

# BRADKEN

## MANUFACTURING FACILITIES



Pattern, casting and machining facilities located in London, Ontario Canada (Single Source Solutions)



Diverse pattern and tooling manufacturing capabilities



A wide variety of steels and specialty materials: NiHard, NiResist, ductile irons to 10,000# ship weight

### Bradken – London

#### (Patterns & Castings)

For over 60 years, Bradken – London, Ltd. casting facility has positioned itself as the preferred supplier for patterns, high integrity ferrous castings and machined components. We continuously assess and improve all aspects of our business to ensure we exceed our customers' expectations. The essence of our success is delivering reliable components on time with superior service and exceptional value. As an integrated manufacturing company Bradken – London, Ltd., casting facility operates locations. The Pattern location specializes in the manufacture of wood, metal and plastic patterns for the foundry industry. The Foundry location specializes in high integrity and difficult to produce components in a wide variety of alloys including such diverse materials as heat and corrosion resistant stainless steel, carbon steel, Ni-hard, Ni-resist and ductile iron. Bradken – London casting facility has a workforce of 120 employees with skilled metallurgical engineers and technicians, and qualified, highly skilled mold and melt crews. We have produced over 50,000 unique castings for nine distinct market sectors. Our customers see us as a jobbing foundry resource providing expertise in casting engineered products with difficult geometries and varying alloys. New customers often find that we offer the right solution as we have experience with reverse engineering and casting unique, one-off components.

#### Manufacturing Capabilities (Overview)

- Each Bradken business unit makes use of continuous improvement programs and maintains specialists at the business unit and corporate levels to drive improvements and efficiencies
- ISO 9001 registered world-class foundry
- Casting weight range: 20 to 10,000 lbs in a variety of steels, specialty stainless steels, NiHard, NiResist, ductile iron and unique metallurgies
- Value added machining, painting & light assembly
- World-class pattern shop with CNC and CAD/CAM capabilities
- Located within minutes of our Bradken machining facility. The two facilities add value and solutions for our customers' wide-ranging needs

#### Key Differentiators:

- Complex highly engineered castings
- Extensive list of alloys poured: Over 280
- In house NDE and certified upgrade
- Single source solutions: Patterns, castings, machining & testing

#### Pattern Shop

Bradken – London began as a one man jobbing wood pattern shop in 1948. During the 1950's the company established a reputation for building very large patterns for hydroelectric, steel mills, and resource processing equipment. During the 1960's the demand for metal patterns increased, so the pattern shop expanded into metal tooling. We provide tooling for large jobbing foundries as well as high production foundries.

# BRADKEN

## MANUFACTURING FACILITIES



Difficult castings and specifications for the energy market



Dimensional stability and high integrity castings



Machined turbine component

In 1980 we became the first Pattern Shop in North America to utilize CAD/CAM for the design and manufacture of tooling. Today we can make your tooling in wood, metal, plastic and Styrofoam, using either CNC or conventional methods. We also supply jigs, fixtures, models and templates.

### Facility Information

<b>In business</b>	Since 1948
<b>Capabilities</b>	
Casting	
Machine Shop	
Fabrication	Outsourced
Value Added	Pattern Shop

### Metals Cast

Cast Steels	
Austenitic-Ferritic Duplex	20 to 10,000 lbs.
Carbon Steels	20 to 10,000 lbs.
Corrosion Resistant Steels	20 to 10,000 lbs.
Heat Resistant Steels	20 to 10,000 lbs.
Low Alloy Steels	20 to 10,000 lbs.
Ni Hard	20 to 10,000 lbs.
Ni Resist	20 to 10,000 lbs.
Ductile Iron	20 to 10,000 lbs.
Wrought Grades	20 to 10,000 lbs.

Molding or casting process used	
Air-Set/Nobake	20 to 10,000 lbs.

Flask sizes	
Minimum	32" x 32"
Maximum	110" x 110"

### Pattern making and solidification modelling

Pattern Shop	
3 CNC tools up to 236" x 132" x 59"	
Magmasoft Simulation	

### In-house Heat Treating

Furnaces	Multiple
Furnace Sizes	
Maximum	110" x 72"
Type of Heat Treating	
Normalization	
Stress Relieving	
Annealing	

### Quality and Process Controls

Hardness	
Faro Arm for Dimensional Layout	
Microstructure	
Radiography	
Charpy Impact Testing	
Magnetic Particle Examination	
Liquid Penetrant Examination	
Chemical Analysis	
Sand Control	
Ultrasonic Examination	
Mechanical Testing	

Certified welding standards: ASME IX

Painting capabilities

### In House Machine Shop Capability

Maximum lifting capacity	10,000 lbs.
Turning – Vertical	CNC
Minimum OD	18"
Maximum OD	78.7"
Maximum Length	70.9"

### Quality Assurance Program:

ISO 9001	
American Bureau of Shipping	
Cage Code Registered - US Government	
Defense Logistics Information Service (DLIS)	
CGP -Canadian government controlled goods program	
ASME Section III, NCA-3800 2001	

For more information contact Bradken at [EngProd@bradken.com](mailto:EngProd@bradken.com)

#### Bradken - London

3040 Osler Street  
London, Ontario, Canada N5Y 1V3  
T +1 519 455 5420

Mailing Address  
P.O. Box 7006  
London, Ontario, Canada N5Y 5R7

#### Bradken

12200 N.W. Ambassador Drive  
Suite 647, Kansas City, MO 64163  
T +1 816 270 0700