

# Engine Room Pumps

Model C2G

Pump Systems

# C2G centrifugal pumps

Hamworthy has more than 100 years experience in design and manufacturing of centrifugal pumps for the marine industry.

Following the great success of the renowned Eureka and Dolphin centrifugal pump series, Hamworthy's continued research and development has led to the introduction of a new series of pumps to better serve the shipping industry, both in terms of operational costs and hydraulic efficiency.

With the use of CAD technology and the most advanced "Laminated Object Manufacturing" machine for pattern making, Hamworthy has successfully developed a new series, the C2G model centrifugal pumps for marine application. The range covers all duties onboard sea-going vessels.



C2G cooling pumps installed onboard, Color Line's 'Color Fantasy'

## Design

Minimum number of parts to facilitate ease of assembly and disassembly during maintenance.

High degree of standardisation of components for low inventory and effective spare parts distribution.

Compact design for ease of installation, retrofit and optimal engine room layout.

## Casing

Computer generated pump volutes for best hydraulic efficiency

Integral pump foot on casing

## Impeller

Single suction, designed with low NPSHr.

## Bearing

Stout angular contact bearings for longer life.

## Seal

Seal bearing assembly with mechanical seal ensures long service life.

# Build flexibility



## Spacer Coupled

The standard build of the C2G is the spacer coupled version.

The spacer coupled pumps offer the advantage of easy maintenance without the need to remove the driving motor.

Includes the seal bearing assembly.



## Close Coupled

The close coupled solution provides an economic and compact alternative to the spacer coupled version.

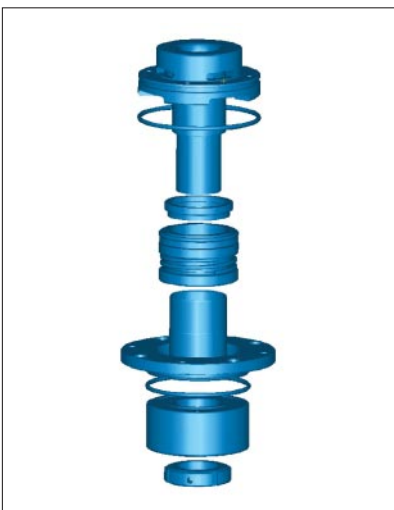
Simple and robust design.

Most compact dimensions in the market.

Dismantling of close coupled pump entails removing the motor to permit access to the pump rotor.

# Seal bearing assembly

The innovative seal bearing assembly offers unmatched value for the marine pump user.



## Benefits include:

Easy and fast overhaul of pump during service downtime.

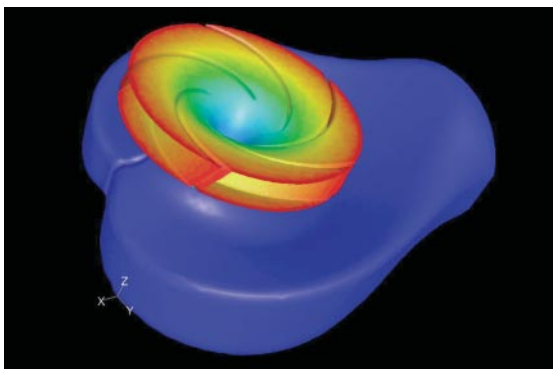
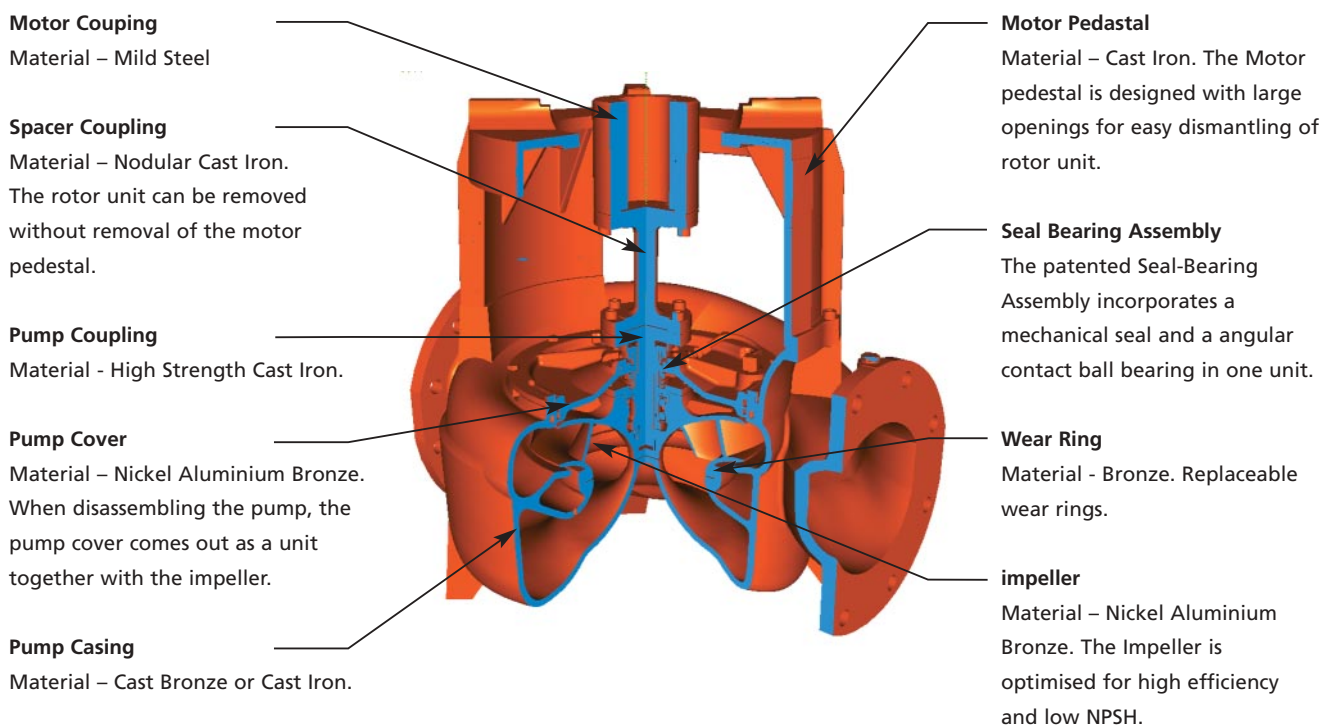
Standardisation of sizes gives user minimum number of spare parts stock.

With the seal bearing assembly the ball bearing is located ideally within the pump.

Patented design ensures quality for the end user.

# Innovative new C2G pump

The new C2G pump is a single-suction inline centrifugal pump, designed for a reliable and efficient operation. The compact design of the pump gives low weights of parts to be handled. The pump has both high suction performance and a low power requirement.



## Pump design

The C2G design is optimised for low NPSH and good cavitation resistance. From the large size suction inlet flange, through the flow passages on the impeller inlet, the utmost care is taken to ensure low-loss flow conditions.



# Construction code

C2G — 150 L B — L — B A N

**Pump Type**

**Basic Pump Size**

**Pressure Class**

L	Low
M	Medium
H	High

**Pump Build**

A B C D X	Spacer Coupled to Prime Mover
P Q	Close Coupled to Prime Mover

**Motor Pedastal**

M	Medium Motor Variant
L	Large Motor Variant
S	Small Motor Variant

**Casing Material**

A	Ni-Al Bronze
B	Bronze
F	Cast Iron

**Impeller Material**

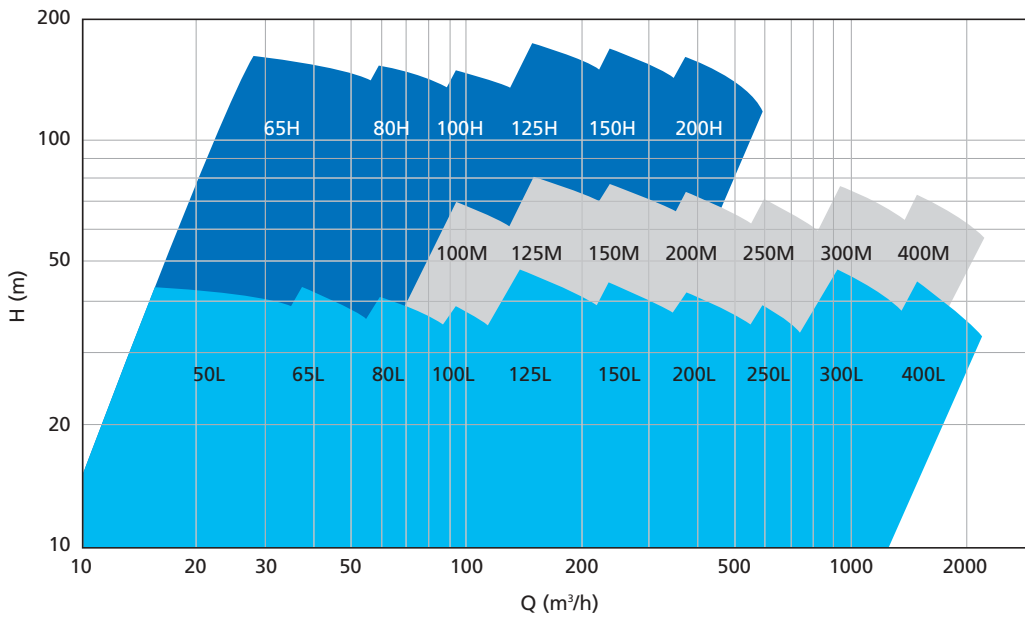
A	Ni-Al Bronze
S	Stainless Steel

**Seal Face Materials**

N	Carbon - Ceramic
V	Silicon Carbide - Silcon Carbide

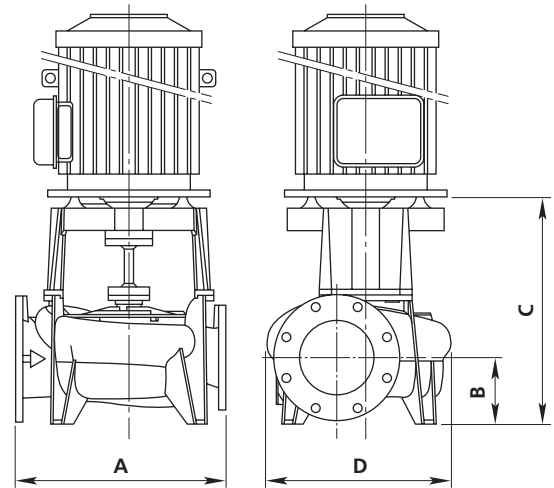
# Capacity range

The C2G range of engine room pumps has three pressure classes and a large number of pump sizes to make a good selection for customer requirements.



## Material List

Item	Material	
	Sea Water Application	Fresh Water Application
Pump Casing	Bronze Nickel Aluminium Bronze	Cast Iron
Pump Cover	Nickel Aluminium Bronze	Cast Iron
Impeller	Nickel Aluminium Bronze Stainless Steel	Nickel Aluminium Bronze Stainless Steel
Wear Ring	Bronze	
Pump Coupling	Nodular Cast Iron	
Spacer Coupling	Nodular Cast Iron	
Seal Bearing Assembly	Stainless Steel Angular Contacts Bearings with Mechanical Seal	
Motor Pedastal	Cast Iron	



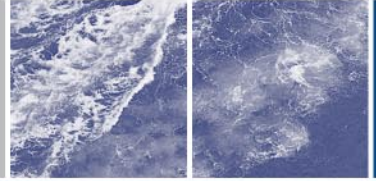
## Outline Dimensions

LOW PRESSURE	Pump size	Flanges according to ISO 7005 PN10 or JIS B2210-10K		Dimensions (mm)			
		Discharge flange	Suction flange	A	B	C	D
		ND	ND				
	C2G - 50LA	50	65	360	100	395	236
	C2G - 65LA	65	80	360	107	402	248
	C2G - 80LA	80	100	360	115	410	259
	C2G - 100LA	100	125	400	130	435	295
	C2G - 125LB	125	150	500	147	565	455
	C2G - 150LB	150	200	560	175	608	498
	C2G - 200LB	200	250	630	206	662	545
	C2G - 250LC	250	300	710	240	750	630
	C2G - 300LD	300	350	1060	270	998	811
	C2G - 400LD	400	500	1200	350	1148	989

MEDIUM PRESSURE	Pump size	Flanges according to ISO 7005 PN10 or JIS B2210-10K		Dimensions (mm)			
		Discharge flange	Suction flange	A	B	C	D
		ND	ND				
	C2G - 100MX	100	125	450	130	496	398
	C2G - 125MB	125	150	680	147	606	527
	C2G - 150MB	150	200	700	175	634	557
	C2G - 200MC	200	250	710	205	730	577
	C2G - 250MC	250	300	800	230	757	669
	C2G - 300MD	300	350	1200	270	1049	894
	C2G - 400MD	400	500	1320	350	1199	993

HIGH PRESSURE	Pump size	Flanges according to ISO 7005 PN16 or JIS B2210-16K		Dimensions (mm)			
		Discharge flange	Suction flange	A	B	C	D
		ND	ND				
	C2G - 65HX	65	80	500	105	481	477
	C2G - 80HX	80	100	500	115	496	477
	C2G - 100HB	100	125	500	150	619	660
	C2G - 125HB	125	150	500	170	640	660
	C2G - 150HC	150	200	560	195	684	660
	C2G - 200HC	200	250	630	228	724	660





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The manufacturers reserve the right to alter the specification and data to incorporate improvements in design. Certified drawings will be issued on request.

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