



INNOVATION

Complete engineering, design and development capabilities.



MANUFACTURING

Manufactured using Bergstrom's World class manufacturing systems and processes.



QUALITY

Designed, engineered and manufactured in the U.S. and China facilities.



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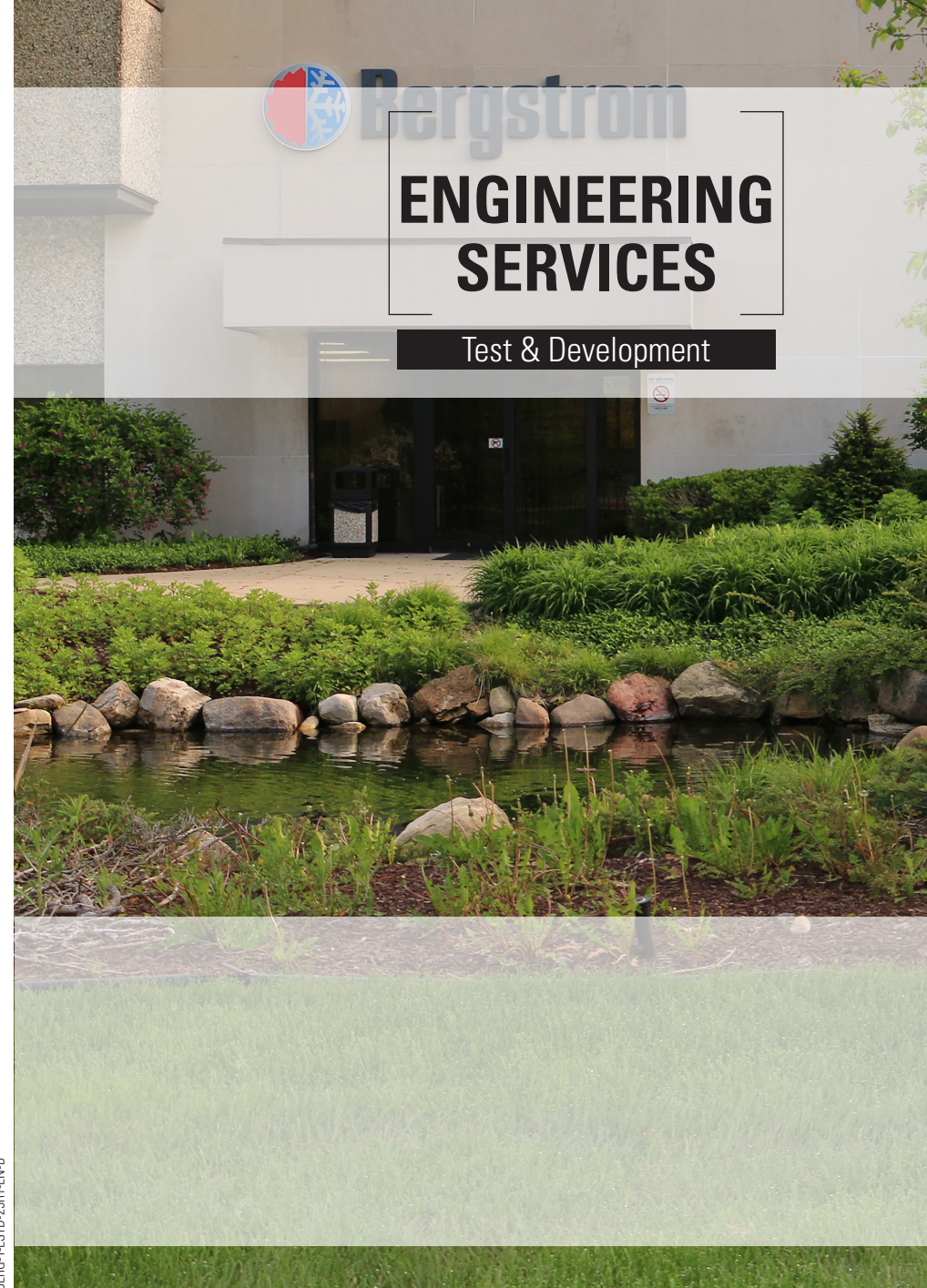
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BERG-TESTD-25R1-EN-B



When it comes to cutting-edge *testing and development*, *Bergstrom's Test Lab* is the ultimate solution for all your needs. Our state-of-the-art facilities, expert team, and commitment to *precision and innovation* make us the trusted partner for industries seeking reliable, *high-quality testing services*.

Vehicle Environmental Chamber

Test range includes:

- Temperature: -30°C to 52°C
- Relative Humidity: 10% to 98%
- Wind Speed: 0 to 32 km/h
- Chamber Size: 4.9m X 14.6m X 5.8m
- Door Size: 3.6m X 5.5m
- Max Solar Power: 1000W/m²

Available testing and evaluations

- Air Conditioning System Performance
- Heater System Performance
- Defrost System Performance
- Cab Insulation Testing
- Air flow
- Cabin pressurization
- Infra-Red Evaluation
- ATC Development
- Charge determination



Calorimeters

Test range includes:

- Temperature range: -20°C to 60°C
- Airflow Capacity
- Heater Capacity
- Evaporator Capacity
- Condenser Capacity
- Condensate Assessment (Tilt, Static)
- Thermostat Linearity
- Temperature Linearity
- Heat Pickup
- Temperature Distribution



Halt Testing

Highly accelerated life tests

Typical approach to component durability analysis

- Temperature step study
- Vibration step study
- Combined temperature and vibration study

Test ranges include

- Temperature: -100°C to 200°C
- Max. Temp. Change Rate: 60°C/min
- Vibration Level: 80Grms
- Vibration Table Size: 1m X 1m
- Frequency Range: 20Hz to 5000Hz



Components Life Testing

- Component Durability / Reliability
- HVAC Life Cycle (Dust Environment)
- Thermal Exposure
- Motor Endurance
- Destructive Torque
- Chemical Resistance
- Vibration
- Force Testing
- Corrosive Environment



NVH and Acoustic Measurements

- Engineering Analysis Tools
- Component Evaluation
- Vehicle Measurement
- Sound Pressure Measurements



Vibration and Reliability

Thermal shock and vibration testing

Vibration Table

- Large 48"x48" & Small 32"x32" Slip Tables & Head Expanders
- Force, Sine and Random: 68.5kN
- Force, Shock: 137kN
- Usable Frequency DC: 2500Hz
- Max Velocity (sine): 1.8m/s
- Max Acceleration (sine): 100G
- Max Static Payload: 1000kg
- Armature Load: 62kg
- Armature Diameter: 480mm
- Max Acceleration, Shock: 100G
- Continuous Displacement: 2.5 inches
- Thermal Temperature Range: -70°C to 150°C



Prototyping and Model Shop

Fabrication Shop

- Test Samples Build
- Prototype Support
- Vehicle Integration Studies
- Fabrication Troubleshooting

3-D Printing

- ABS, Nylon, Polycarbonate, Carbon-reinforced Material, Diran, TPU, etc.
- 406mm x 356mm x 406mm size



Environment Tests

- Corrosion Testing
- Environment Exposure Testing
- Thermal Shock Testing

