**Fuel & Oxidizer Tank**

*Application:* Flange and chamber joints, lining of fuel and oxidizer tank doors

- Fluid: Fuel (H₂, hydrogen), MMH, LH₂O (H₂O), LH₂, and Oxidizer (LD₃, C₂H₈O₂, Peroxide, Nitrogen Tetroxide, Oxygen Dichloride, etc.)
- Temperature: -269°C to 213°C
- Pressure: Up to 1,500 bar (21,700 psi)
- Sealing: Static face seal

*Our Product:* Meldin® seal

*Our Key Value:* Compatibility with corrosive, toxic and difficult to handle hypergolic fluids

**Thruster**

*Application:* Hypersonic fluid injection in pulsed thrusters

- Fluid: Monomethylhydrazine (MMH) and nitrogen tetroxide (NTO)
- Temperature: 10°F to 120°F (1°C to 48°C)
- Pressure: 100 psig (7 bar)
- Sealing: Static face seal

*Our Product:* Meldin® seal

*Our Key Value:* Fluid compatibility with corrosive, toxic and difficult to handle hypergolic fluids

**Sub-orbital Launch Vehicle**

*Application:* Valves in interstage fluid lines

- Fluid: Natural gas
- Temperature: -10°F to 40°F (-23°C to 4°C)
- Pressure: 2,400 psig (16 bar)
- Sealing: Static

*Our Product:* Meldin® seal

*Our Key Value:* High pressure sealing in low temperature range

Sealing in a wide temperature range

**Landing Gear**

*Application:* Landing gear shock-absorbers

- Fluid: Pressurized gas
- Temperature: Up to 300°F (149°C)
- Pressure: 1,000 psig (69 bar)
- Sealing: Dynamic multiposition seal of dithering and oscillating motion

*Our Product:* Dynemex® seal

*Our Key Value:* Fluid proof sealing in high pressure environment

- Lightweight, high-temperature polyimide components replacing metal bushings

**Supporting all major space projects from civil to military to commercial and emergent space.**

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**Ourspace Application Areas**

1. **Ourspace Throttle**
   - Launch abort system
   - Landing gear

2. **Ourspace Propulsion (Engines & Auxiliaries)**
   - Engines
   - Main valves
   - Pumps
   - Valves
   - Thrusters
   - Filling/discharging
   - Fluid handling
   - Fuel & oxidizer storage
   - Fluid delivery systems

3. **Ourspace Structure & Tanks**
   - Frames
   - Fuel and oxidizer tanks
   - Landing gears

4. **Ourspace Ground Support Systems**
   - Fluids & gaseous storage
   - Delivery systems

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**Ourspace Journey**

Building upon three initial unique designs (Dynemex®, RAEX® and TEC Ring seals), we have recognized as a leading designer and manufacturer of high-performance spring-energized seals that provide improved sealing performance over soft elastomeric seals and hard metal gaskets in applications involving cryogenic liquid propellants in various rocket engine programs. Our Meldin® thermoset polyimide material is ideal as finished machined components and delivery systems. Supporting all major space projects from civil to military to commercial and emergent space.

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**Ourspace Application Areas**

1. **Valves**
   - Application: Valves in flow control and fluid handling
     -applications: engine control, anti-blowout, isolation, throttle, cryogenic, OIV, FIV, ball valves, butterfly valves, relief valves, check valves, main valves, etc.
   - Application conditions:
     - Fluids: Fuel and oxidizers, hypergolic fuels, etc.
     - Temperature: Cryogenic to a few hundred degrees F
     - Pressure: Up to a few thousand psi
     - Sealing: Reciprocating rod/shaft seal and static face seal
   - Our Product: Dynemex® seal
   - Our Key Values:
     - Cryogenic sealing
     - Low friction and wear in oscillating/rotating environments
     - Seal design prevents seal blowout

2. **Fluid Transfer Line**
   - Application: High pressure fittings and fittings
     - Fluid: Helium, O₂, H₂, N₂, etc.
     - Temperature: 8°F to 48°F (-17°C to 25°C)
     - Pressure: 800 psi (55 bar)
     - Sealing: Static seal seal, dynamic multiposition seal and bushing
   - Our Product: Dynemex® seal with guide rings and Meldin® components
   - Our Key Values:
     - Able to withstand oscillation and vibrations
     - Lightweight polyimide replacing metal bushing

3. **Space Exploration Vehicle**
   - Application: Analytical chemistry equipment
     - Fluid: Martian atmosphere, Subterranean fluid (SF)
     - Temperature: -20°F to 24°F (-29°C to 4°C)
     - Pressure: Up to 10 psi (69 bar)
     - Sealing: Static multiposition seal
   - Our Product: Dynemex® seal with rails® bushings
   - Our Key Values:
     - Sealing over a wide temperature range
     - Wear and abrasion resistance in harsh sand/dust environment

4. **Rocket Motor**
   - Application: Pump to tank fitting
     - Fluid: Hypervelocity and cryogenic
     - Temperature: -40°F to 120°F (-40°C to 260°C)
     - Pressure: 2,400 psi (167 bar)
     - Sealing: Static face
   - Our Product: Dynemex® seal
   - Our Key Values:
     - Temperature capability from -269°C to 213°C
     - PTFE coated metal jacket and crush ring for robust sealing

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**Proven in the Past**

from manned and unmanned space programs to countless other sub-orbital, orbital and outer space programs...

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... Prepared for the Future