



HIGH SILICON CAST IRON CANISTER ANODES



50 YEARS EXPERIENCE IN CATHODIC PROTECTION



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DATA SHEET

Having previously manufactured Durichlor-51 anodes in vast quantities, we have been supplying high silicon cast iron anodes for over 50 years. Our high silicon cast iron stick anode is manufactured by "chill" casting method using gravity to feed the metal mold, which guarantees a rapid solidification of the molten metal. Either stick or tubular HSCI anodes can be pre-packaged in a spirally welding 0.65 mm thick galvanized steel canister. Preloaded canisters ensure the anodes are evenly surrounded with the proper amount of compacted coke breeze backfill.

■ Centrifugal Casting Process

Our high silicon cast iron anode is centrifugal chill casted. The casting mold rotates at over 1000rpm producing a g-force that eliminates any trapped gas from silicon iron and throws any impurities to the inside bore of the anode where they do not hinder anode performance. Hence, the metal matrix is tight and dense, effectively improving anode utilization by up to 60% ~ 70%.

■ Strengthened Canister Housing

The anode is installed in a spirally welding 0.026" (0.65 mm) thick galvanized steel canister. The canister is biodegradable and will corrode in service. It should be stored in a dry place before installation to avoid corrosion and perforation.

■ Uniform Coke Filled with Centralizer

The canister may be supplied in a variety of diameters and lengths to suit the specific anode/groundbed design. Preloaded canister ensures the anodes are evenly surrounded with the proper amount of compacted coke breeze backfill.

■ Low Ground Resistance

The coke backfill provides a homogenous environment for high silicon cast iron anode and can substantially lower the anode to earth resistance. It is an ideal cathodic protection material for high soil resistivity.

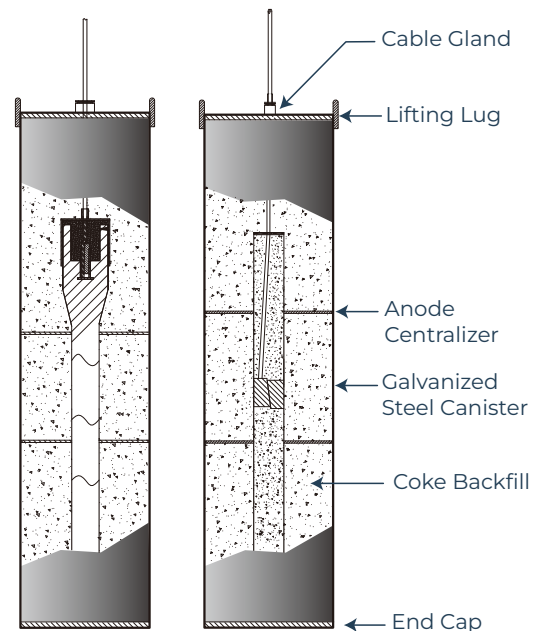
■ Easy Installation

Canister high silicon cast iron anodes reduce installation costs by providing the anode and coke backfill in a self contained package. The assembly process is finished within our foundry instead of in the field, which effectively guarantees field installation quality of anode bed.

APPLICATIONS

Our high silicon cast iron stick anodes are widely used in the impressed current cathodic protection in a variety of environments.

- Conventional grounding bed
- Vertical deepwell
- Shallow installation



CHEMICAL COMPOSITION

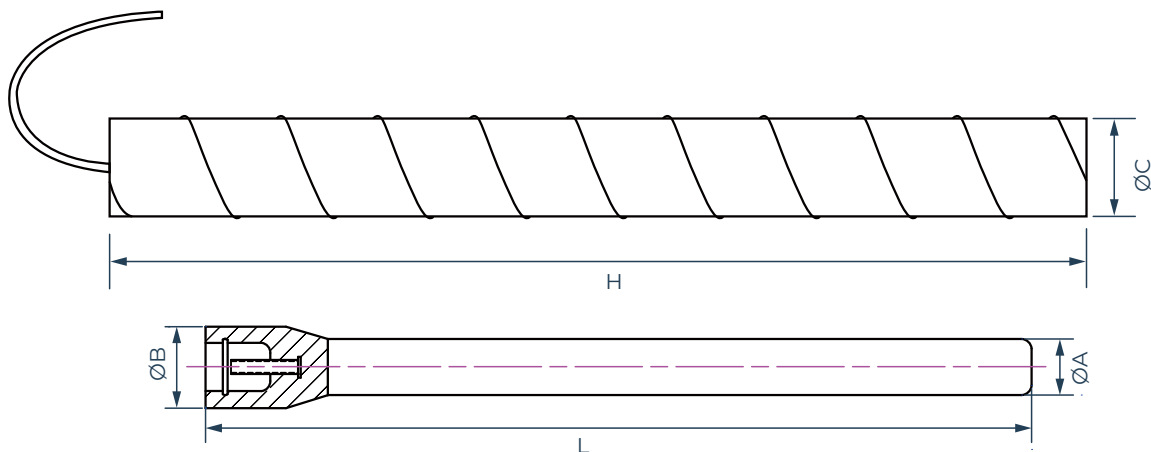
Element \ Standard	ASTM A518/A518M Grade 1	ASTM A518 / A518M Grade 3	BS 1591 1975
Silicon (Si)	14.2% ~ 14.75%	14.2% ~ 14.75%	14.25% ~ 15.25%
Chromium (Cr)	0.5% max.	3.25% ~ 5%	0.5% max.
Manganese (Mn)	1.5% max.	1.5% max.	0.5% max.
Copper (Cu)	0.5% max.	0.5% max.	—
Molybdenum (Mo)	0.5% max.	0.2% max.	—
Carbon (C)	0.65% ~ 1.1%	0.7% ~ 1.1%	1.4% max.
Phosphorus (P)	—	—	0.25% max.
Sulphur (S)	—	—	0.1% max.
Iron (Fe)	Remainder	Remainder	Remainder

ELECTROCHEMICAL PROPERTIES

Technical Measurement	Performance
Current Density	0.5 ~ 1 A/ft ² (5 ~ 10 A/m ²)
Consumption Rate	0.1 ~ 0.7 lbs/A.y (0.05 ~ 0.3 kg/A.y)

SPECIFICATIONS

Stick Type Anode

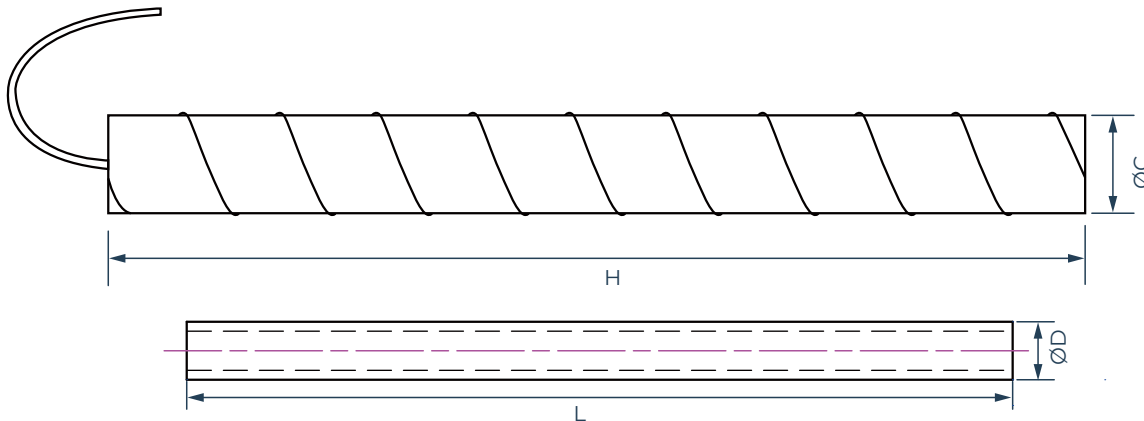


Item No.	Anode Dimensions			Canister Dimensions	
	ØA	ØB	L	ØC	H
JA-CSA-38	1.5" (38 mm)	2.5" (63 mm)	60" (1524 mm)	7.9" (200 mm)	78.7" (2000 mm)
JA-CSA-51	2.0" (51 mm)	3.0" (76 mm)	60" (1524 mm)	7.9" (200 mm)	78.7" (2000 mm)
JA-CSA-76	3.0" (76 mm)	4.0" (102 mm)	60" (1524 mm)	7.9" (200 mm)	78.7" (2000 mm)

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■ Tubular Type Anode



Item No.	Anode Dimensions		Canister Dimensions	
	ØD	L	ØC	H
JA-CTA-58	2.3" (58 mm)	84" (2134 mm)	7.9" (200 mm)	118.1" (3000 mm)
JA-CTA-71	2.8" (71 mm)	84" (2134 mm)	7.9" (200 mm)	118.1" (3000 mm)
JA-CTA-96	3.8" (96 mm)	84" (2134 mm)	7.9" (200 mm)	118.1" (3000 mm)
JA-CTA-124	4.8" (122 mm)	84" (2134 mm)	9.8" (250 mm)	118.1" (3000 mm)

Notes: All dimensions and weights are nominal. The parameter provided is subject to variation in material compositions and Jennings Anodes foundry tolerance.

TESTING DETAILS

We employ ISO 9001:2015 quality management system and rigorous internal testing standards to ensure the optimum lifespan and performance of our anodes. Each anode is labelled with a unique serial number for quality tracking.

Technical Measurement	Chemical Composition	Electrochemical Performance	Physical Properties
Testing Standard	ASTM E350	ASTM E186/E446	Foundry ITP
Testing Content	Chemical Analysis	Current Efficiency Connection Resistance	Dimension & Weight Surface Finish Cable Connection Epoxy Resin Sealing
Equipment	Optical Emission Spectrometer Labspark 750A / Thermoscientific Niton XL2-980	Electrochemical Analyzer EPI 200	Calibrated Digital Measuring Devices

* Third party testing is conducted by customer's special request at extra charge.



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