

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

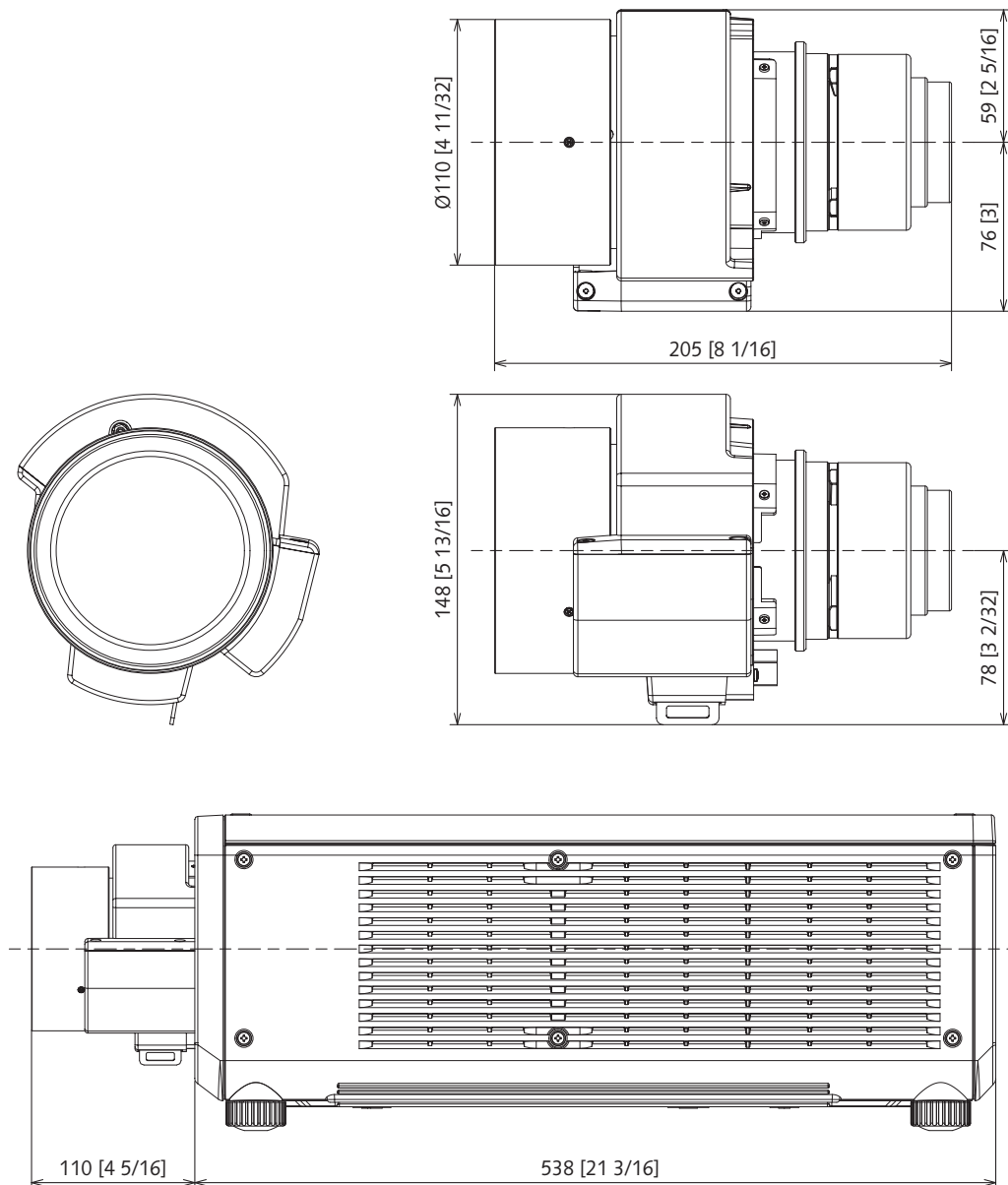
*\*Please use the lens only on the specified Panasonic projector.*

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

F-number	1.84 - 2.31	
Focal distance (f)	23.9 mm - 37.2 mm [30/32 - 1 15/32 in]	
Throw ratio	1.36 - 2.10:1 (16:10 aspect ratio)	
	1.36 - 2.10:1 (16:9 aspect ratio)	
	1.64 - 2.52:1 (4:3 aspect ratio)	
	1.36 - 2.10:1 (21:9 aspect ratio)	
Dimensions	Width	135 mm [5 5/16 in]
	Height	148 mm [5 13/16 in]
	Depth	205 mm [8 1/16 in]
Weight	1.7 kg (3.75 lbs)	
Applicable projector	PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80/PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80	

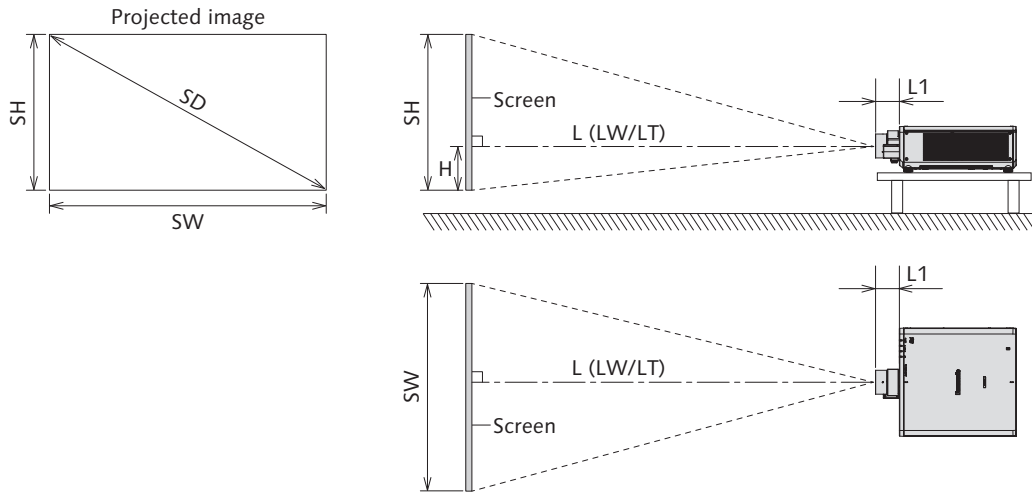
**Dimensions**

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 bottom 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 : m

Projector model	Dimension for L1 (approximate value)
PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80	0.110
PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80	

## 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-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80		PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80		
Throw ratio			1.36 - 2.10:1				
Projected image size			Projection distance (L)		Height position (H)		
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)			Max. (LT)
m	inches						
1.778	70	0.942	1.508	2.03	3.15	-0.09 - 1.04	
2.032	80	1.077	1.723	2.33	3.61	-0.11 - 1.19	
2.286	90	1.212	1.939	2.63	4.06	-0.12 - 1.33	
2.540	100	1.346	2.154	2.93	4.52	-0.14 - 1.48	
3.048	120	1.615	2.585	3.53	5.44	-0.16 - 1.78	
3.810	150	2.019	3.231	4.43	6.82	-0.20 - 2.22	
5.080	200	2.692	4.308	5.93	9.11	-0.27 - 2.96	
6.350	250	3.365	5.385	7.43	11.40	-0.34 - 3.70	
7.620	300	4.039	6.462	8.92	13.70	-0.40 - 4.44	
8.890	350	4.712	7.539	10.42	15.99	-0.47 - 5.18	
10.160	400	5.385	8.616	11.92	18.28	-0.54 - 5.92	
12.700	500	6.731	10.770	14.92	22.87	-0.67 - 7.40	
15.240	600	8.077	12.923	17.92	27.46	-0.81 - 8.89	
17.780	700	9.423	15.077	20.91	32.04	-0.94 - 10.37	
20.320	800	10.770	17.231	23.91	36.63	-1.08 - 11.85	
22.860	900	12.116	19.385	26.91	41.22	-1.21 - 13.33	
25.400	1000	13.462	21.539	29.90	45.80	-1.35 - 14.81	

• The throw ratio is based on the value during projection with the projected image size of 2.54 m [100 in]

Screen aspect ratio 16:10

Unit: feet

Projector model			PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80		PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80		
Throw ratio			1.36 - 2.10:1				
Projected image size			Projection distance (L)		Height position (H)		
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)			Max. (LT)
m	inches						
1.778	70	3.09	4.95	6.66	10.34	-0.89 - 3.15	
2.032	80	3.53	5.65	7.64	11.84	-1.02 - 3.61	
2.286	90	3.98	6.36	8.63	13.32	-1.15 - 4.04	
2.540	100	4.42	7.07	9.61	14.83	-1.25 - 4.50	
3.048	120	5.30	8.48	11.58	17.85	-1.51 - 5.41	
3.810	150	6.62	10.60	14.53	22.38	-1.90 - 6.76	
5.080	200	8.83	14.13	19.46	29.89	-2.53 - 8.99	
6.350	250	11.04	17.67	24.38	37.40	-3.15 - 11.25	
7.620	300	13.25	21.20	29.27	44.95	-3.77 - 13.48	
8.890	350	15.46	24.73	34.19	52.46	-4.40 - 15.75	
10.160	400	17.67	28.27	39.11	59.97	-5.05 - 18.01	
12.700	500	22.08	35.34	48.95	75.03	-6.30 - 22.51	
15.240	600	26.50	42.40	58.79	90.09	-7.55 - 27.00	
17.780	700	30.92	49.47	68.60	105.12	-8.83 - 31.50	
20.320	800	35.34	56.53	78.45	120.18	-10.07 - 35.99	
22.860	900	39.75	63.60	88.29	135.24	-11.35 - 40.49	
25.400	1000	44.17	70.67	98.10	150.26	-12.60 - 44.98	

• The throw ratio is based on the value during projection with the projected image size of 2.54 m [100 in]

Zoom Lens

Screen aspect ratio 16:9

Unit: meters

Projector model			PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80				PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80
Throw ratio			1.36 - 2.10:1				
Projected image size			Projection distance (L)			Height position (H)	
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)		
m	inches						
1.778	70	0.872	1.550	2.09	3.24	-0.15 - 1.02	
2.032	80	0.996	1.771	2.40	3.71	-0.17 - 1.16	
2.286	90	1.121	1.992	2.71	4.18	-0.19 - 1.31	
2.540	100	1.245	2.214	3.01	4.65	-0.21 - 1.45	
3.048	120	1.494	2.657	3.63	5.59	-0.25 - 1.74	
3.810	150	1.868	3.321	4.55	7.01	-0.31 - 2.18	
5.080	200	2.491	4.428	6.09	9.36	-0.42 - 2.91	
6.350	250	3.113	5.535	7.63	11.72	-0.52 - 3.63	
7.620	300	3.736	6.641	9.17	14.08	-0.62 - 4.36	
8.890	350	4.358	7.748	10.71	16.44	-0.73 - 5.09	
10.160	400	4.981	8.855	12.26	18.79	-0.83 - 5.81	
12.700	500	6.226	11.069	15.34	23.51	-1.04 - 7.26	
15.240	600	7.472	13.283	18.42	28.22	-1.25 - 8.72	
17.780	700	8.717	15.497	21.50	32.94	-1.45 - 10.17	
20.320	800	9.962	17.710	24.58	37.65	-1.66 - 11.62	
22.860	900	11.207	19.924	27.66	42.36	-1.87 - 13.08	
25.400	1000	12.453	22.138	30.74	47.08	-2.08 - 14.53	

• The throw ratio is based on the value during projection with the projected image size of 2.54 m [100 in]

Screen aspect ratio 16:9

Unit: feet

Projector model			PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80				PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80
Throw ratio			1.36 - 2.10:1				
Projected image size			Projection distance (L)			Height position (H)	
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)		
m	inches						
1.778	70	2.86	5.09	6.86	10.63	-0.49 - 3.35	
2.032	80	3.27	5.81	7.87	12.17	-0.56 - 3.81	
2.286	90	3.68	6.54	8.89	13.71	-0.62 - 4.30	
2.540	100	4.09	7.26	9.88	15.26	-0.69 - 4.76	
3.048	120	4.90	8.72	11.91	18.34	-0.82 - 5.71	
3.810	150	6.13	10.90	14.93	23.00	-1.02 - 7.15	
5.080	200	8.17	14.53	19.98	30.71	-1.38 - 9.55	
6.350	250	10.21	18.16	25.03	38.45	-1.71 - 11.91	
7.620	300	12.26	21.79	30.09	46.19	-2.03 - 14.30	
8.890	350	14.30	25.42	35.14	53.94	-2.40 - 16.70	
10.160	400	16.34	29.05	40.22	61.65	-2.72 - 19.06	
12.700	500	20.43	36.32	50.33	77.13	-3.41 - 23.82	
15.240	600	24.51	43.58	60.43	92.59	-4.10 - 28.61	
17.780	700	28.60	50.84	70.54	108.07	-4.76 - 33.37	
20.320	800	32.68	58.10	80.64	123.52	-5.45 - 38.12	
22.860	900	36.77	65.37	90.75	138.98	-6.14 - 42.91	
25.400	1000	40.86	72.63	100.85	154.46	-6.82 - 47.67	

• The throw ratio is based on the value during projection with the projected image size of 2.54 m [100 in]

Screen aspect ratio 4:3

Unit: meters

Projector model			PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80				PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80
Throw ratio			1.64 - 2.52:1				
Projected image size			Projection distance (L)			Height position (H)	
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)		
m	inches						
1.778	70	1.067	1.422	2.31	3.57	-0.11 - 1.17	
2.032	80	1.219	1.626	2.65	4.09	-0.12 - 1.34	
2.286	90	1.372	1.829	2.99	4.61	-0.14 - 1.51	
2.540	100	1.524	2.032	3.33	5.13	-0.15 - 1.68	
3.048	120	1.829	2.438	4.00	6.17	-0.18 - 2.01	
3.810	150	2.286	3.048	5.02	7.73	-0.23 - 2.52	
5.080	200	3.048	4.064	6.72	10.32	-0.31 - 3.35	
6.350	250	3.810	5.080	8.42	12.92	-0.38 - 4.19	
7.620	300	4.572	6.096	10.11	15.51	-0.46 - 5.03	
8.890	350	5.334	7.112	11.81	18.11	-0.53 - 5.87	
10.160	400	6.096	8.128	13.51	20.71	-0.61 - 6.71	
12.700	500	7.620	10.160	16.90	25.90	-0.76 - 8.38	
15.240	600	9.144	12.192	20.29	31.09	-0.91 - 10.06	
17.780	700	10.668	14.224	23.68	36.28	-1.07 - 11.74	
20.320	800	12.192	16.256	27.08	41.48	-1.22 - 13.41	
22.860	900	13.716	18.288	30.47	46.67	-1.37 - 15.09	
25.400	1000	15.240	20.320	33.86	51.86	-1.52 - 16.76	

• The throw ratio is based on the value during projection with the projected image size of 2.54 m [100 in]

Screen aspect ratio 4:3

Unit: feet

Projector model			PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80				PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80
Throw ratio			1.64 - 2.52:1				
Projected image size			Projection distance (L)			Height position (H)	
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)		
m	inches						
1.778	70	3.50	4.67	7.58	11.71	-0.36 - 3.84	
2.032	80	4.00	5.34	8.69	13.42	-0.39 - 4.40	
2.286	90	4.50	6.00	9.81	15.13	-0.46 - 4.95	
2.540	100	5.00	6.67	10.93	16.83	-0.49 - 5.51	
3.048	120	6.00	8.00	13.12	20.24	-0.59 - 6.59	
3.810	150	7.50	10.00	16.47	25.36	-0.76 - 8.27	
5.080	200	10.00	13.33	22.05	33.86	-1.02 - 10.99	
6.350	250	12.50	16.67	27.63	42.39	-1.25 - 13.75	
7.620	300	15.00	20.00	33.17	50.89	-1.51 - 16.50	
8.890	350	17.50	23.33	38.75	59.42	-1.74 - 19.26	
10.160	400	20.00	26.67	44.32	67.95	-2.00 - 22.01	
12.700	500	25.00	33.33	55.45	84.97	-2.49 - 27.49	
15.240	600	30.00	40.00	66.57	102.00	-2.99 - 33.01	
17.780	700	35.00	46.67	77.69	119.03	-3.51 - 38.52	
20.320	800	40.00	53.33	88.85	136.09	-4.00 - 44.00	
22.860	900	45.00	60.00	99.97	153.12	-4.50 - 49.51	
25.400	1000	50.00	66.67	111.09	170.14	-4.99 - 54.99	

• The throw ratio is based on the value during projection with the projected image size of 2.54 m [100 in]

Screen aspect ratio 21:9

Unit: meters

Projector model			PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80			PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80
Throw ratio			1.36 - 2.10:1			
Projected image size			Projection distance (L)			Height position (H)
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)	
m	inches					
1.778	70	0.691	1.638	2.21	3.43	-0.27 - 0.96
2.032	80	0.790	1.872	2.54	3.92	-0.31 - 1.10
2.286	90	0.889	2.106	2.86	4.42	-0.35 - 1.23
2.540	100	0.987	2.340	3.19	4.92	-0.38 - 1.37
3.048	120	1.185	2.808	3.84	5.92	-0.46 - 1.65
3.810	150	1.481	3.510	4.82	7.41	-0.58 - 2.06
5.080	200	1.975	4.681	6.45	9.90	-0.77 - 2.74
6.350	250	2.468	5.851	8.07	12.40	-0.96 - 3.43
7.620	300	2.962	7.021	9.70	14.89	-1.15 - 4.11
8.890	350	3.456	8.191	11.33	17.38	-1.34 - 4.80
10.160	400	3.949	9.361	12.96	19.87	-1.54 - 5.49
12.700	500	4.936	11.701	16.22	24.85	-1.92 - 6.86
15.240	600	5.924	14.042	19.47	29.84	-2.30 - 8.23
17.780	700	6.911	16.382	22.73	34.82	-2.69 - 9.60
20.320	800	7.898	18.722	25.98	39.80	-3.07 - 10.97
22.860	900	8.886	21.062	29.24	44.79	-3.46 - 12.34
25.400	1000	9.873	23.403	32.50	49.77	-3.84 - 13.71

• The throw ratio is based on the value during projection with the projected image size of 2.54 m [100 in]

Screen aspect ratio 21:9

Unit: feet

Projector model			PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80			PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80 PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80
Throw ratio			1.36 - 2.10:1			
Projected image size			Projection distance (L)			Height position (H)
Diagonal (SD)		Height (SH)	Width (SW)	Min. (LW)	Max. (LT)	
m	inches					
1.778	70	2.27	5.37	7.25	11.25	-0.89 - 3.15
2.032	80	2.59	6.14	8.33	12.86	-1.02 - 3.61
2.286	90	2.92	6.91	9.38	14.50	-1.15 - 4.04
2.540	100	3.24	7.68	10.47	16.14	-1.25 - 4.50
3.048	120	3.89	9.21	12.60	19.42	-1.51 - 5.41
3.810	150	4.86	11.52	15.81	24.31	-1.90 - 6.76
5.080	200	6.48	15.36	21.16	32.48	-2.53 - 8.99
6.350	250	8.10	19.20	26.48	40.68	-3.15 - 11.25
7.620	300	9.72	23.04	31.82	48.85	-3.77 - 13.48
8.890	350	11.34	26.87	37.17	57.02	-4.40 - 15.75
10.160	400	12.96	30.71	42.52	65.19	-5.05 - 18.01
12.700	500	16.19	38.39	53.22	81.53	-6.30 - 22.51
15.240	600	19.44	46.07	63.88	97.90	-7.55 - 27.00
17.780	700	22.67	53.75	74.57	114.24	-8.83 - 31.50
20.320	800	25.91	61.42	85.24	130.58	-10.07 - 35.99
22.860	900	29.15	69.10	95.93	146.95	-11.35 - 40.49
25.400	1000	32.39	76.78	106.63	163.29	-12.60 - 44.98

• The throw ratio is based on the value during projection with the projected image size of 2.54 m [100 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-REQ15/PT-REQ12/PT-REQ10/PT-REQ80	$=1.1800 \times SD - 0.0668$	$=1.8057 \times SD - 0.0631$
PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80		

#### Screen aspect ratio 16:9

Unit: m

Projector model	Projection distance (L) formula	
	Min. (LW)	Max. (LT)
PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80	$=1.2128 \times SD - 0.0668$	$=1.8559 \times SD - 0.0631$
PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80		

#### Screen aspect ratio 4:3

Unit: m

Projector model	Projection distance (L) formula	
	Min. (LW)	Max. (LT)
PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80	$=1.3358 \times SD - 0.0668$	$=2.0442 \times SD - 0.0631$
PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80		

#### Screen aspect ratio 21:9

Unit: m

Projector model	Projection distance (L) formula	
	Min. (LW)	Max. (LT)
PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80	$=1.2821 \times SD - 0.0668$	$=1.9619 \times SD - 0.0631$
PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80		

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

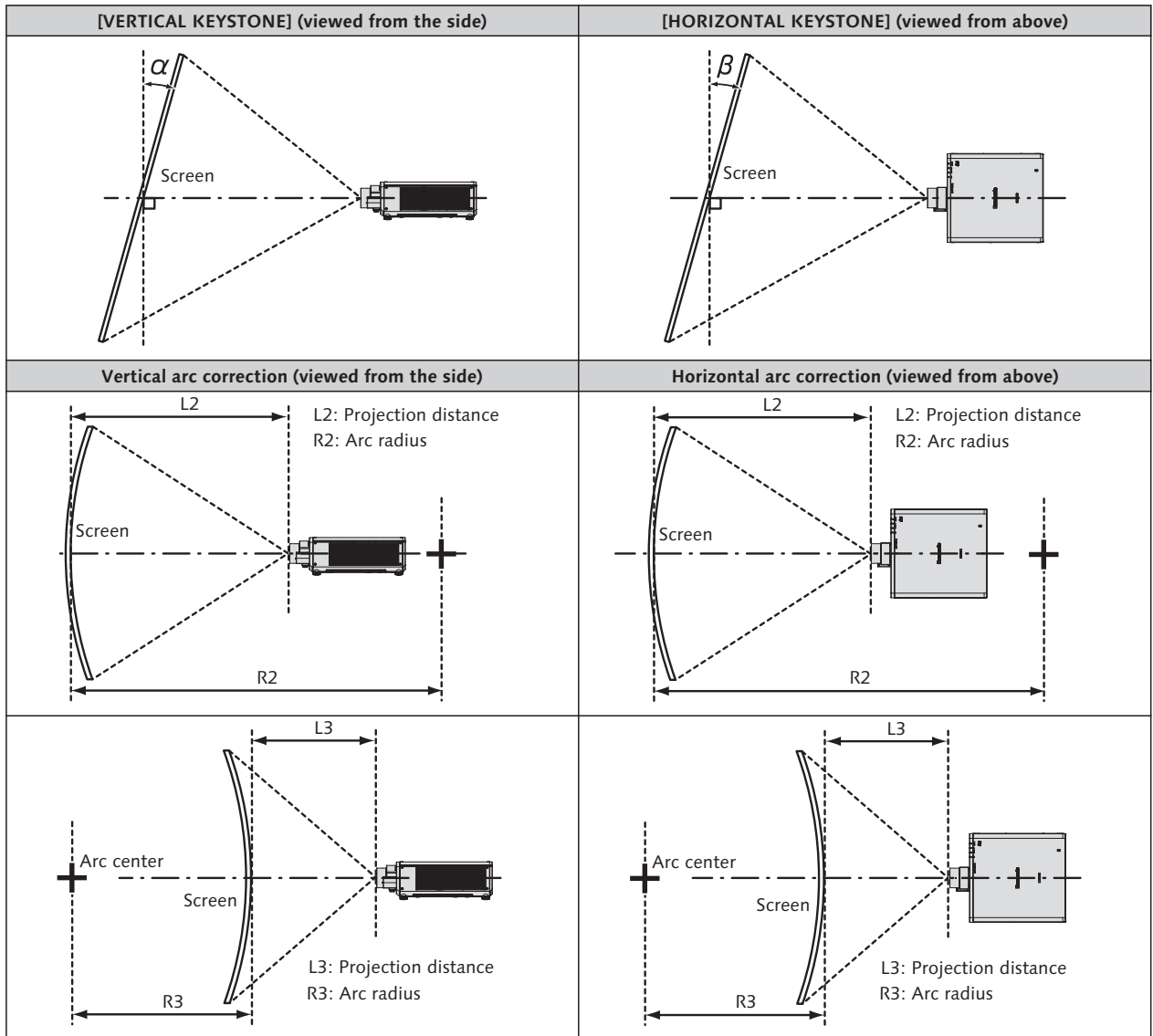
Based on the standard projection position using the optical axis shift function, the projection position can be adjusted in the range shown in the following figure.

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

Projector model	PT-REQ15/PT-REQ12/PT-REQ10/PT-REQ80/PT-REZ15/PT-REZ12/PT-REZ10/PT-REZ80 is mounted.
Lens shift range	



[GEOMETRY] projection range



Projector model	Only [KEYSTONE] used <sup>1</sup>		[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-REQ15 PT-REQ12 PT-REQ10 PT-REQ80	±40	±40	±20	±15	1.3	3.3	0.8	1.9
PT-REZ15 PT-REZ12 PT-REZ10 PT-REZ80								

<sup>1</sup> When [VERTICAL KEYSTONE] and [HORIZONTAL KEYSTONE] are used simultaneously, correction cannot be made exceeding total of 55°.