

# MEPNN Supplier Scouting Opportunity Synopsis

## Section 1: General Information

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| Scouting Number    | 2026-494                                                                                                                                                                                                                    |
| Item to be Scouted | MR1 Magnesium Housing                                                                                                                                                                                                       |
| Days to be scouted | 25                                                                                                                                                                                                                          |
| Response Due By    | 10/05/2026                                                                                                                                                                                                                  |
| Description        | Hamilton Medical is seeking a qualified US-based manufacturer for a family of five complex, thin-walled magnesium housing components used in a medical device. The required scope includes AZ91 magnesium high pressure die |

## Section 2: Technical Information

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| Type of supplier being sought                                                          | Manufacturer<br>must operate its own magnesium die-casting facility in the United States and may use qualified, transparently disclosed subcontractors for downstream processes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Reason                                                                                 | Procurement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Describe the manufacturing processes (elaborate to provide as much detail as possible) | <p>Nevada</p> <p>The requested product is a family of five complex, thin-walled magnesium housing components manufactured from AZ91 / MgAl9Zn1 by high-pressure die casting.</p> <p>The anticipated manufacturing process includes:</p> <p>Raw-material and alloy-batch control.<br/>Magnesium melting and melt treatment under controlled temperature and protective-atmosphere conditions.<br/>High-pressure die casting using dedicated production tooling for each of the five components.<br/>Controlled trimming and removal of gates, runners and overflows.<br/>Deburring, deflashing, grinding and cosmetic preparation without damaging functional or visible surfaces.<br/>CNC machining of holes, countersinks, threads, sealing grooves and locally machined functional surfaces.<br/>Dimensional and visual inspection using suitable measuring equipment, including CMM, optical measurement systems, gauges and surface-roughness measurement where applicable.<br/>Cleaning and degreasing.<br/>Chromate-free pretreatment or passivation suitable for magnesium and subsequent painting.<br/>Controlled filling, sanding and cosmetic repair of permissible casting imperfections.<br/>Masking of threads, bonding areas, functional surfaces and other defined paint-free areas.<br/>Application of primer, intermediate fine sanding and a two-component topcoat.<br/>Application of part-specific symbols or markings, where required.<br/>Final dimensional, coating and cosmetic inspection.<br/>Protective packaging and shipment with full batch traceability.</p> <p>The supplier must perform magnesium high-pressure die casting at its own production facility in the United States. Downstream processes may be performed by qualified subcontractors, provided that their identity, location, qualifications, traceability and responsibilities are disclosed and controlled.</p> |

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| Provide dimensions / size / tolerances / performance specifications for the item              | <p>The scope comprises five different housing components:</p> <p>Part 161741 – Filter cover: approximately 0.221 kg<br/> Part 161762 – Bottom housing: approximately 0.408 kg<br/> Part 161772 – Front housing: approximately 0.405 kg<br/> Part 161782 – Right side housing: approximately 0.166 kg<br/> Part 161792 – Left side housing: approximately 0.170 kg</p> <p>The approximate component envelope ranges from approximately 164 × 180 × 43 mm to 298 × 243 mm.</p> <p>The components contain thin-walled sections, ribs, pockets, holes, threads, sealing features, locally machined areas and cosmetic visible surfaces. Casting tolerances are based on DIN 1688-4, GTA 13/5, or on the applicable component drawing. Machined dimensions and feature-specific tolerances are defined in the individual technical drawings.</p> <p>Key surface requirements include:</p> <p>Chromate-free magnesium pretreatment or passivation<br/> Primer and two-component topcoat<br/> RAL 7026 and/or RAL 7036, depending on the component<br/> Satin finish with fine or nano-texture<br/> Typical total coating thickness: 80–150 µm<br/> Defined paint-free and masked areas<br/> No paint overspray in designated functional areas<br/> High-quality cosmetic appearance suitable for visible medical-device housings</p> <p>Complete 3D data, detailed critical characteristics, approved reference samples and final acceptance criteria: To be confirmed and provided after NDA or during a subsequent RFQ phase.</p> |
| List required materials needed to make the product, including materials of product components | <p>Primary component material:</p> <p>Magnesium alloy AZ91 / MgAl9Zn1</p> <p>Additional process materials may include:</p> <p>Chromate-free magnesium pretreatment or passivation chemistry<br/> Approved filler material for controlled cosmetic repair<br/> Primer, specified in the documentation as a monopoxy or approved equivalent system<br/> Two-component topcoat in RAL 7026 and/or RAL 7036<br/> Masking materials suitable for threads, bonding areas and functional surfaces<br/> Part-specific marking or symbol materials<br/> Cleaning and degreasing agents<br/> Protective packaging materials</p> <p>The final pretreatment chemistry, coating system, approved filler materials and part-specific colour allocation are to be confirmed during the RFQ and qualification phase.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Are there applicable certification requirements?                                              | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Certification(s) required                                                                     | ISO 13485 ,ISO 9001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Are there applicable regulations?                                                             | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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| Details                                            | <p>The components are intended for use within a regulated medical-device supply chain. The supplier must be capable of supporting applicable FDA-related quality and documentation requirements, including traceability, change notification, nonconformance management, CAPA/8D, controlled rework, supplier control and audit readiness.</p> <p>The supplier must also be able to provide RoHS and REACH/SVHC information for the magnesium alloy, process chemicals and coatings used.</p> <p>Applicable US federal, state and local environmental, occupational-safety, fire-protection and permitting requirements for magnesium melting, die casting, machining, dust and chip handling, storage, scrap management and emergency response must be observed.</p> <p>The specific medical-device classification and final product-specific regulatory obligations applicable to the supplier are to be confirmed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Are there any other standards, requirements, etc.? | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Details                                            | <p>The following standards and requirements apply or are expected:</p> <p>DIN 1688-4, GTA 13/5, for relevant cast tolerances, unless otherwise specified on the final drawing</p> <p>RAL 7026 and/or RAL 7036 colour requirements</p> <p>Total coating thickness of approximately 80–150 µm</p> <p>Documented raw-material, melt, casting-lot, tooling/cavity, machining, finishing, inspection and delivery-lot traceability</p> <p>Material certificates or melt-analysis records for each applicable batch</p> <p>Documented change-notification process</p> <p>Documented nonconformance, deviation, CAPA, 8D and controlled-rework processes</p> <p>Calibration and inspection-equipment management</p> <p>Control Plan, PFMEA, SPC and process-capability methods, or equivalent controls</p> <p>First Article Inspection capability and complete dimensional reports during a later qualification phase</p> <p>Controlled qualification and monitoring of critical subcontractors</p> <p>Documented magnesium-specific fire, explosion, dust, chip and emergency-management procedures</p> <p>Business-continuity and backup planning for equipment, tooling and critical subcontractors</p> <p>Strict cosmetic inspection and protective packaging requirements</p> <p>No unapproved changes to material, manufacturing process, location, tooling, surface treatment or critical subcontractors</p> <p>Final drawings, STEP files, cosmetic defect limits, reference samples and detailed acceptance criteria will be provided only after NDA or during a subsequent RFQ phase.</p> |

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| Additional Technical Comments | <p>The five components form one visible housing family and require five separate die-casting tools. The main technical challenge is achieving an economically viable process for relatively low annual volumes while maintaining dimensional stability, controlled porosity, precise machining and consistent cosmetic appearance across all five components.</p> <p>Suppliers must have their own magnesium high-pressure die-casting capability at a US production location. Pure distributors, brokers or sourcing companies without their own relevant US magnesium die-casting operation are not suitable.</p> <p>The supplier may use qualified partners for machining or finishing but must retain technical and quality responsibility for the complete proposed scope. All subcontractors and manufacturing locations must be transparently disclosed.</p> <p>Detailed drawings and technical data are currently intended for prequalification purposes. A binding manufacturability assessment will be conducted after NDA and during a potential RFQ phase.</p> |
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## Section 4: Business Information

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| Estimated potential business volume                                     | <p>The following annual-volume scenarios are being evaluated:</p> <p>200 complete housing sets per year<br/> 400 complete housing sets per year<br/> 600 complete housing sets per year<br/> 800 complete housing sets per year<br/> 1,000 complete housing sets per year</p> <p>One complete housing set contains one unit of each of the five components.</p> <p>The current estimated demand is approximately 500–700 complete sets per year, corresponding to approximately 2,500–3,500 individual cast components per year.</p> <p>The final forecast and awarded business volume are to be confirmed and will depend on technical feasibility, commercial competitiveness and the subsequent supplier-selection process.</p> |
| Estimated target price / unit cost information (if unavailable explain) | <p>No target price or unit-cost information is available for the Supplier Scouting Submission. Pricing is intentionally not requested during the current RFI phase. Selected suppliers may receive detailed technical documentation and be invited to submit a commercial quotation during a subsequent RFQ phase.</p> <p>Tooling costs must be considered separately because the housing family consists of five individual components requiring separate production tooling.</p>                                                                                                                                                                                                                                                 |
| When is it needed by?                                                   | <p>Initial supplier identification and capability assessment are required during September and early October. The detailed timing for quotation, prototypes, qualification and serial production will be communicated to selected suppliers following the RFI. The final implementation schedule has not yet been defined.</p>                                                                                                                                                                                                                                                                                                                                                                                                     |

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| Describe packaging requirements  | <p>Packaging must prevent damage to cosmetic and functional surfaces throughout internal handling, storage and transportation.</p> <p>The packaging concept must protect:</p> <p>Painted visible surfaces<br/>Component edges and corners<br/>Defined masking boundaries<br/>Threads and machined surfaces<br/>Bonding and other paint-free functional areas</p> <p>The components must be protected against scratches, dents, pressure marks, abrasion, contamination and contact damage between individual parts. Suitable separators, individual protection or dedicated trays should be proposed by the supplier.</p> <p>Final packaging materials, pack quantities, labelling requirements and returnable-packaging expectations are to be confirmed.</p> |
| Where will this item be shipped? | Hamilton Medical, Inc., Reno, Nevada, USA. The exact ship-to address, Incoterms and delivery conditions will be communicated during the RFQ or contracting phase.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Additional Comments

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| Is there other information you would like to include? | <p>Comment regarding certification:</p> <p>A valid, certified quality management system is required for the proposed US manufacturing location. ISO 9001 is the reference minimum requirement. Another internationally recognized certified quality management system may be considered subject to review.</p> <p>ISO 13485 is preferred but is not currently defined as a mandatory requirement. Suppliers must nevertheless demonstrate relevant experience with mechanical housing or structural components for medical devices or comparably regulated products.</p> <p>This Supplier Scouting request and the subsequent RFI are non-binding and are intended solely for supplier identification, capability assessment and prequalification. The RFI acts as a capability gate. Suppliers with a positive or conditionally positive evaluation may be asked to sign an NDA and may subsequently be invited to an RFQ. Participation in the RFI does not represent a nomination, purchase commitment or guarantee of future business.</p> <p>Hamilton Medical is specifically seeking manufacturers that combine:</p> <p>An established US magnesium high-pressure die-casting operation<br/>Demonstrated AZ91/AZ91D experience<br/>Capability for complex, thin-walled and cosmetic housing components<br/>CNC machining and dimensional-inspection capability<br/>A controlled chromate-free pretreatment and cosmetic painting supply chain<br/>Magnesium-specific environmental, health, safety and fire-protection controls<br/>Medical-device or comparably regulated industry experience<br/>Interest in low- to medium-volume production involving five separate tools</p> <p>Qualified downstream partners are acceptable, but the proposed prime supplier must transparently disclose the complete manufacturing chain and assume responsibility for the offered scope.</p> |
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