



COMPREHENSIVE
CASTING & MACHINING
SOLUTIONS

ALUMINUM & ZINC
CASTING



KingCast

StressCrete® GROUP



We are a family business focused on creating opportunities for our employees and improving the communities we serve. We are building the foundation of enhanced, more livable cities.

StressCrete Group services multiple market segments, including Municipal, Department of Transportation, Transmission & Distribution, Sports Lighting, and more, through four divisions: StressCrete, King Luminaire, KingCast, and Spartan Sports Lighting.

Established in 1953, StressCrete is the oldest and most experienced manufacturer of spun concrete poles in North America operating from three facilities strategically located in Alabama, Kansas, and Ontario. From here, we serve customers across the continent with the broadest, most diverse range of made-to-order pre-stressed spun concrete poles.

King Luminaire produces a comprehensive assortment of high-performance outdoor luminaires, metal poles, pole arms, bollards, and site amenities. With an array of state-of-the-art LED technology, the most advanced technical knowledge available, plus state-of-the-art equipment, we aim to manufacture the highest quality product possible. With plants in Ohio and Ontario, King Luminaire is a North American leader in the outdoor lighting industry.

KingCast designs and produces zinc and aluminum permanent cast products, as well as expanding our reach to outside industries, such as transportation, energy, utility, and many others. Located in Ontario, KingCast provides a seamless flow from initial design and tooling, to cast products and powder coat finishing in-house with end-to-end machining.

Spartan Sports Lighting provides a complete turnkey solution for any application regardless of field type, size, level of play, or existing site amenities. Manufactured in the United States and easy to install, Spartan Sports Lighting is the high-performance solution you will be proud to put on the field.

At StressCrete Group, we provide every customer with the highest quality innovative products and work as a team to create and maintain life-long customers through world class service. Our goal is to offer our customers the highest level of service and technical support possible.

KINGCAST

KingCast Inc., a division of StressCrete Group, is a gravity die cast supplier of high-quality aluminum and zinc products to various market segments in the manufacturing industry. KingCast management possess more than three decades of foundry experience, ensuring a seamless flow from initial design to finished product.

Our sales and operations teams work closely with clients to design premium castings in a variety of gravity die cast methods. With virtually endless capabilities, clients can rely on KingCast to provide turnkey solutions through a fully-equipped CNC machine shop, as well as multiple finishing processes.

Over the last 30 years, our operations teams have been continually perfecting our production and quality processes to guarantee premium products. We are ISO 9001 certified, follow ASTM practices and our qualified team maintains their skills with industry certifications to provide quality products and guaranteed workmanship.

We take pride in providing excellent customer service and exceeding the needs of our clients. Each customer's projects are unique, and as such, we work as a team to become a valued part of their supply chain, fostering relationships that will last a lifetime.



Pictured: KingCast Plant, Stoney Creek, Ontario



PERMANENT MOLD CASTING

Permanent mold casting is the process of introducing molten aluminum into reusable cavities to produce superior castings. Our in-house permanent mold casting facility offers various gravity pressure casting processes to provide high-quality aluminum and zinc castings that suit every customer's needs. Engineers provide casting design assistance, solid modeling, gating and flow analysis, plus prototyping and modeling to ensure each project is perfectly crafted to customer specifications.

ADVANTAGES

- ✓ Intricate design capabilities with high dimensional precision
- ✓ Castings with excellent mechanical properties
- ✓ Excellent surface finish with consistent quality
- ✓ Cost-effective castings due to design, tooling life and production processing
- ✓ Rapid low-cost prototyping with graphite permanent molding



DESIGN & MOLD PRODUCTION

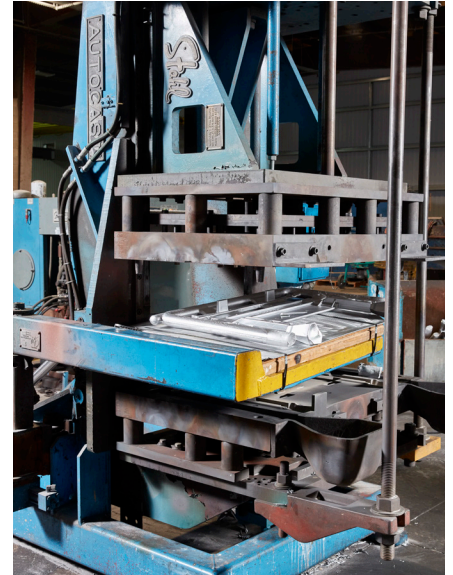
With in-house mold making capabilities, our expert design team can work with you to make your concept into reality. Our experienced staff can design, engineer and manufacture tooling from scratch with the use of state-of-the-art CAD and CAM software. Conveniently, we can also alter, modify, and/or repair existing tooling.

CASTING CAPABILITIES

Our modern static and tilt-pour permanent mold facility has ten furnaces for a total capacity of 10,000 pounds, producing aluminum or zinc parts ranging from 1 ounce to 150 pounds. With a variety and various sized casting machines, our foundry allows us to operate efficiently and to deliver a wide range of high-quality castings to our customers on time.

PERMANENT MOLD PRODUCTION

- **TILT POUR PERMANENT MOLD** — Molten metal is poured into cups while the mold is in a horizontal position and flows into the cavity as the mold is gradually tilted into a vertical position. As the molten metal flows into the mold cavity at a controlled, gradual rate, there is little turbulence present, resulting in a high-quality casting.
- **TILT POUR PERMANENT MOLD** — Molten metal is poured directly into the mold and fed by gravity. A fixed amount of time is given for the metal to solidify in a stationary position.
- **SEMI-PERMANENT MOLD** — Introducing sand cores to either tilt or static permanent methods. Temporary sand cores create a non-machined shape or passageway within the casting for a variety of customer requirements.



GRAPHITE PERMANENT MOLD PRODUCTION

Excellent for smaller sized parts using a bottom fill, low turbulence process, that produces high quality, homogenous castings with an outstanding surface finish. Graphite molds are an economical option for any quantity of zinc castings or an excellent alternative for lower volumes or prototypes of aluminum castings.

CORE PRODUCTION

The use of a bonded sand to produce inserts for desired shapes, passageways, or relieve drafts in the casting process without machining.

FINISHING PROCESS



- **CUTTING** — The process of trimming gating, excess material from a casting.
- **GRINDING** — Utilizing abrasives to remove parting lines and other excess material from a casting.
- **DE-BURRING** — The process of filing down unwanted edges or lines from a casting.
- **SHOT BLASTING** — A process typically utilizing steel media to blast the surface of a casting, effectively cleaning and texturizing the metal.
- **VIBRATORY FINISHING** — Tumbling process to deburr, descale, burnish, or clean and polish castings.
- **HEAT TREATMENT** — The process of improving the mechanical and physical properties of an aluminum casting.
- **IMPREGNATION** — Effectively seals against leaks and other damaging agents.

MACHINING



Our fully equipped CNC and manual machine shop offers a variety of services including milling, turning, drilling, and tapping. With the recent advancements in machine technology and CMM inspection, we can achieve tight tolerances to provide finished products that meet a variety of customer requirements.

POWDER COATING

KINGCOAT™ BY KING LUMINAIRE

We apply an extremely durable exterior polyester powder blend of non-volatile ingredients in a dry process, which is then fused into a continuous film through heat. This warrantied coating provides an exceptional finish with a variety of color options, outstanding outdoor durability, and superior corrosion and barrier protection. To ensure the highest quality, our coatings undergo extensive QC testing, including 4,000 hours of salt spray exposure.

For products installed in highly corrosive environments, such as seaside communities with salty air, we offer a dual coating. This additional layer helps maintain the integrity of our KingCoat™ colors, ensuring they stay vibrant and durable for years to come.

Our finishing options provide reliable protection, excellent chemical resistance, and superior hardness, all available in a wide range of colors. Depending on the color selection, finishes are offered in textured or smooth options, with **custom color matching available to meet specific project needs**.

KINGCOAT™ | POPULAR COLOR SWATCHES*



** KingCoat™ color samples shown are an approximate representation. Paint chip samples and custom color matching available upon request.*

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