HELIO™ SECURITY BOLLARDS

	600 SERIES - S10	900 SERIES - M30/K4	1200 SERIES - M40/K8	1200 SERIES - M50/K12
Bollard Construction	Stainless steel tube and head cap with Satin or powdercoat finish	Stainless steel tube and head cap with Satin or powdercoat finish	Stainless steel tube and head cap with Satin or powdercoat finish	Stainless steel tube and head cap with Satin or powdercoat finish
Dimensions	H: 40"; 6" Dia.	H: 40"; 9.25" Dia.	H: 40"; 11.5" Dia.	H: 40"; 11.5" Dia.
Embedded Security Core: In-ground depth	24"	36"	36"	42"
Embedded Security Core: Internal to bollard	24"	36"	36"	36"
Installation: Concrete Footer and Foundation	Minimum concrete footer (single bollard): 18"x18" Wide x 36" Deep	Minimum concrete footer (single bollard): 56" x 56" Wide x 60" Deep Refer to foundation detail drawings for specifications required to support security rating.	Minimum concrete footer (single bollard): 60" x 60" Wide x 60" Deep Refer to foundation detail drawings for specifications required to support security rating.	Minimum concrete footer (single bollard): 72" x 72" Wide x 60" Deep Refer to foundation detail drawings for specifications required to support security rating.
Spacing	40" minimum - 60" maximum center-to-center to support security rating	40" minimum - 60" maximum center-to-center to support security rating	40" minimum - 60" maximum center-to-center to support security rating	40" minimum - 60" maximum center-to-center to support security rating
Security Rating*	600 series-S10: bollards successful in stopping a 5,000 lb. vehicle traveling at 10 mph	M30/K4-P1: bollards successful in stopping a 15,000 lb. vehicle traveling at a minimum test velocity of 30 mph in less than 3.3 feet (1 meter)	M40/K8: bollards successful in stopping a 15,000 lb. vehicle traveling at a minimum test velocity of 40 mph in less than 3.3 feet (1 meter)	M50/K12: bollards successful in stopping a 15,000 lb. vehicle traveling at a minimum test velocity of 50 mph in less than 3.3 feet (1 meter)
Applications	Low threat: - Designed to stop small passenger cars and direct traffic - Typical applications: store fronts, pedestrian areas	Moderate threat: - For use in areas that may allow vehicles to pick up some speed - Typical applications: high value properties and large gathering areas	Greater threat: - For use in areas that may allow vehicles to pick up more speed - Typical applications: high value properties and large gathering areas	Greater threat: - For use in areas that may allow vehicles to pick up higher speed - Typical applications: federal buildings and high value properties
Options	Non-illuminated versions are available: straight stainless pole is standard; detailed design is also an option Non-security core versions in illuminated and non-illuminated configurations are also available 180° and 360° light distribution options are available for all illuminated bollards	Non-illuminated versions are available: straight stainless pole is standard; detailed design is also an option Non-security core versions in illuminated and non-illuminated configurations are also available 180° and 360° light distribution options are available for all illuminated bollards	Non-illuminated versions are available: straight stainless pole is standard; detailed design is also an option Non-security core versions in illuminated and non-illuminated configurations are also available 180° and 360° light distribution options are available for all illuminated bollards	Non-illuminated versions are available: straight stainless pole is standard; detailed design is also an option Non-security core versions in illuminated and non-illuminated configurations are also available 180° and 360° light distribution options are available for all illuminated bollards

** Forms+Surfaces' security bollards have been tested using a Finite Element Analysis (FEA) by a professional engineering consultant. FEA is a software-based tool commonly used in the automotive industry and used extensively for crash test simulations. All of our bollards with a security solution option were tested and passed a very demanding set of impact criteria. Tests were performed using a bollard set in permanent concrete footings and struck by a vehicle at a 90-degree impact.*