

# HS Series 2K HD lens throw ratios

The following table details the information required to calculate the lens throw ratios for the Christie D13HD2-HS, D16HD-HS, and D20HD-HS projectors.

| Lens                                | Throw distance formula  |                       | Vertical and horizontal offset (%) | Diagonal screen sizes |             |
|-------------------------------------|-------------------------|-----------------------|------------------------------------|-----------------------|-------------|
|                                     | Imperial (in)           | Metric (cm)           |                                    | Imperial (in)         | Metric (cm) |
| 0.38:1 fixed<br>(140-142108-XX)     | TD = 0.38 x W - 0.65    | TD = 0.38 x W - 1.65  | +120%/-65% V                       | 200 to 600            | 508 to 1524 |
|                                     |                         |                       | +7%/-15% H                         |                       |             |
| 0.65-0.75 zoom<br>(140-144100-XX)   | TDmin = 0.66 x W + 3.39 | TDmin = 0.66 x W + 9  | +120% /- 120% V                    | 50 to 500             | 127 to 1270 |
|                                     | TDmax = 0.77 x W + 3.39 | TDmax = 0.77 x W + 9  | +/- 50% H                          |                       |             |
| 0.84-1.02:1 zoom<br>(140-114107-XX) | TDmin = 0.84 x W + 3.74 | TDmin = 0.84 x W + 10 | +120% /- 21.9% V                   | 50 to 500             | 127 to 1270 |
|                                     | TDmax = 1.02 x W + 3.74 | TDmax = 1.02 x W + 10 | +/- 50% H                          |                       |             |
| 1.02-1.36:1 zoom<br>(140-115108-XX) | TDmin = 1.02 x W + 2.36 | TDmin = 1.02 x W + 6  | +120% /- 21.9% V                   | 50 to 500             | 127 to 1270 |
|                                     | TDmax = 1.36 x W + 2.36 | TDmax = 1.36 x W + 6  | +/- 50% H                          |                       |             |
| 1.2-1.50:1 zoom<br>(140-109101-XX)  | TDmin = 1.24 x W - 5.08 | TDmin = 1.24 x W - 13 | +120% /- 120% V                    | 50 to 500             | 127 to 1270 |
|                                     | TDmax = 1.55 x W - 4.61 | TDmax = 1.55 x W - 12 | +/- 50% H                          |                       |             |
| 1.5-2.0:1 zoom<br>(140-110103-XX)   | TDmin = 1.52 x W - 2.45 | TDmin = 1.52 x W - 6  | +120% /- 120% V                    | 50 to 500             | 127 to 1270 |
|                                     | TDmax = 2.02 x W - 2.43 | TDmax = 2.02 x W - 6  | +/- 50% H                          |                       |             |

| Lens                               | Throw distance formula           |                               | Vertical and horizontal offset (%) | Diagonal screen sizes |             |
|------------------------------------|----------------------------------|-------------------------------|------------------------------------|-----------------------|-------------|
|                                    | Imperial (in)                    | Metric (cm)                   |                                    | Imperial (in)         | Metric (cm) |
| 2.0-4.0:1 zoom<br>(140-111104-XX)  | TDmin = $1.95 \times W + 6.99$   | TDmin = $1.95 \times W + 18$  | +120% /- 120% V                    | 50 to 500             | 127 to 1270 |
|                                    | TDmax = $3.94 \times W + 3.87$   | TDmax = $3.94 \times W + 10$  | +/- 50% H                          |                       |             |
| 4.0-7.2:1 zoom<br>(140-116109-XX)  | TDmin = $3.95 \times W + 6.35$   | TDmin = $3.95 \times W + 16$  | +120% /- 120% V                    | 50 to 500             | 127 to 1270 |
|                                    | TDmax = $7.14 \times W + 4.41$   | TDmax = $7.14 \times W + 11$  | +/- 50% H                          |                       |             |
| 7.2-10.8:1 zoom<br>(140-145101-XX) | TDmin = $7.18 \times W + 10.12$  | TDmin = $7.18 \times W + 26$  | +120% /- 120% V                    | 50 to 500             | 127 to 1270 |
|                                    | TDmax = $10.80 \times W + 10.15$ | TDmax = $10.80 \times W + 26$ | +/- 50% H                          |                       |             |

- Throw distance measured from the center of the front foot of the projector.
- All lenses are made of glass.
- Calculated throw distance (TD) values are subject to a +/- 5% tolerance for individual lens variation.
- Calculated offset values are subject to a +/- 7% centering tolerance.