

Selection Guide

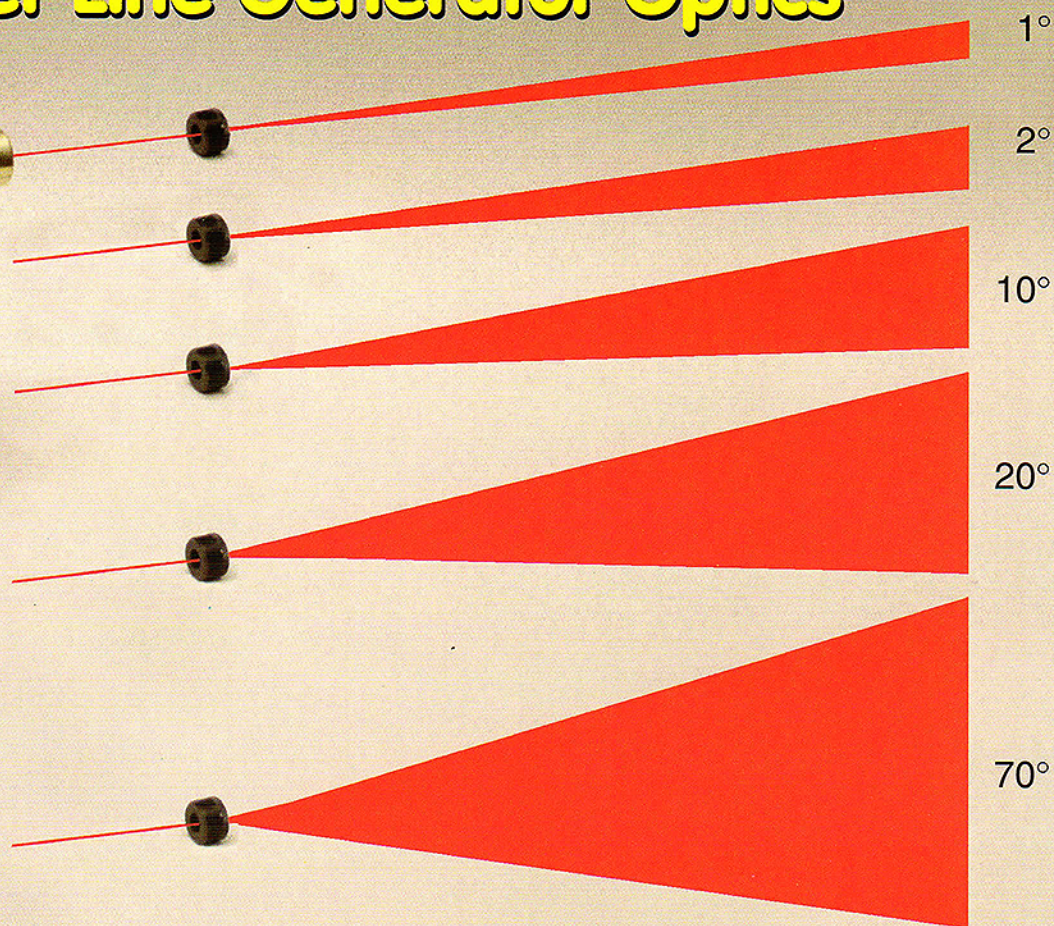
Laser Line Generator Optics



L58 Laser

shown with AP98 Magnetic Support Bracket and AP94 Mounting Assembly.

A line generator system uses a collimated (straightened) laser beam to shoot through a cylindrical lens.



When using the L58 Style Laser Dot Generator, choose the correct Line Generator Optic to create the appropriate line length for your need from the following list:

| Model # | Fan angle | Measured at 18" from the end of the laser | Line Gen. Assembly |
|---------|----------------|---|--------------------|
| CL150 | 1° divergence | Produces a 5/16" long line | 150 mm Radius |
| CL75 | 2° divergence | Produces a 5/8" long line | 75 mm Radius |
| C15 | 10° divergence | Produces a 3" long line | 15 mm Radius |
| CL7 | 20° divergence | Produces a 6" long line | 7 mm Radius |
| CL2 | 70° divergence | Produces a 25" long line | 2 mm Radius |

A cylindrical lens is a round bar or cross section of glass through which the collimated laser light passes and then spreads into a fan beam to form a line. The line length is determined by two factors: 1. The radius (curve) of the glass and 2. The laser beam's cross sectional size.

Example: To lengthen a laser line, shorten the radius of the cylindrical lens (grind the glass so that the curve is more sharp). This will make the line spread (diverge) faster. To shorten a laser line, decrease the size (cross section) of the laser beam. The smaller the laser beam, the less the beam will interact (hit) the more curved part (the outer edges) of the cylindrical lens. In other words, a small laser beam goes through the middle of the lens and isn't changed (refracted) much. The reverse is true for larger laser beams and longer radius (less curved) cylindrical lens.

The cylindrical lens types used with the L58 Laser Dot Generator decrease their radius proportionally as the line lengthens. The laser beam size is not changed. This is a simple but effective design approach for industrial customers.



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