

SACRIFICIAL ANODES

Magnesium anodes

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German Cathodic Protection



Prepackaged magnesium anodes

Magnesium anodes for buried pipelines, casings, tanks and similar structures are prepacked either in cotton bags or cardboard cartons containing a rapid wetting, moisture retaining backfill.

The backfill powder reduces the resistivity of soil surrounding the anodes and improves their anode performance.

The pre packaged magnesium anodes are available in two grades, Standard and High Potential, which is used primarily in high resistivity soils.

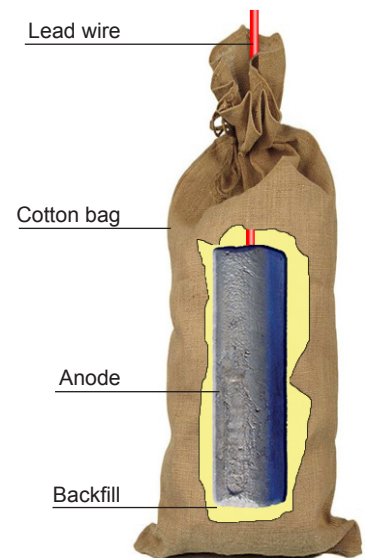
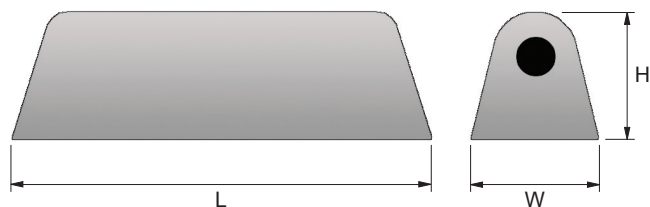
Anodes are supplied with 5 m (PVC/PVC) insulated copper cable of 6 mm² as standard, other sizes and lengths are available on request.

| MAGNESIUM | | |
|--------------------------------|--------------|----------------|
| Composition | % | |
| | Standard | High Potential |
| Al | 5.50 - 6.50 | 0.003 |
| Zn | 2.50 - 3.50 | 0.004 |
| Mn | 0.20 - 0.50 | 0.50 - 1.00 |
| Cu | 0.002 | 0.002 |
| Ni | 0.001 | 0.002 |
| Fe | 0.005 | 0.025 max. |
| Others | 0.01 | 0.005 |
| Mg | remainder | remainder |
| Potential Cu/CuSO ₄ | -1.60 V | -1.75 V |
| Max. capacity | 1250 Ah / kg | 1250 Ah / kg |

| Type | Weight (nominal) | | Anode Dimensions | | | | |
|--------|------------------|----------|------------------|-----|------|-----|------|
| | Bare | Packaged | W | H | L | Ø D | OL |
| | kg | kg | mm | mm | mm | mm | mm |
| 3D3 | 1.4 | 3.6 | 89 | 95 | 127 | 152 | 254 |
| 3D5 | 2.3 | 7.7 | 89 | 95 | 216 | 152 | 305 |
| 9D3 | 4.1 | 12.2 | 89 | 95 | 356 | 152 | 432 |
| 17D3 | 7.7 | 20.4 | 89 | 95 | 654 | 191 | 864 |
| 20D2 | 9.1 | 31.8 | 70 | 76 | 1518 | 127 | 1676 |
| 32D5 | 14.5 | 31.8 | 140 | 127 | 521 | 203 | 711 |
| 32D3 | 14.5 | 41.3 | 89 | 95 | 1149 | 165 | 1346 |
| 40D3 | 18.1 | 43.5 | 89 | 95 | 1518 | 165 | 1676 |
| 48D5 | 21.8 | 45.4 | 140 | 146 | 787 | 203 | 965 |
| 4x4x60 | 27.2 | 56.7 | 102 | 102 | 1524 | 176 | 1626 |

Standard backfill composition:

Powdered Gypsum : 75 %
 Granular Bentonite : 20 %
 Sodium Sulphate : 5 %



All weights and dimensions are nominal and subject to variation in material compositions. Alternative configurations may be cast to requirements.

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| MAGNESIUM | | |
|--------------------------------|--------------|----------------|
| Composition | % | |
| | Standard | High Potential |
| Al | 5.30 - 6.70 | 0.05 |
| Zn | 2.50 - 3.50 | 0.03 |
| Mn | 0.25 min. | 0.50 - 1.50 |
| Cu | 0.08 | 0.02 |
| Ni | 0.001 | 0.002 |
| Fe | 0.005 max. | 0.002 max. |
| Si | 0.03 max. | 0.05 max. |
| Mg | remainder | remainder |
| Potential Cu/CuSO ₄ | -1.60 V | -1.75 V |
| Max. capacity | 1230 Ah / kg | 1230 Ah / kg |

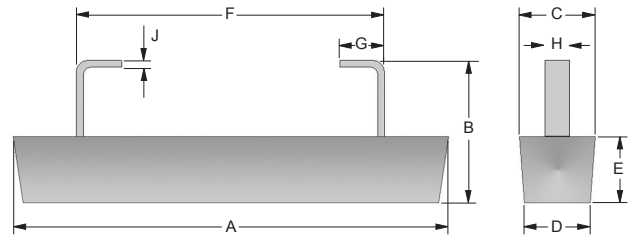
A range of magnesium anodes suitable for marine structures, storage tanks and condenser boxes is available in either high purity or high potential alloys.

All weights and dimensions are nominal and subject to variation in material compositions.

Alternative configurations may be cast to requirements.

| Type | A | B | C | D | E | F | G | H | J | Weight |
|-------|-----|-----|-----|-----|-----|-----|----|----|----|---------|
| MG46M | 864 | 232 | 120 | 102 | 108 | 610 | 90 | 50 | 6 | 20.8 kg |
| MG73M | 864 | 232 | 152 | 127 | 130 | 610 | 90 | 50 | 12 | 33.0 kg |

All dimensions in mm



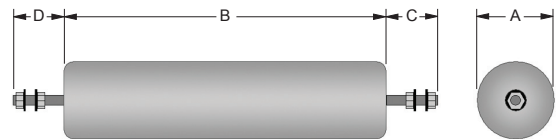
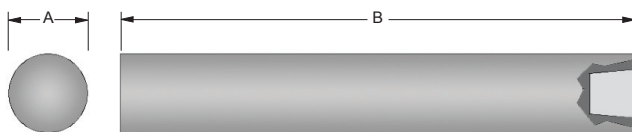
| Type | Diameter A | Length B | Weight |
|--------|------------|----------|--------|
| MG101 | 82 | 381 | 3.6 |
| MG102 | 114 | 457 | 7.7 |
| MG103 | 114 | 533 | 10.0 |
| MG104 | 146 | 533 | 15.5 |
| MG104M | 146 | 508 | 14.5 |
| MG105 | 178 | 508 | 22.7 |
| MG105M | 178 | 610 | 27.3 |
| MG106 | 114 | 1524 | 27.3 |

MG101 to MG105: mild steel insert - 20 x 20 x 3 mm strip
MG106: angle section insert - 20 x 20 x 3 mm

| Type | A | B | C | D | Weight |
|-------|-----|-----|----|----|---------|
| MG119 | | | 89 | | |
| MG123 | 114 | 533 | 89 | 89 | 10.0 kg |
| MG120 | | | 89 | | |
| MG124 | 146 | 532 | 89 | 89 | 15.5 kg |
| MG121 | | | 89 | | |
| MG125 | 178 | 508 | 89 | 89 | 22.7 kg |

MG119-MG121 (core at one end only)
MG123-MG125 (core at both ends)

All dimensions in mm



| Type | A | B | C | D | E | F | G | H | Weight |
|-------|-----|-----|-----|-----|----|---|----|----|---------|
| MG128 | 571 | 219 | 368 | 298 | 50 | 9 | 12 | 16 | 68.0 kg |
| MG129 | 597 | 279 | 432 | 298 | 50 | 9 | 12 | 16 | 90.7 kg |

| Type | Dia. A | Dia. B | C | D | E | Galvanised core details | Weight |
|--------------|--------|--------|----|----|----|---|---------|
| MG107 | 57 | 70 | - | 19 | 32 | 1/2" B.S.P. | 0.56 kg |
| MG107M | 76 | 89 | - | 19 | 32 | 1/4" Whitworth | 1.0 kg |
| MG108A | 120 | 108 | 76 | - | - | M12 thread | 1.8 kg |
| MG108B | 120 | 108 | - | 19 | 32 | 3/4" B.S.P. | 1.8 kg |
| MG108B (mod) | 120 | 108 | - | 19 | 32 | 3/4" B.S.P. insert (located in diagram A) | 1.8 kg |

H = Dia. Galv. M.S. Eye-bolt

