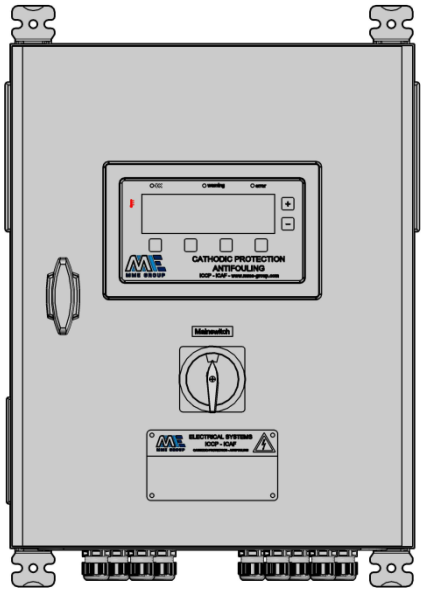
ICCP systems

Impressed Current Cathodic Protection (ICCP) systems consist of one or more reference electrodes and several ICCP anodes which are all connected to a power unit. The reference cells measure the underwater electrical protection potential and based on this data, the power unit regulates the required output to the anodes. The controller has a self-testing and calibrating microprocessor with Modbus RS-485 interface. System fault alarm trough indication LEDs, LCD screen and Modbus protocol.

Advantages

- Rugged Design (IP54)
- No subscription fees
- Adaptive system providing guaranteed protection level
- Free log sheet service
- 25+ years operational lifespan



A Longer Life

MME GROUP

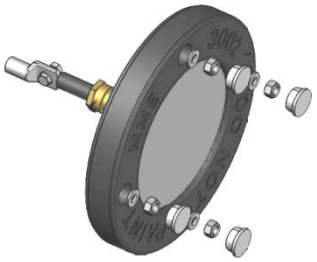
www.mme-group.com

Small vessels

Used for small vessels such as workboats, yachts, fishing vessels, etcetera.

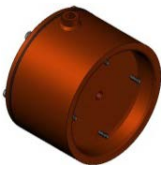
3002 anode

This type of anode is also suitable if the vessel sails under ice class conditions.
When installed in EX-zones, please use the 3001 Anode.

	3002 anode
	
Maximum outline dimensions	Ø220 x 185 mm (with stud)
Mounting method	4x M8 studs
Total weight (kg)	Abt. 1.3Kg
Durability	High durability
Article code	ICMM3002S

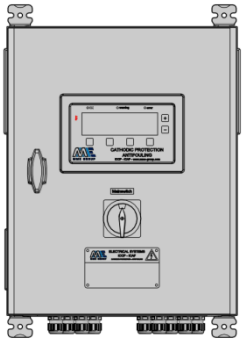
3001 cofferdam

Regular cofferdams are placed in the hull of the ship. The tank cofferdam must be used if the cofferdam is mounted in a tank.

	3001-N Cofferdam	3001-N Tank Cofferdam
		
Maximum outline dimensions	Ø293 x 175	430 x 175
Mounting method	Welding	Welding
Total weight (kg)	Abt. 38 Kg	Abt. 38 Kg
Colour	Red – weldable shop primer	Red – weldable shop primer
Article code	ICS3001N	ICS3001N + ICCONDUITETUBE

50A power unit

Outline dimensions	580x410x250 mm
Mounting type	Wall mounted
Mounting brackets	Suitable for M8 bolts or studs
Door hinge	Right side
Total weight (kg)	About 30Kg
Colour	RAL 7035
Number of anode connections	• 2 anodes • 4 anodes
Input voltage	230 VAC
Article code	ICPUHF050A12W.230V1



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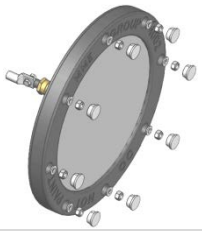
Mid-sized to large vessels

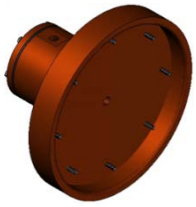
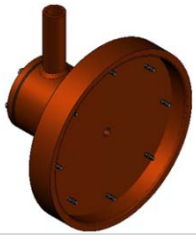
4002 anode

This type of anode is also suitable if the vessel sails under ice class conditions.
When installed in EX-zones, please use the 4001 Anode.

	4002 Anode
	
Maximum outline dimensions	Ø354 x 185 mm (with stud)
Mounting method	8x M8 studs
Total weight (kg)	Abt. 3 Kg
Durability	High durability
Article code	ICMM4002S

4001 cofferdam

- When placed in a ballast tank, the tank cofferdam must be used.

	4001-N Cofferdam	4001-D Cofferdam	4001-NT (Tank) Cofferdam	4001-DT (Tank) Cofferdam
				
Maximum outline dimensions	Ø419 x 252	Ø408 x 260	425 x 190	415 x 260
Mounting method	Welding	Welding	Welding	Welding
Total weight (kg)	Abt. 46 Kg	Abt. 46 Kg	Abt. 46 Kg	Abt. 46 Kg
Colour	Red – weldable shop primer	Grey – weldable shop primer	Red – weldable shop primer	Grey – weldable shop primer
Certification	No	Yes	No	Yes
Article code	ICS4001N	ICS4001D	ICS4001N + ICCONDUITETUBE	ICS4001D + ICCONDUITETUBE

150A power unit

Outline dimensions	1123x800x450
Mounting type	Wall mounted
Mounting holes	Suitable for M8 bolts or studs
Door hinge	Right side
Total weight (kg)	About 200 Kg
Colour	RAL 7035
Number of anode connections	• 2 anodes • 4 anodes
Input voltage	400/440VAC
Article code	ICPU150A24V400VFLEX

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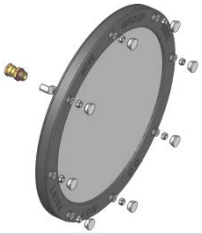
Large vessels

5002 anode

This type of anode is also suitable if the vessel sails under ice class conditions.
When installed in EX-zones, please use the 5001 Anode.

	5002 Anode
	
Maximum outline dimensions	Ø495 x 185 mm (with stud)
Mounting method	8x M8 studs
Total weight (kg)	Abt. 4.5 Kg
Durability	High durability
Article code	ICMM5002S

5001 cofferdam

- When placed in a ballast tank, the tank cofferdam must be used.

	5001-N Cofferdam	5001-D Cofferdam	5001-NT (Tank) Cofferdam	5001-DT (Tank) Cofferdam
Maximum outline dimensions	Ø559 x 252	Ø560 x 260	Ø559 x 252	Ø560 x 260
Mounting method	Welding	Welding	Welding	Welding
Total weight (kg)	Abt. 88,5 Kg	Abt. 88,5 Kg	Abt. 88,5 Kg	Abt. 88,5 Kg
Colour	Red – weldable shop primer	Grey – weldable shop primer	Red – weldable shop primer	Grey – weldable shop primer
Certification	No	Yes	No	Yes
Article code	ICS5001N	ICS5001H	ICS5001N + ICCONDUITETUBE	ICS5001H + ICCONDUITETUBE

300A powerunit

Outline dimensions	1123x800x450
Mounting type	Wall mounted
Mounting holes	Suitable for M8 bolts or studs
Door hinge	Right side
Total weight (kg)	About 220 Kg
Colour	RAL 7035
Article code	ICPU300A24V400VFLEX

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For all systems:

Junction box 7522 for anodes

IP Class	IP66
Connection size	M8 stud
Dimensions	190x122x86 mm
Cable glands	1x M20 (O.D. 6 – 13 mm) 1x M25 (O.D. 9 – 17 mm)

Junction box 7521 for reference cells

IP Class	IP66
Terminal Cable Size	2.5 mm2 – 6 mm2
Dimensions	183x122x86 mm
Cable glands	1x M16 (O.D. 4.5 – 10 mm) 1x M25 (O.D. 9 – 17 mm)

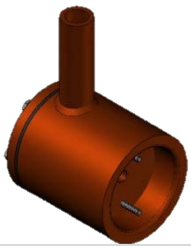
Reference cells

It is recommended to combine regular anodes with regular reference cells and HD anodes with HD reference cells.

	2001 Reference cell	**2001-HD Reference cell**
Maximum outline dimensions	Ø300 x 200 mm (with 2 m cable)	Ø300 x 200 mm (with 2 m cable)
Mounting method	2x M8 studs	2x M8 studs
Total weight (kg)	Abt. 2 Kg (with 2 m cable)	Abt. 2 Kg (with 2 m cable)
Durability	Standard durability	High Durability

ICCP Cofferdam for Reference cells

If the cofferdam material requires 3.2 certification acc. EN 10204, choose 2001-D or 2001-DT. If certification is not required, choose 2001-N or 2001-NT.

	2001-N Cofferdam	**2001-D Cofferdam**	**2001-NT (Tank) Cofferdam** 	**2001-DT (Tank) Cofferdam**
Maximum outline dimensions	Ø168,3 x 190	Ø168,3 x 190	318,3 x 190	318,3 x 190
Mounting method	Welding	Welding	Welding	Welding
Total weight (kg)	Abt. 15,5 Kg	Abt. 15,5 Kg	Abt. 15,5 Kg	Abt. 15,5 Kg
Colour	Red – weldable shop primer	Grey – weldable shop primer	Red – weldable shop primer	Grey – weldable shop primer
Certification	No	Yes	No	Yes

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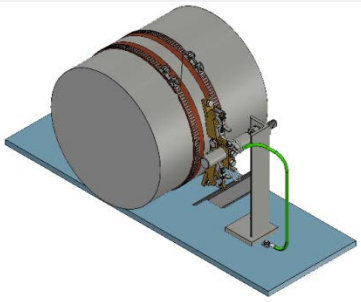
Shaft grounding system

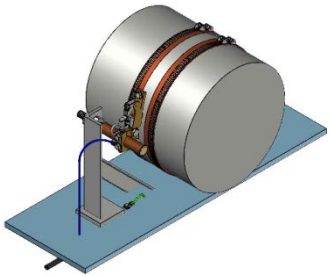
The shaft grounding system is needed to ground the shaft to prevent damage to the gear box and propeller in combination with a cathodic protection system.

Article Code	ICSGS0***
Packing dimensions	Box size acc. to order
Mounting type	Support structure
Total weight (kg)	Max 4.5 kg



Shaft grounding measuring system

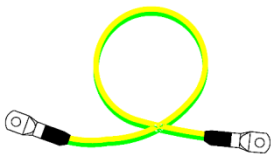
Packing dimensions	260 x 160 x 60 mm - box
Mounting type	Support structure
Total weight (kg)	About 0.45 kg
System type	Measuring system



Bonding cable

Bonding cables are used to ground the rudders, fins and stabilizers.

Available sized	25mm^2 70mm^2
Mounting holes	Suitable for M10 bolts or studs
Total weight (kg)	About 2 kg
Colour	Green/yellow



Dielectric shield

All anodes require a dielectric shield. This coating is applied around the anode and on the inside of the hull penetration recess of the anode to a diameter as specified on the applicable anode drawings.
Non MME supply

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