

NV Mechanics Design Ltd

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Subsea Rotary and Linear Actuators

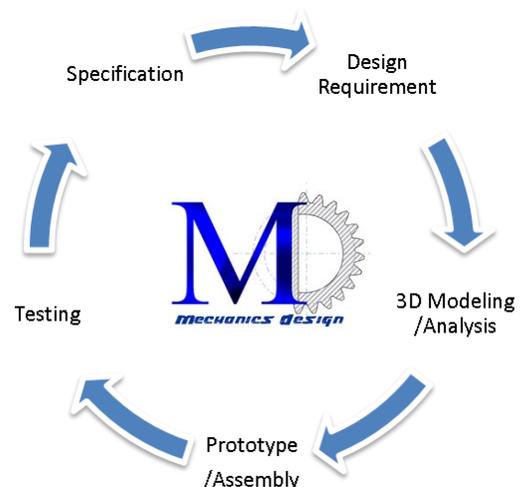
NV Mechanics Design Ltd. designs and manufactures Subsea Rotary and Linear Actuators.

The electric motor (brush or brushless) with gearbox is ideal for underwater rotary applications. The compact design is suitable for a wide range of tasks. The body housing is manufactured from lightweight hard anodized aluminum and the shaft in 17-4 PH stainless steel. Both internal and external oil filled pressure compensators are available.



Engineering Design

Mechanics Design Ltd. offers complete mechanical engineering design and analysis services for the development of components and systems in strict compliance with current codes and standards. We present the client with a practical, economical and safe design. Among typical applications are reviewing design and fabrication requirements, scoping and detailed stress analysis, determining specification and regulatory constraints, and working to practical cost limitation.



Subsea Rotary Actuator



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|--|---------------------------------------|
| MOTOR TYPE | BRUSH MOTOR |
| NOMINAL VOLTAGE | 30 VDC |
| NOMINAL TORQUE (MAX CONTINUOUS TORQUE) | 4.6 ft. lbf [6.2 Nm] |
| MAX CONTINUOUS CURRENT | 2.9 A |
| MAX OUTPUT SHAFT SPEED | 63 RPM AT GEAR RATIO 66:1 |
| DIAMETER | 1.63 IN [41.3 mm] |
| LENGTH | 7.86 IN [200 mm] |
| CONNECTOR | 25-5 MRBS UNDERWATER CONNECTOR 2 PINS |
| PART NUMBER | MDM-SR10-UM1000-1 |

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| MOTOR TYPE | BRUSHLESS MOTOR |
| NOMINAL VOLTAGE | 15V, 24V, 42V, 48V AVAILABLE |
| NOMINAL TORQUE (MAX CONTINUOUS TORQUE) | 11 ft. lbf [15 Nm] |
| INTERMITTENTLY PERMISSIBLE TORQUE | 17 ft. lbf [23 Nm] |
| MAX CONTINUOUS CURRENT | 3.68A to 11.8A (varying voltage input) |
| MAX OUTPUT SHAFT SPEED | 212 RPM AT GEAR RATIO 43:1 |
| DIAMETER | 2.06in [52.3mm] |
| LENGTH | 13.2in [335mm] (EXTERNAL OIL COMP) 14.2in [361mm] (INTERNAL OIL COMP) |
| CONNECTOR | MHDG UNDERWATER CONNECTOR 8 PINS |
| PART NUMBER | MD-RAC14-ME-11000-0 (EXTERNAL OIL COMP) MD-RAC14-ME-13000-0 (INTERNAL OIL COMP) |

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| MOTOR TYPE | BRUSHLESS MOTOR |
| NOMINAL VOLTAGE | 12V, 18V, 24V, 36V, 48V AVAILABLE |
| NOMINAL TORQUE (MAX CONTINUOUS TORQUE) | 3.3 ft. lbf [4.5 Nm] |
| INTERMITTENTLY PERMISSIBLE TORQUE | 5.2 ft. lbf [7.0 Nm] |
| MAX CONTINUOUS CURRENT | 1.23A to 6.51A (varying voltage input) |
| MAX OUTPUT SHAFT SPEED | 13.4 RPM AT GEAR RATIO 706:1 |
| DIAMETER | 1.63in [41.4mm] |
| LENGTH | 10.7in [272mm] (EXTERNAL OIL COMP) 11.6in [295mm] (INTERNAL OIL COMP) |
| CONNECTOR | MHDG UNDERWATER CONNECTOR 8 PINS |
| PART NUMBER | MD-RAC14-ME-12000-1 (INTERNAL OIL COMP) MD-RAC14-ME-14000-0 (EXTERNAL OIL COMP) |

90 DEG GEARHEAD AVAILABLE UPON REQUEST

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Subsea Linear Actuator



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| MOTOR TYPE | BRUSH MOTOR |
| NOMINAL VOLTAGE | 30 VDC |
| NOMINAL TORQUE (MAX CONTINUOUS TORQUE) | 4.6 ft. lbf [6.2 Nm] |
| MAX CONTINUOUS CURRENT | 2.9 A |
| MAX OUTPUT SHAFT STROKE/SPEED | AVAILABLE UPON REQUEST |
| DIAMETER | 1.63 IN [41.3 mm] |
| LENGTH | 13.2 IN [336 mm] |
| CONNECTOR | 25-5 MRBS UNDERWATER CONNECTOR 2 PINS |
| PART NUMBER | MD-LAC12-11000-0 |

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| MOTOR TYPE | BRUSHLESS MOTOR |
| NOMINAL VOLTAGE | 15V, 24V, 42V, 48V AVAILABLE |
| NOMINAL TORQUE (MAX CONTINUOUS TORQUE) | 11.1 ft. lbf [15.0 Nm] |
| MAX CONTINUOUS CURRENT | 11.8A to 3.68A (varying voltage input) |
| MAX OUTPUT SHAFT STROKE/SPEED/ THRUST FORCE | AVAILABLE UPON REQUEST |
| DIAMETER | AVAILABLE UPON REQUEST |
| LENGTH | AVAILABLE UPON REQUEST |
| CONNECTOR | MHDG MINATURE HIGH DENSITY |
| PART NUMBER | MD-LAC13-11000-1 |

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To order call: 1-604-250-3375 or www.mechanicsdesign.com or www.winch101.com



Custom Design/Manufacturing Services

Prototype/Design: Concept-to-Reality. Mechanics Design provides technical information concerning manufacturing techniques and materials. We advise our customers on process advantages and limitations. We think outside the box with determination and creative solutions while keeping cost and quality in mind.

