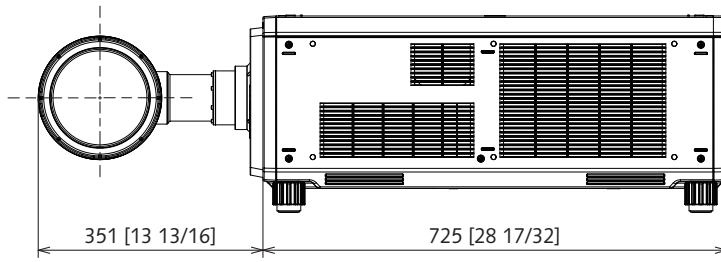
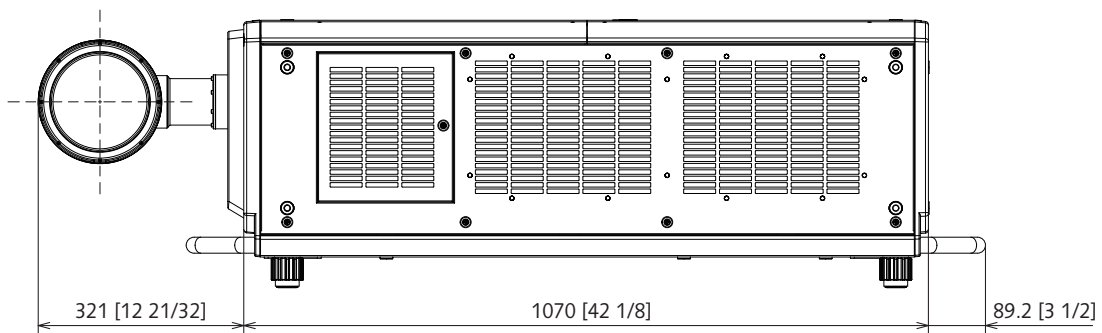
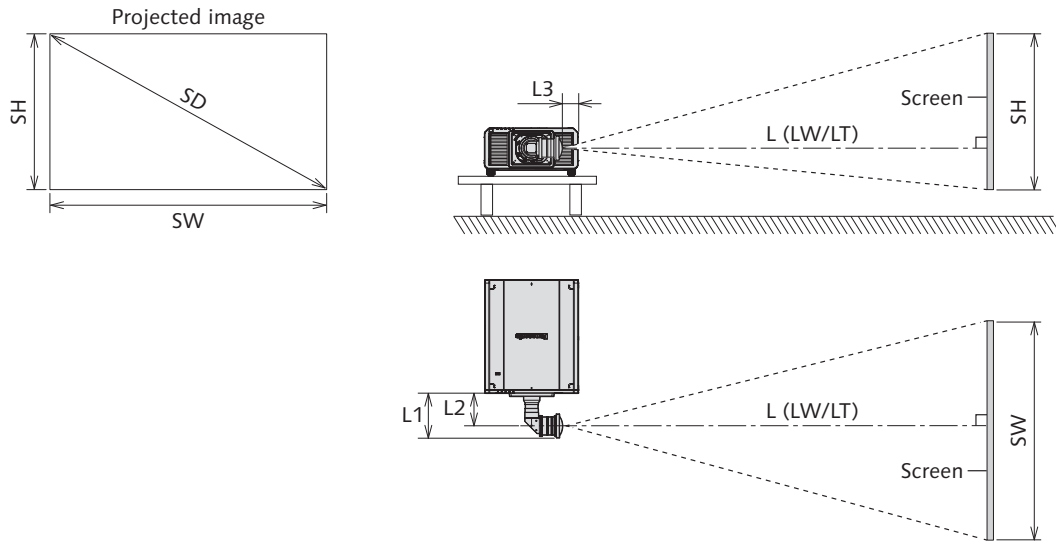


Figure attached to the [Group B, PT-RQ32K/RZ31K/RS30K] projector



**Dimensional relationship diagram**

The dimensional relationship between the screen and the projector is shown below.



**Note**

- This illustration is prepared on the assumption that the projected image size and position have been aligned to fit full in the screen.
- This illustration is not drawn to scale.
- The values are approximate.

L		Projection distance
	LW	Minimum distance
	LT	Maximum distance
L1	Lens protrusion dimension (Distance from front of projector to edge of lens)	
L2	Lens protrusion dimension (Distance from front of projector to center of lens)	
L3	Lens protrusion dimension (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	Lens protrusion dimension (approximate value)		
	L1	L2	L3
PT-RQ32K/RZ31K/RS30K	0.32	0.23	0.18
PT-RQ22K/RZ21K/RS20K	0.35	0.26	0.13

**Projection distance**

A  $\pm 5\%$  error in listed projection distances may occur.

When [SCREEN ADJUSTMENT] is used, distance is corrected to become smaller than the specified image size.

Screen aspect ratio 16:10

Unit: meters

Projector model				PT-RQ32K/RQ22K/RQ13K (2560x1600)		PT-RZ31K/RZ21K/RZ12K (1920x1200)	
Throw ratio				0.693-0.913:1		0.645-0.850:1	
Projected image size				Projection distance			
Diagonal (SD)		Height (SH)	Width (SW)	Min (LW)	Max (LT)	Min (LW)	Max (LT)
m	inches						
5.080	200	2.692	4.308	2.98	3.93	2.78	3.66
6.350	250	3.365	5.385	3.75	4.94	3.50	4.61
7.620	300	4.039	6.462	4.53	5.95	4.22	5.55
8.890	350	4.712	7.539	5.30	6.96	4.94	6.49
10.160	400	5.385	8.616	6.07	7.98	5.66	7.44
12.700	500	6.731	10.770	7.61	10.00	7.09	9.32
15.240	600	8.077	12.923	9.15	12.02	8.53	11.21

Screen aspect ratio 16:10

Unit: feet

Projector model				PT-RQ32K/RQ22K/RQ13K (2560x1600)		PT-RZ31K/RZ21K/RZ12K (1920x1200)	
Throw ratio				0.693-0.913:1		0.645-0.850:1	
Projected image size				Projection distance			
Diagonal (SD)		Height (SH)	Width (SW)	Min (LW)	Max (LT)	Min (LW)	Max (LT)
m	inches						
5.080	200	8.83	14.13	9.78	12.89	9.12	12.01
6.350	250	11.04	17.67	12.30	16.21	11.48	15.12
7.620	300	13.25	21.20	14.86	19.52	13.84	18.21
8.890	350	15.46	24.73	17.39	22.83	16.21	21.29
10.160	400	17.67	28.27	19.91	26.18	18.57	24.41
12.700	500	22.08	35.33	24.97	32.81	23.26	30.58
15.240	600	26.50	42.40	30.02	39.44	27.99	36.78

Screen aspect ratio 16:9

Unit: meters

Projector model				PT-RQ32K/RQ22K/RQ13K (2560x1440)		PT-RZ31K/RZ21K/RZ12K (1920x1080)		PT-RS30K/RS20K/RS11K (1400x788)	
Throw ratio				0.694-0.913:1		0.646-0.851:1		0.701-0.923:1	
Projected image size				Projection distance					
Diagonal (SD)		Height (SH)	Width (SW)	Min (LW)	Max (LT)	Min (LW)	Max (LT)	Min (LW)	Max (LT)
m	inches								
5.080	200	2.491	4.428	3.07	4.05	2.86	3.77	3.10	4.09
6.350	250	3.113	5.535	3.86	5.08	3.60	4.74	3.90	5.14
7.620	300	3.736	6.641	4.65	6.12	4.34	5.71	4.70	6.19
8.890	350	4.358	7.748	5.45	7.16	5.08	6.68	5.50	7.24
10.160	400	4.981	8.855	6.24	8.20	5.82	7.65	6.30	8.29
12.700	500	6.226	11.069	7.82	10.28	7.29	9.58	7.91	10.38
15.240	600	7.472	13.283	9.41	12.35	8.77	11.52	9.51	12.48

Zoom Lens

Screen aspect ratio 16:9

Unit: feet

Projector model			PT-RQ32K/RQ22K/RQ13K (2560x1440)			PT-RZ31K/RZ21K/RZ12K (1920x1080)		PT-RS30K/RS20K/RS11K (1400x788)	
Throw ratio			0.694-0.913:1			0.646-0.851:1		0.701-0.923:1	
Projected image size			Projection distance						
Diagonal (SD)		Height (SH)	Width (SW)	Min (LW)	Max (LT)	Min (LW)	Max (LT)	Min (LW)	Max (LT)
m	inches								
5.080	200	8.17	14.53	10.07	13.29	9.38	12.37	10.17	13.42
6.350	250	10.21	18.16	12.66	16.67	11.81	15.55	12.80	16.86
7.620	300	12.26	21.79	15.26	20.08	14.24	18.73	15.42	20.31
8.890	350	14.30	25.42	17.88	23.49	16.67	21.92	18.04	23.75
10.160	400	16.34	29.05	20.47	26.90	19.09	25.10	20.67	27.20
12.700	500	20.43	36.32	25.66	33.73	23.92	31.43	25.95	34.05
15.240	600	24.51	43.58	30.87	40.52	28.77	37.79	31.20	40.94

Screen aspect ratio 4:3

Unit: meters

Projector model			PT-RQ32K/RQ22K/RQ13K (2133x1600)			PT-RZ31K/RZ21K/RZ12K (1600x1200)		PT-RS30K/RS20K/RS11K (1400x1050)	
Throw ratio			0.835-1.09:1			0.778-1.02:1		0.699-0.921:1	
Projected image size			Projection distance						
Diagonal (SD)		Height (SH)	Width (SW)	Min (LW)	Max (LT)	Min (LW)	Max (LT)	Min (LW)	Max (LT)
m	inches								
5.080	200	3.048	4.064	3.39	4.47	3.16	4.16	2.84	3.75
6.350	250	3.810	5.080	4.26	5.61	3.97	5.23	3.57	4.82
7.620	300	4.572	6.096	5.14	6.76	4.79	6.30	4.31	5.78
8.890	350	5.334	7.112	6.01	7.90	5.60	7.37	5.04	6.74
10.160	400	6.096	8.128	6.88	9.04	6.42	8.43	5.78	7.71
12.700	500	7.620	10.160	8.63	11.33	8.05	10.57	7.25	9.63
15.240	600	9.144	12.192	10.37	13.62	9.67	12.70	8.72	11.39

Screen aspect ratio 4:3

Unit: feet

Projector model			PT-RQ32K/RQ22K/RQ13K (2133x1600)			PT-RZ31K/RZ21K/RZ12K (1600x1200)		PT-RS30K/RS20K/RS11K/ (1400x1050)	
Throw ratio			0.835-1.09:1			0.778-1.02:1		0.699-0.921:1	
Projected image size			Projection distance						
Diagonal (SD)		Height (SH)	Width (SW)	Min (LW)	Max (LT)	Min (LW)	Max (LT)	Min (LW)	Max (LT)
m	inches								
5.080	200	10.00	13.33	11.12	14.67	10.37	13.65	9.32	12.30
6.350	250	12.50	16.67	13.98	18.41	13.02	17.16	11.71	15.81
7.620	300	15.00	20.00	16.86	22.18	15.72	20.67	14.14	18.96
8.890	350	17.50	23.33	19.72	25.92	18.37	24.18	16.54	22.11
10.160	400	20.00	26.67	22.57	29.66	21.06	27.66	18.96	25.29
12.700	500	25.00	33.33	28.31	37.17	26.41	34.68	23.79	31.59
15.240	600	30.00	40.00	34.02	44.68	31.73	41.67	28.61	37.37

## Calculation of the projection distance

Screen aspect ratio 16:10

Unit: m

Projector model	Projection distance (L) formula	
	Min (LW)	Max (LT)
PT-RQ32K/RQ22K	= (diagonal screen size in inches) x 0.0154 - 0.1001	= (diagonal screen size in inches) x 0.0202 - 0.1076
PT-RZ31K/RZ21K	= (diagonal screen size in inches) x 0.0144 - 0.1001	= (diagonal screen size in inches) x 0.0189 - 0.1076

Screen aspect ratio 16:9

Unit: m

Projector model	Projection distance (L) formula	
	Min (LW)	Max (LT)
PT-RQ32K/RQ22K	= (diagonal screen size in inches) x 0.0159 - 0.1001	= (diagonal screen size in inches) x 0.0208 - 0.1076
PT-RZ31K/RZ21K	= (diagonal screen size in inches) x 0.0148 - 0.1001	= (diagonal screen size in inches) x 0.0194 - 0.1076
PT-RS20K/RS30K	= (diagonal screen size in inches) x 0.0160 - 0.1001	= (diagonal screen size in inches) x 0.0210 - 0.1076

Screen aspect ratio 4:3

Unit: m

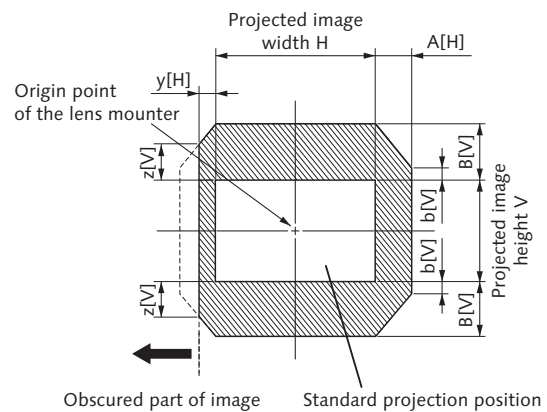
Projector model	Projection distance (L) formula	
	Min (LW)	Max (LT)
PT-RQ32K/RQ22K	= (diagonal screen size in inches) x 0.0175 - 0.1001	= (diagonal screen size in inches) x 0.0229 - 0.1076
PT-RZ31K/RZ21K	= (diagonal screen size in inches) x 0.0163 - 0.1001	= (diagonal screen size in inches) x 0.0214 - 0.1076
PT-RS20K/RS30K	= (diagonal screen size in inches) x 0.0147 - 0.1001	= (diagonal screen size in inches) x 0.0193 - 0.1076

## Adjustment range by the lens position shift (optical shift)

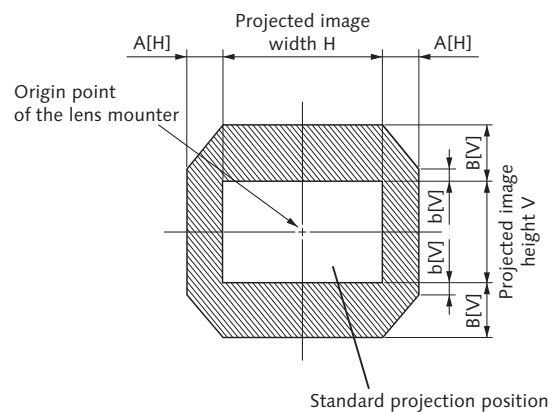
Based on the standard projection position using the optical axis shift function, the projection position can be adjusted in the range shown in the following figure.

Following figure shows the adjustment range when the projector is installed on the floor.

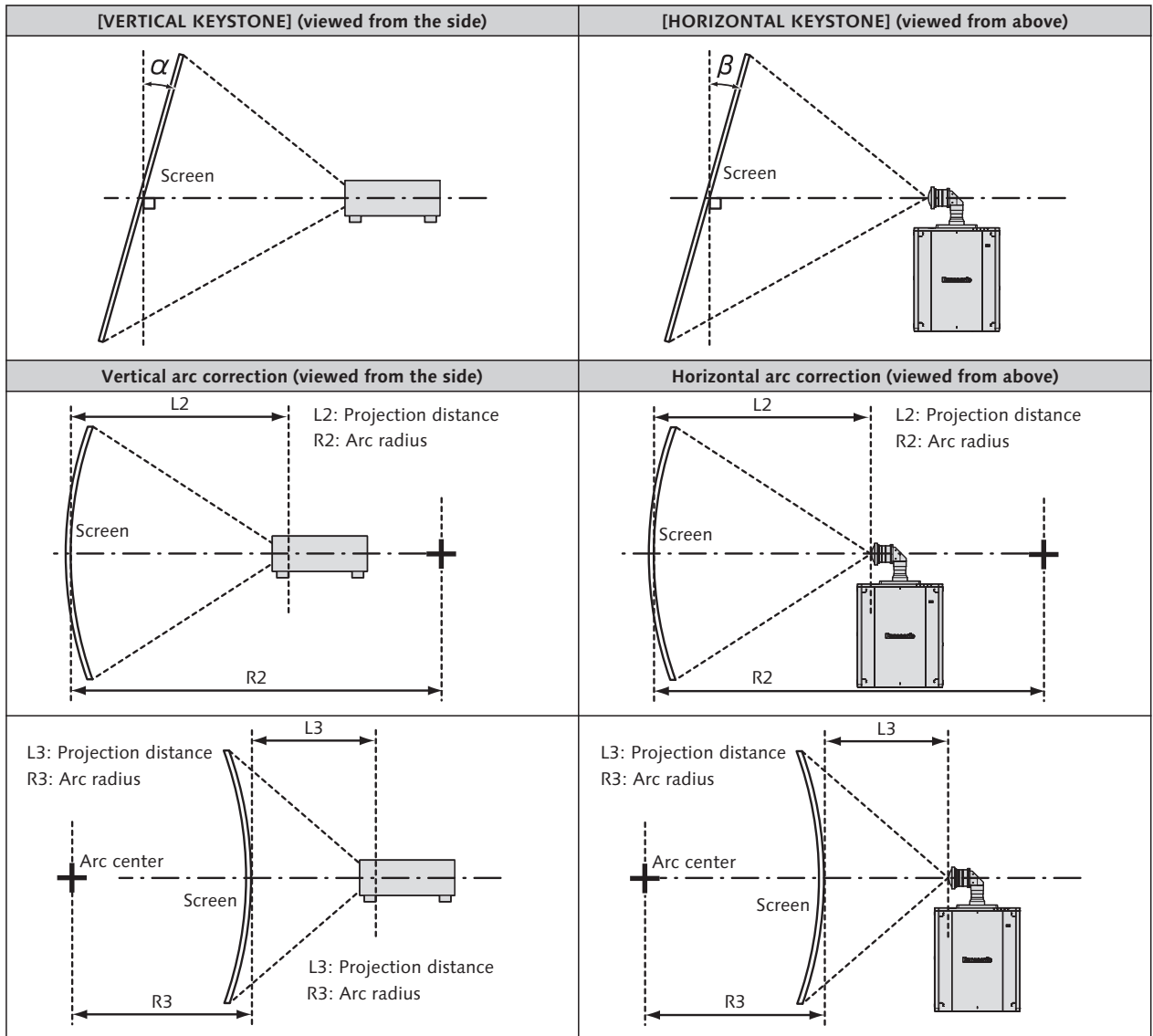
Projector model	A	B	b	y	z
PT-RZ31K	0.15	0.48	0.12	0.05	0.35
PT-RQ32K	0.19	0.56	0.24	0.1	0.39
PT-RS30K	0.18	0.4	0.12	0.14	0.18



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



[GEOMETRY] projection range



Projector model	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 R3/L3	Min. value of R2/L2	Min. value of R3/L3
PT-RQ32K/RQ22K/RQ13K	±15	±5	-	-	-	-	-	-
PT-RZ31K/RZ21K/RZ12K	±15	±5	-	-	-	-	-	-
PT-RS30K/RS20K/RS11K	±15	±5	-	-	-	-	-	-

When using the optional upgrade kit (ET-UK20)

Projector model	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 R3/L3	Min. value of R2/L2	Min. value of R3/L3
PT-RQ32K/RQ22K/RQ13K	±15	±5	-	-	-	-	-	-
PT-RZ31K/RZ21K/RZ12K	±15	±5	-	-	-	-	-	-
PT-RS30K/RS20K/RS11K	±15	±5	-	-	-	-	-	-