



# MAGNESIUM RIBBON ANODES

PRODUCT DATA SHEET

# Magnesium Ribbon Anode

As a flexible anode material, magnesium ribbon anode consists of an extruded ribbon of magnesium around a central continuous galvanised steel core which ensures a uniform current and efficient electrical discharge. Due to larger area-to-mass ratio, magnesium ribbon anode can provide higher current outputs when compared to other magnesium anodes.

## CHEMICAL COMPOSITION

Our magnesium ribbon anode is produced using high purity ingots, conforming to ASTM B843-M1C standards.

Element		Content (%)
Aluminum	(Al)	0.010 max.
Manganese	(Mn)	0.500 ~ 1.300
Zinc	(Zn)	—
Silicon	(Si)	0.050 max.
Copper	(Cu)	0.020 max.
Iron	(Fe)	0.030 max.
Nickel	(Ni)	0.001 max.
Single Impurity	(Each)	0.050 max.
Other Impurities	(Total)	0.300 max.
Magnesium	(Mg)	Remainder

## ELECTROCHEMICAL PROPERTIES

With a high driving potential of -1.7V to -1.75V (CSE), it can generate more current than their cast magnesium counterparts. Generally, the current output is three to seven times greater than cast anodes of the same weight.

Technical Measurement	Performance
Open Circuit Voltage	1.70 ~ 1.75 Volts
Closed Circuit Voltage	1.58 ~ 1.62 Volts
Current Capacity	1100 A.h/kg (500 A.h/lbs)
Current Efficiency	50% min.

\* The open/closed circuit voltage is with respect to a saturated calomel electrode.

Environment	Electrical Resistance	Current Density
Soil	5000 $\Omega$ .cm	10 mA/m (3 mA/ft.)
Freshwater	15000 $\Omega$ .cm	3 mA/m (0.9 mA/ft.)
Seawater	/	2.4 A/m (0.73 A/ft.)



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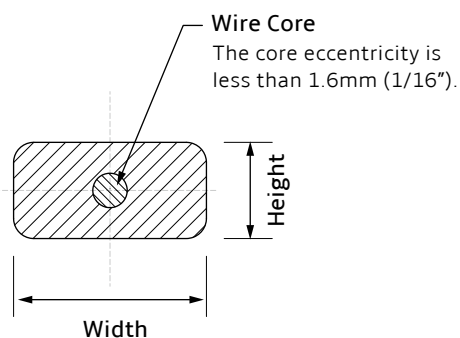
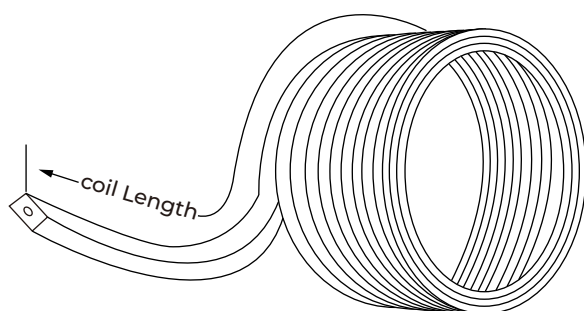
## PRACTICAL APPLICATION

The magnesium ribbon anode is easy to bend and has a small footprint — particularly used in areas of restricted space. It is applied to coil the protected body, especially in cathodic protection engineering of long-distance pipelines, crossing pipe sections, pipelines in casings (inner pipe of drive pipe), internal protection of huge tank or silo, grounding protection against strong electrical interference and so on.

It runs automatically after installation — no maintenance required. Moreover, it does not cause any interference with the external environment.



## SPECIFICATIONS



Item No.	Width	Height	Core Diameter	Weight	Coil Length
YX-MG-R357	19mm ( $\frac{3}{4}$ " )	9.5mm ( $\frac{3}{8}$ " )	3.4mm (0.135" )	0.357kg/m (0.243 lbs/ft.)	305m (1000 ft.)

Note: All dimensions and weights shown above are nominal. The information provided is subject to change without notice.







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