

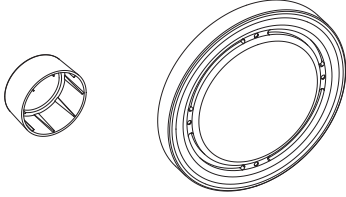
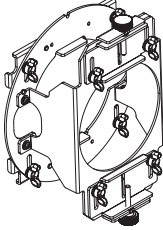
This lens is designed for use with Panasonic's applicable projectors.
With ultra-short throw-distance and flexible zoom, this lens is designed to project in extremely tight spaces.,
with minimal screen shadowing.

Please use the lens only on the specified Panasonic projector.

Specifications (Specifications subject to change without notice.)

F-number		2.0
Focal distance (f)		4.1 mm - 4.4 mm [5/32 - 11/64 in]
Throw ratio		0.280 - 0.299:1 for PT-RCQ10/RCQ80/RZ990/RZ890/RZ790/RZ690/RZ120/RZ970/RZ870/RZ770/RZ660 (16:10 aspect ratio)
		0.294 - 0.314:1 for PT-RW930/RW730/RW620 (16:10 aspect ratio)
		0.290 - 0.309:1 for PT-RX110 (4:3 aspect ratio)
Dimensions	Width	170 mm [6 11/16 in]
	Height	170 mm [6 11/16 in]
	Depth	391 mm [15 13/32 in]
Weight		Approx. 3.2 kg (Approx. 7.05 lbs)
Applicable projector		PT-PT-RCQ10/RCQ80/RZ990/RZ890/RZ790/RZ690/RZ120/RZ970/RW930/RX110/RZ870/RZ770/RW730/RZ660/RW620

Supplied Accessories

Lens cover	Lens fixed attachment
 1 each	 x 1

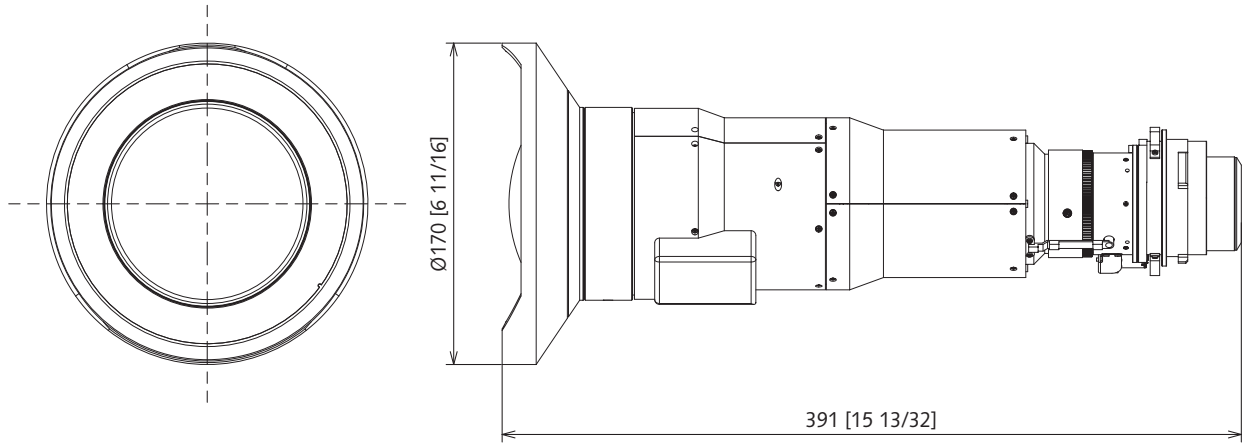
*When attaching to the PT-RCQ10/RZ120/RZ890/RZ970 series projectors, please use the included lens mounting attachment.

Note

- Once the fixed attachment is installed, lens shift adjustments cannot be made. Please adjust the lens shift before attaching the fixed attachment.

Dimensions

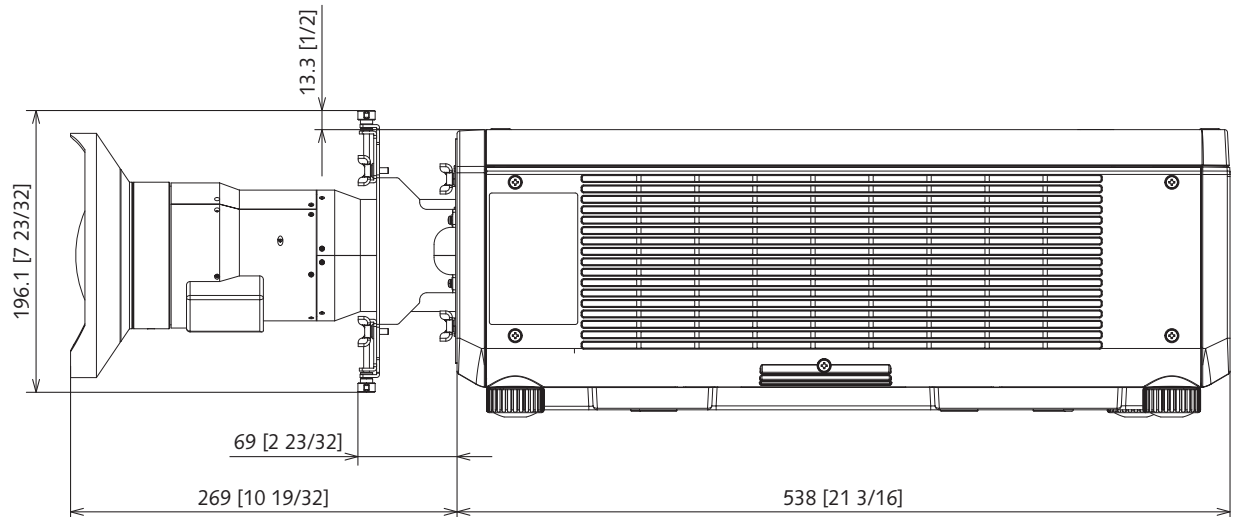
unit : mm [inch]
This illustration is not drawn to scale.



Group A

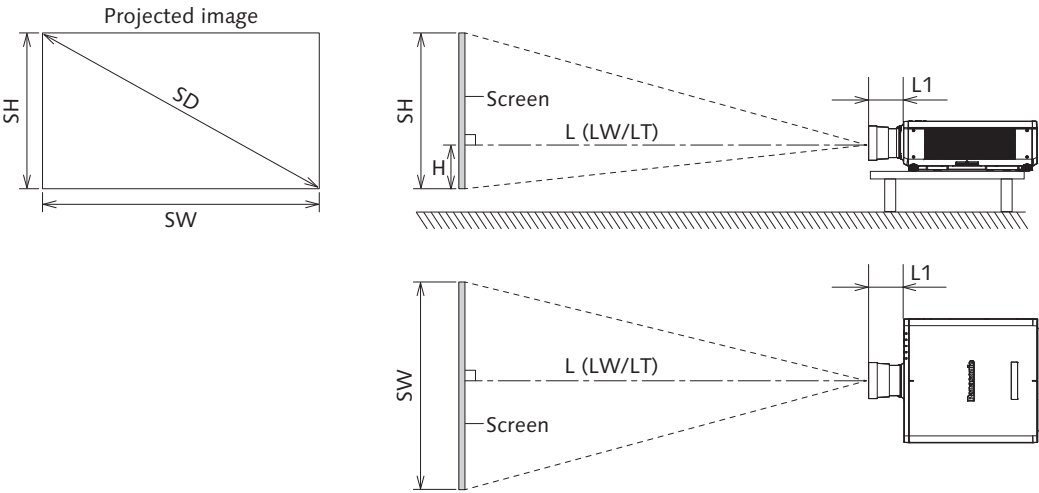
PT-PT-RCQ10/RCQ80/RZ990/RZ890/RZ790/RZ690/RZ120/RZ970/RW930/RX110/RZ870/RZ770/
RW730/RZ660/RW620

unit : mm [inch]
This illustration is not drawn to scale.



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.

SH	Projected image height
SW	Projected image width
SD	Projected image size
H	Distance from the lens center to the lower edge of the projected image
L	Projection distance (distance from the front end of the projection lens to the screen)
	LW Minimum projection distance when the Zoom Lens is used
	LT Maximum projection distance when the Zoom Lens is used
L1	Lens protrusion dimension (distance from the front surface of the projector to the front end of the projection lens)

Unit : meters

Projector model	Dimension for L1 (approximate value)
PT-RCQ10 RCQ80 RZ890 RZ690 RZ120 RZ970 RW930 RX110 RZ870 RZ770 RW730 RZ660 RW620	0.269

Projection distance

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

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

Screen aspect ratio 16:10

Unit: meters

Projector model				PT-RCQ10/RCQ80/RZ990/RZ890/RZ790/RZ690/ RZ120/RZ970/RZ870/RZ770/RZ660			PT-RW930/RW730/RW620		
Throw ratio ¹				0.280-0.299:1			0.294-0.314:1		
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)
m	inches								
2.54	100	1.346	2.154	0.59	0.64	0.00 - 0.89	0.62	0.67	-0.07 - 1.17
3.05	120	1.615	2.585	0.72	0.77	0.00 - 1.07	0.75	0.81	-0.08 - 1.41
3.81	150	2.019	3.231	0.90	0.97	0.00 - 1.33	0.95	1.02	-0.10 - 1.76
5.08	200	2.692	4.308	1.21	1.30	0.00 - 1.78	1.27	1.37	-0.13 - 2.34
6.35	250	3.365	5.385	1.52	1.63	0.00 - 2.22	1.60	1.71	-0.17 - 2.93
7.62	300	4.039	6.462	1.83	1.96	0.00 - 2.67	1.92	2.06	-0.20 - 3.51
8.89	350	4.712	7.539	2.14	2.29	0.00 - 3.11	2.25	2.41	-0.24 - 4.10
10.16	400	5.385	8.616	2.45	2.63	0.00 - 3.55	2.57	2.76	-0.27 - 4.68

¹ The throw ratio is based on the value during projection with the projected image size of 3.81 m [150 in].

Screen aspect ratio 16:10

Unit: feet

Projector model				PT-RCQ10/RCQ80/RZ990/RZ890/RZ790/RZ690/ RZ120/RZ970/RZ870/RZ770/RZ660			PT-RW930/RW730/RW620		
Throw ratio ¹				0.280-0.299:1			0.294-0.314:1		
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)
m	inches								
2.54	100	4.42	7.07	1.94	2.10	0.00 - 2.92	2.03	2.20	-0.23 - 3.84
3.05	120	5.30	8.48	2.36	2.53	0.00 - 3.51	2.46	2.66	-0.26 - 4.63
3.81	150	6.62	10.60	2.95	3.18	0.00 - 4.36	3.12	3.35	-0.33 - 5.77
5.08	200	8.83	14.13	3.97	4.27	0.00 - 5.84	4.17	4.49	-0.43 - 7.68
6.35	250	11.04	17.67	4.99	5.35	0.00 - 7.28	5.25	5.61	-0.56 - 9.61
7.62	300	13.25	21.20	6.00	6.43	0.00 - 8.76	6.30	6.76	-0.66 - 11.52
8.89	350	15.46	24.73	7.02	7.51	0.00 - 10.20	7.38	7.91	-0.79 - 13.45
10.16	400	17.67	28.27	8.04	8.63	0.00 - 11.65	8.43	9.06	-0.89 - 15.35

¹ The throw ratio is based on the value during projection with the projected image size of 3.81 m [150 in].

Screen aspect ratio 16:9

Unit: meters

Projector model				PT-RCQ10/RCQ80/RZ990/RZ890/RZ790/RZ690/RZ120/RZ970/RZ870/RZ770/RZ660			PT-RW930/RW730/RW620		
Throw ratio ¹				0.280-0.299:1			0.294-0.314:1		
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)
m	inches								
2.54	100	1.245	2.214	0.61	0.65	-0.12 - 0.91	0.64	0.69	-0.21 - 1.20
3.05	120	1.494	2.657	0.74	0.79	-0.15 - 1.10	0.78	0.83	-0.25 - 1.44
3.81	150	1.868	3.321	0.93	0.99	-0.19 - 1.37	0.98	1.05	-0.31 - 1.81
5.08	200	2.491	4.428	1.25	1.34	-0.25 - 1.83	1.31	1.40	-0.42 - 2.41
6.35	250	3.113	5.535	1.56	1.68	-0.31 - 2.28	1.64	1.76	-0.52 - 3.01
7.62	300	3.736	6.641	1.88	2.02	-0.37 - 2.74	1.98	2.12	-0.62 - 3.61
8.89	350	4.358	7.748	2.20	2.36	-0.44 - 3.20	2.31	2.48	-0.73 - 4.21
10.16	400	4.981	8.855	2.52	2.70	-0.50 - 3.65	2.65	2.84	-0.83 - 4.82

Projector model				PT-RX110J		
Throw ratio ¹				0.290-0.310:1		
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)
m	inches					
2.54	100	1.245	2.214	0.63	0.68	0.22 - 1.25
3.05	120	1.494	2.657	0.76	0.82	0.26 - 1.49
3.81	150	1.868	3.321	0.96	1.03	0.32 - 1.87
5.08	200	2.491	4.428	1.29	1.39	0.43 - 2.49
6.35	250	3.113	5.535	1.62	1.74	0.54 - 3.11
7.62	300	3.736	6.641	1.95	2.09	0.65 - 3.74
8.89	350	4.358	7.748	2.28	2.44	0.76 - 4.36
10.16	400	4.981	8.855	2.61	2.80	0.86 - 4.98

¹ The throw ratio is based on the value during projection with the projected image size of 3.81 m [150 in].

Screen aspect ratio 16:9

Unit: feet

Projector model				PT-RCQ10/RCQ80/RZ990/RZ890/RZ790/RZ690/RZ120/RZ970/RZ870/RZ770/RZ660			PT-RW930/RW730/RW620		
Throw ratio ¹				0.280-0.299:1			0.294-0.314:1		
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)
m	inches								
2.54	100	4.08	7.26	2.00	2.13	-0.39 - 2.99	2.10	2.26	-0.69 - 3.94
3.05	120	4.90	8.72	2.43	2.59	-0.49 - 3.61	2.56	2.72	-0.82 - 4.72
3.81	150	6.13	10.90	3.05	3.25	-0.62 - 4.49	3.22	3.44	-1.02 - 5.94
5.08	200	8.17	14.53	4.10	4.40	-0.82 - 6.00	4.30	4.59	-1.38 - 7.91
6.35	250	10.21	18.16	5.12	5.51	-1.02 - 7.48	5.38	5.77	-1.71 - 9.88
7.62	300	12.26	21.79	6.17	6.63	-1.21 - 8.99	6.50	6.96	-2.03 - 11.84
8.89	350	14.30	25.42	7.22	7.74	-1.44 - 10.50	7.58	8.14	-2.39 - 13.81
10.16	400	16.34	29.05	8.27	8.86	-1.64 - 11.97	8.69	9.32	-2.72 - 15.81

Projector model				PT-RX110J		
Throw ratio ¹				0.290-0.310:1		
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)
m	inches					
2.54	100	4.08	7.26	2.07	2.23	0.72 - 4.10
3.05	120	4.90	8.72	2.49	2.69	0.85 - 4.89
3.81	150	6.13	10.90	3.15	3.38	1.05 - 6.14
5.08	200	8.17	14.53	4.23	4.56	1.41 - 8.17
6.35	250	10.21	18.16	5.31	5.71	1.77 - 10.20
7.62	300	12.26	21.79	6.40	6.86	2.13 - 12.27
8.89	350	14.30	25.42	7.48	8.01	2.49 - 14.30
10.16	400	16.34	29.05	8.56	9.19	2.82 - 16.34

¹ The throw ratio is based on the value during projection with the projected image size of 3.81 m [150 in].

Screen aspect ratio 4:3

Unit: meters

Projector model				PT-RCQ10/RCQ80/RZ990/RZ890/RZ790/RZ690/RZ120/RZ970/RZ870/RZ770/RZ660			PT-RW930/RW730/RW620		
Throw ratio ¹				0.337-0.360:1			0.354-0.378:1		
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)
m	inches								
2.54	100	1.524	2.032	0.67	0.72	0.00 - 1.01	0.71	0.76	-0.08 - 1.33
3.05	120	1.829	2.438	0.81	0.87	0.00 - 1.21	0.86	0.92	-0.09 - 1.59
3.81	150	2.286	3.048	1.03	1.10	0.00 - 1.51	1.08	1.15	-0.11 - 1.99
5.08	200	3.048	4.064	1.38	1.47	0.00 - 2.01	1.44	1.55	-0.15 - 2.65
6.35	250	3.810	5.080	1.73	1.85	0.00 - 2.51	1.81	1.94	-0.19 - 3.31
7.62	300	4.572	6.096	2.08	2.23	0.00 - 3.02	2.18	2.34	-0.23 - 3.98
8.89	350	5.334	7.112	2.43	2.60	0.00 - 3.52	2.55	2.73	-0.27 - 4.64
10.16	400	6.096	8.128	2.78	2.98	0.00 - 4.02	2.92	3.12	-0.30 - 5.30

Projector model				PT-RX110		
Throw ratio ¹				0.290-0.309:1		
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)
m	inches					
2.54	100	1.524	2.032	0.58	0.62	0.18 - 1.14
3.05	120	1.829	2.438	0.70	0.75	0.22 - 1.37
3.81	150	2.286	3.048	0.88	0.94	0.27 - 1.71
5.08	200	3.048	4.064	1.18	1.27	0.37 - 2.29
6.35	250	3.810	5.080	1.49	1.59	0.46 - 2.86
7.62	300	4.572	6.096	1.79	1.92	0.55 - 3.43
8.89	350	5.334	7.112	2.09	2.24	0.64 - 4.00
10.16	400	6.096	8.128	2.39	2.57	0.73 - 4.57

¹ The throw ratio is based on the value during projection with the projected image size of 3.81 m [150 in].

Screen aspect ratio 4:3

Unit: feet

Projector model				PT-RCQ10/RCQ80/RZ990/RZ890/RZ790/RZ690/RZ120/RZ970/RZ870/RZ770/RZ660			PT-RW930/RW730/RW620		
Throw ratio ¹				0.337-0.360:1			0.354-0.378:1		
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)
m	inches								
2.54	100	5.00	6.67	2.20	2.36	0.00 - 3.31	2.33	2.49	-0.26 - 4.36
3.05	120	6.00	8.00	2.66	2.85	0.00 - 3.97	2.82	3.02	-0.30 - 5.22
3.81	150	7.50	10.00	3.38	3.61	0.00 - 4.95	3.54	3.77	-0.36 - 6.53
5.08	200	10.00	13.33	4.53	4.82	0.00 - 6.59	4.72	5.09	-0.49 - 8.69
6.35	250	12.50	16.67	5.68	6.07	0.00 - 8.23	5.94	6.36	-0.62 - 10.86
7.62	300	15.00	20.00	6.82	7.32	0.00 - 9.91	7.15	7.68	-0.75 - 13.06
8.89	350	17.50	23.33	7.97	8.53	0.00 - 11.55	8.37	8.96	-0.89 - 15.22
10.16	400	20.00	26.67	9.12	9.78	0.00 - 13.19	9.58	10.24	-0.98 - 17.39

Projector model				PT-RX110		
Throw ratio ¹				0.290-0.309:1		
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)	Height from the edge of screen to center of lens (H)
m	inches					
2.54	100	5.00	6.67	1.90	2.03	0.59 - 3.74
3.05	120	6.00	8.00	2.30	2.46	0.72 - 4.49
3.81	150	7.50	10.00	2.89	3.08	0.89 - 5.61
5.08	200	10.00	13.33	3.87	4.17	1.21 - 7.51
6.35	250	12.50	16.67	4.89	5.22	1.51 - 9.38
7.62	300	15.00	20.00	5.87	6.30	1.80 - 11.25
8.89	350	17.50	23.33	6.86	7.35	2.10 - 13.12
10.16	400	20.00	26.67	7.84	8.43	2.39 - 14.99

¹ The throw ratio is based on the value during projection with the projected image size of 3.81 m [150 in].

Calculation of the projection distance

To use a projected image size not listed in this manual, check the projected image size SD (m) and use the respective formula to calculate the value.

The unit of all the formulae is m. (Values obtained by the following calculation formulae contain a slight error.)

When calculating the value using image size designation (value in inches), multiply the value in inches by 0.0254 and substitute it into SD in the formula.

Screen aspect ratio 16:10

Unit: m

Projector model	Projection distance (L) formula	
	Min. (LW)	Max. (LT)
PT-RCQ10/RCQ80/RZ990/RZ890/RZ790/RZ690/RZ120/ RZ970/RZ870/RZ770/RZ660	$=0.2438 \times SD - 0.0266$	$=0.2612 \times SD - 0.0279$
PT-RW930/RW730/RW620	$=0.2560 \times SD - 0.0266$	$=0.2742 \times SD - 0.0279$

Screen aspect ratio 16:9

Unit: m

Projector model	Projection distance (L) formula	
	Min. (LW)	Max. (LT)
PT-RCQ10/RCQ80/RZ990/RZ890/RZ790/RZ690/RZ120/ RZ970/RZ870/RZ770/RZ660	$=0.2506 \times SD - 0.0266$	$=0.2684 \times SD - 0.0279$
PT-RW930/RW730/RW620	$=0.2631 \times SD - 0.0266$	$=0.2819 \times SD - 0.0279$
PT-RX110	$=0.2597 \times SD - 0.0266$	$=0.2782 \times SD - 0.0279$

Screen aspect ratio 4:3

Unit: m

Projector model	Projection distance (L) formula	
	Min. (LW)	Max. (LT)
PT-RCQ10/RCQ80/RZ990/RZ890/RZ790/RZ690/RZ120/ RZ970/RZ870/RZ770/RZ660	$=0.2760 \times SD - 0.0266$	$=0.2957 \times SD - 0.0279$
PT-RW930/RW730/RW620	$=0.2896 \times SD - 0.0266$	$=0.3102 \times SD - 0.0279$
PT-RX110	$=0.2383 \times SD - 0.0266$	$=0.2553 \times SD - 0.0279$

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.

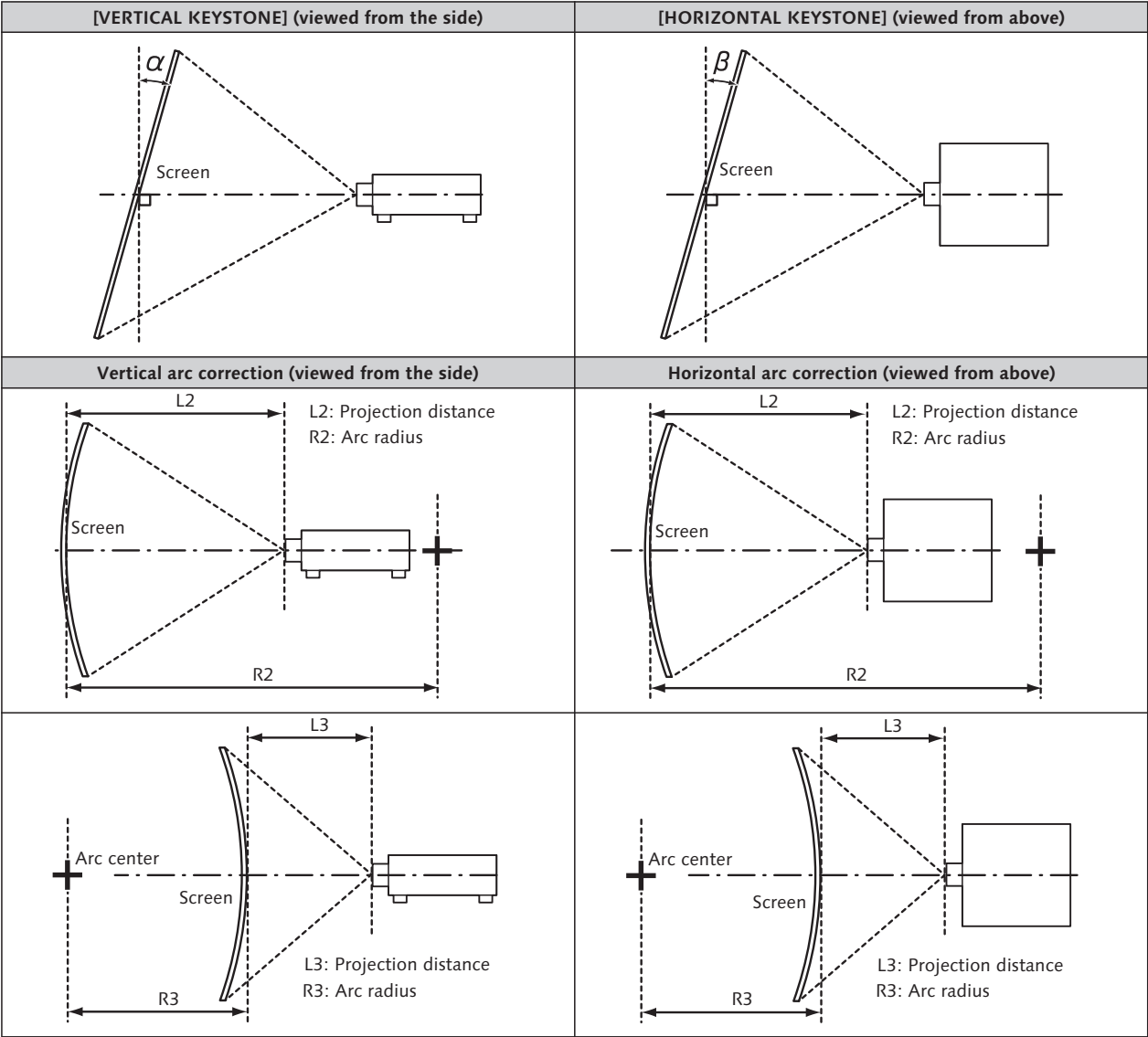
Following figure shows the adjustment range when the projector is installed on the floor.

Projector model	PT-RCQ10/RCQ80/RZ990/RZ890/RZ790/RZ690/ RZ120/RZ970/RZ870/RZ770/RZ660 is mounted.	PT-RW930/RW730/RW620 is mounted.
Lens shift range		
Projector model	PT-RX110 is mounted.	
Lens shift range		

Note

- Once the fixed attachment is installed, lens shift adjustments cannot be made. Please adjust the lens shift before attaching the fixed attachment.

[GEOMETRY] projection range



Projector model	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 R3/L3	Min. value of R2/L2	Min. value of R3/L3
PT-RCQ10 RCQ80 RZ890 RZ690 RZ120 RZ970 RW930 RX110 RZ870 RZ770 RW730 RZ660 RW620	±5	0	-	-	-	-	-	-