

Dominis

COMPANY INFORMATION

Company: **DOMINIS ENGINEERING LTD.**

5515 Canotek Rd., Unit 15
Gloucester (Ottawa), Ontario
Canada K1J 9L1
website: <http://www.dominis.ca/>

Contacts: Mr. Bodo Gospodnetic, President
tel.: 613 747-0193
fax.: 613 746-3321
e-mail: sgospodnetic@dominis.ca

Overview: Dominis Engineering designs and manufactures high performance propellers. The company has developed state-of-the-art technology for CNC milling of propellers and water jet impellers to *"final form and finish"*. This technology eliminates robotic grinding and hand finishing of leading edges from the manufacturing process. Dominis has extensive experience in CNC machining of monoblock propellers, water jet impellers in duplex stainless steel and hydro turbine runners in stainless steel. Dominis Engineering also develops all the necessary tooling, fixtures and CAD/CAM programming for its production. The company was established in 1985.

Services:

- propeller design
- machining of monoblock propellers
- machining of CP propeller blades
- machining of water jet impeller
- machining of shrouded impellers
- machining of turbine blades

Major naval projects:

- spare CP propeller blades for Canadian Patrol Frigates (CPF)
- monoblock propellers for Egyptian Fast Missile Craft (EFMC)
- water jet impellers for Littoral Combat Ship (LCS)
- water jet impellers for Improved Navy Lighterage System (INLS)

Quality approvals: ISO 9001: 2008 (FM94074)

CAGE CODE: 3AF71

Controlled goods no.: 010930

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Main customers:

Canadian Coast Guard	Monoblock propellers
Canadian Navy	CP propeller blades
Flowserve, Phillipsburg, NJ	Pump blades
Howden Buffalo, Canton, OH	High velocity fan rotors
Michigan Wheel Marine, Grand Rapids, MI	Monoblock propellers
Rolls-Royce Naval Marine, Walpole, MA	Water jet impellers
US Coast Guard, Baltimore, MD	Ship propeller blades
Velan Inc, Montreal, Quebec	Large valves
Wartsila Defense, Chesapeake, VA	Monoblock propellers
Wartsila Netherlands, Drunen, Netherlands	Water jet impellers

Equipment: Dominis Engineering's manufacturing capabilities are focused on three large, 5-axis simultaneous contouring milling machines, one vertical turning and boring mill with live tools, two medium capacity computerized balancers and high resolution laser scanner at its 835 sq. m. plant.

1, Toshiba BMC-80 horizontal machining centre with two pallets

Working volume & table capacity: 1.6 m x 1 m x 1.1 m, 1,500 kg
Spindle speed: 20 - 4,500 rpm 60 tool ATC

2, Toshiba BTD-110R.16 (S) horizontal boring/milling machine

Working volume & table capacity 2.5 m x 1.8 m x 1.4 m, 6,300 kg
Spindle speed: 40 - 8,000 rpm 60 tool ATC

3, Toshiba BTD-200QH horizontal boring and milling machine

Working volume & table capacity: 1.5 m x 1.1 m x 1.2 m, 4,000 kg
Spindle speed: 20 - 5,000 rpm 30 tool ATC

4, Toshiba TUE-150S, vertical turning and boring mill

Working volume & table capacity: 2 m dia x 1.6 m, 8,000 kg
Table speed: 10 - 350 rpm 18 tool ATC

5, Dynamics Research 602P computerized balancer

Working volume & capacity: 1.25 m dia. x 2 m, 900 kg

6, Dynamics Research 610 computerized balancer

Working volume & capacity 2.50 m dia. x 2 m, 4,500 kg

7, Faro Scan Arm HD

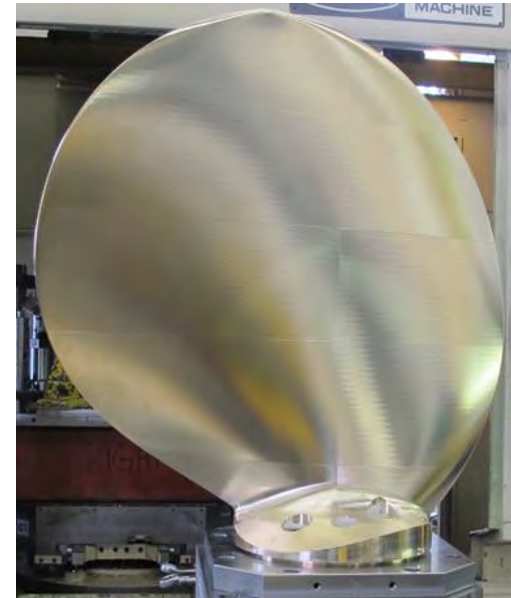
Range: 2.8 m
Accuracy: $\pm 0.001"$,
Minimum point spacing: 0.0015"

Dominis Engineering

Ottawa, Canada

Integrated Propeller Manufacturing System

Program	Client	Location	Description	Year
LCS - Littoral Combat Ship LCS5 through LCS31 and spares	Rolls-Royce Naval Marine	Walpole, MA, USA	68 water jet impellers Diameter: 1.7 m	2012 - 2020
Coastal Patrol Boat	Michigan Wheel Marine	Grand Rapids MI, USA	20 monoblock propellers Diameter: 50"	2011 - 2012
EFMC Egyptian Fast Missile Craft	Wartsila Defence	Chesapeake VA, USA	20 monoblock propellers Diameter: 1.75 m	2010 - 2011
LCS - Littoral Combat Ship LCS 4	Wartsila Defence	Chesapeake VA, USA	3 water jet impellers Diameter: 1.7 m and 2 m	2010
INLS Improved Navy Lighterage System	Wartsila Defence	Chesapeake VA, USA	127 water jet impellers Diameter: 900 mm	2004 - 2014
E-Craft Expeditionary Craft	Wartsila Defence	Chesapeake VA, USA	4 water jet impellers Diameter: 810 mm	2007
DDX Destroyer	Howden Buffalo	New Philadelphia OH, USA	2 prototype fan rotors Diameter: 21"	2006
CPF Halifax Class Frigate	Canadian Navy	Halifax, NS , Canada	20 CP propeller blades Diameter: 4.34 m	2007
CCGS "Griffon" Icebreaker	Canadian Coast Guard	Sarnia, Ontario, Canada	2 monoblock propellers Diameter: 120"	2002
210' Class B Cutter	US Coast Guard	Baltimore Maryland, USA	72 CP propeller blades Diameter: 90"	2000
210' Class A Cutter	US Coast Guard	Baltimore Maryland, USA	12 CP propeller blades Diameter: 90"	2015



CNC machining to “final form and finish”

Propellers True to Design

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COMPLETED NAVY AND COAST GUARD PROJECTS

CP propeller blades delivered for Navy and Coast Guard programs

Program name	Navy/Coast Guard	Prime	Diameter	Quantity
CPF	Royal Canadian Navy	Dominis	4.3 m	20
210' Class B cutter	US Coast Guard	Dominis	90"	72
210' Class A cutter	US Coast Guard	Dominis	90"	12
Total no. of CP propeller blades				104

Propellers delivered for Navy and Coast Guard programs

Program name	Navy/Coast Guard	Prime	Diameter	Quantity
Ice breaker "Griffon"	Canadian Coast Guard	Dominis	3 m	2
CPB	US Navy	Michigan Wheel Marine	50"	20
EFMC	US Navy	Wartsila Defense	1.75 m	20
Total no. of propellers				42

Water jet impellers delivered for Navy and Coast Guard programs

Program name	Navy/Coast Guard	Prime	Diameter	Quantity
INLS	US Navy	Wartsila Defense	900 mm	127
E-craft	US Navy	Wartsila Defense	810 mm	4
LCS 4	US Navy	Wartsila Defense	1 @ 2 m 2 @ 1.7 m	3
LCS 5 through 31 and spares	US Navy	Rolls Royce Naval Marine	1.7 m	68
Total no. of water jet impellers				202

Grand total no. of CP blades, propellers and water jet impellers delivered: 348

Legend:

CPF	Canadian Patrol Frigate
CPB	Coastal Patrol Boat
EFMC	Egyptian Fast Missile Craft
INLS	Improved Navy Lighterage System
E-craft	Expeditionary Craft
LCS	Littoral Combat Ship

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U.S. Navy program: LCS 5 *Milwaukee* – Littoral Combat Ship

Client: Rolls Royce Naval Marine
Shipyard: Marinette Marine, Marinette, WI
Quantity: 68 water jet impellers
Diameter: 1.7 m.



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U.S. Navy program: LCS 4 *Coronado* – Littoral Combat Ship

Client:	Wärtsilä Defense
Shipyard:	Austal, Mobile, AL
Quantity:	3 water jet impellers
Diameter:	1.7 m. and 2 m.



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U.S. Navy program: EFMF - Egyptian Fast Missile Craft

Client: Wärtsilä Defense
Shipyard: VT Halter Marine, Pascagoula, MS
Quantity: 20 monoblock propellers
Diameter: 1.75 m.



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U.S. Navy Program: INLS - Improved Navy Lighterage System

Client: Wärtsilä Defense
Shipyard: Marinette Marine, Marinette, WI
Quantity: 127 water jet impellers
Diameter: 900 mm



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U.S. Navy program: E-CRAFT - Expeditionary Craft

Client: Wärtsilä Defense
Shipyard: Ketchikan Shipyard, Ketchikan, AK
Quantity: 4 water jet impellers
Diameter: 810 mm



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Canadian Navy program: Canadian Patrol Frigate – Halifax Class

Client:	Canadian Navy
Shipyard:	St. John Shipbuilding, St. John, New Brunswick
Quantity:	20 CP propeller blades
Diameter:	4.34 m



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Canadian Coast Guard program: *Griffon* Icebreaker

Client: Canadian Coast Guard
Shipyard: Davie Shipbuilding, Quebec, QC
Quantity: 2 monoblock propellers
Diameter: 120"



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U.S. Coast Guard program: Medium Endurance Cutter

Client: U.S. Coast Guard
Shipyard: Todd Shipyard, Houston, TX
Quantity: 84 CP propeller blades
Diameter: 90"







