Load Factors
This sheet, rough and irregular surfaces, steel shapes and scale all effect lifting power adversely and must be considered in establishing a safety factor. The magnet must be positioned on the load’s center of gravity. Tilted or unbalanced loads significantly affect the holding power of the magnet.

Capacity
Maximum attractive force is approximately twice the rated lifting capacity. Capacity ratings listed in the table are based on material temperatures of 70°F and are applicable only when the face is in full contact with the load surfaces. The load factor listed should be taken into account when determining appropriate safety factors for a given load. A minimum of 3 to 1 safety factor must be applied based on the actual breakdown force for a given load. Refer to ASME Standard B30.26 for inspection and operating procedures of Close Proximity Operated Lift Magnets and read the Operating Manual before using magnets.

Application Information

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<thead>
<tr>
<th>Plates</th>
<th>Material Temp. °F</th>
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<th>Length _____</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>70</td>
<td>0.010</td>
<td>36</td>
<td>144</td>
<td>8</td>
</tr>
<tr>
<td>Maximum</td>
<td>70</td>
<td>0.150</td>
<td>84</td>
<td>288</td>
<td>56</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bar/Pipe</th>
<th>Material Temp. °F</th>
<th>Material O.D. _____</th>
<th>I.D. _____</th>
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<tbody>
<tr>
<td>Minimum</td>
<td>70</td>
<td>0.750</td>
<td>0.500</td>
<td>120</td>
<td>16</td>
</tr>
<tr>
<td>Maximum</td>
<td>70</td>
<td>2.000</td>
<td>1.000</td>
<td>360</td>
<td>64</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Bundles</th>
<th>Material</th>
<th>Max O.D. _____</th>
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<th>Length _____</th>
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<tr>
<td>Bundle</td>
<td>Steel Strapping</td>
<td>2(\times)</td>
<td>1(\times)</td>
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<td>144</td>
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</table>

Method of handling:
- Tighten
- Loose
- Wire
- Strapping

Describe bundle make-up and provide sketch:

"Load Factors" section:
Thin sheets, rough and irregular surfaces, odd shapes and scale all affect holding power adversely and must be considered in establishing a safety factor. The magnet must be positioned on the load’s center of gravity. Tilted or unbalanced loads significantly affect the holding power of the magnet.

"Capacity" section:
Maximum attractive force is approximately twice the rated lifting capacity. Capacity ratings listed in the table are based on material temperatures of 70°F and are applicable only when the face is in full contact with the load surfaces. The load factor listed should be taken into account when determining appropriate safety factors for a given load. A minimum of 3 to 1 safety factor must be applied based on the actual breakdown force for a given load. Refer to ASME Standard B30.26 for inspection and operating procedures of Close Proximity Operated Lift Magnets and read the Operating Manual before using magnets.

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Method of handling:
- Tighten
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Describe bundle make-up and provide sketch:

"Load Factors" section:
This sheet, rough and irregular surfaces, steel shapes and scale all effect lifting power adversely and must be considered in establishing a safety factor. The magnet must be positioned on the load’s center of gravity. Tilted or unbalanced loads significantly affect the holding power of the magnet.

"Capacity" section:
Maximum attractive force is approximately twice the rated lifting capacity. Capacity ratings listed in the table are based on material temperatures of 70°F and are applicable only when the face is in full contact with the load surfaces. The load factor listed should be taken into account when determining appropriate safety factors for a given load. A minimum of 3 to 1 safety factor must be applied based on the actual breakdown force for a given load. Refer to ASME Standard B30.26 for inspection and operating procedures of Close Proximity Operated Lift Magnets and read the Operating Manual before using magnets.

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Method of handling:
- Tighten
- Loose
- Wire
- Strapping

Describe bundle make-up and provide sketch:
Eriez’ lift magnets are built in compliance with ASME B30.20. Eriez can inspect your magnets to ensure they remain in compliance. Our procedure includes:

- Inspection of lift magnet surface and resurfacing of poles, if needed
- Inspection of all other parts
- Replacement of any missing parts
- Repair/replacement of all damaged parts
- Replacement of warning labels and capacity markings
- Load testing and certification

Eriez’ certified repairs come with a one-year “As New” warranty.

Load Factors
This treats, rough and irregular surfaces, curved shapes and scale all effect lifting power adversely and must be considered in establishing a safety factor. The magnet must be centered on the load’s center of gravity. Tilted or unbalanced loads significantly affect the holding power of the magnet.

Capacity
Maximum attractive force is approximately twice the rated lifting capacity. Capacity ratings listed are based on lifting a steel plate on flat, clean, polished steel plate in full contact with the load surface. The load factors listed should be taken into account when determining the appropriate safety factors for a given load. A minimum of 3 to 1 safety factor must be applied based on the actual breakdown force for a given load. Refer to ASME Standard B30.20 for inspection and operating procedures of Close Proximity Operated Lifting Magnets and read the Operating Manual before using the magnet.

Load Factors

- Minimum
- Maximum

- Material:
- Surface: 3D
- Weight:
- Tilt:
- Method of loading:
- Snapping:

Describe handle make-up and provide sketch:

Application Information

<table>
<thead>
<tr>
<th>Plates</th>
<th>Bar/ Pipe</th>
<th>Bundle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material:</td>
<td>Material:</td>
<td>Material:</td>
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<tr>
<td>Temp.</td>
<td>O.D.:</td>
<td>O.D.:</td>
</tr>
<tr>
<td>°F</td>
<td>I.D.:</td>
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</tr>
<tr>
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</tr>
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<td>Length</td>
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Service, Repair & Certification

- Inspection of lift magnet surface and resurfacing of poles, if needed
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- Replacement of warning labels and capacity markings
- Load testing and certification

Eriez’ certified repairs come with a one-year “As New” warranty.

Load Factors

- Minimum
- Maximum

- Material: | Material: | Material: |
- Temp. | O.D.: | O.D.: |
- °F | I.D.: | I.D.: |
- Thickness | Width | Length | Weight |
- Thickness | Width | Length | Weight |
- Thickness | Width | Length | Weight |

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</tr>
<tr>
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Service, Repair & Certification

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- Replacement of warning labels and capacity markings
- Load testing and certification

Eriez’ certified repairs come with a one-year “As New” warranty.
### SafeHold Lift Magnets

#### RPL Series
- **No power supply required**
- **Round - max cap**
  - Min. to Max OD
  - C (in.)
  - 3/8
  - 5/16
  - 3/8
  - 1/2
  - 3/4
  - 1 1/4
  - 2
  - 2 1/2
  - 3 1/4
  - 4
  - 5
  - 6
- **Flat - max cap**
  - Min. to Max OD
  - C (in.)
  - 3/8
  - 5/16
  - 3/8
  - 1/2
  - 3/4
  - 1 1/4
  - 2
  - 2 1/2
  - 3 1/4
  - 4
  - 5
  - 6
- **Material Thickness Capacity Ratings**
  - 1 1/2
  - 1 1/4
  - 1
  - 1/2
  - 3/4
  - 1 1/4
  - 2
  - 2 1/2
  - 3 1/4
  - 4
  - 5
  - 6
- **Features**
  - **SafeHold** Permanent Lift Magnets
  - **No power supply required**
  - **Manual On/Off**
  - **Easy to rotate handle with a wide range of diameters can be handled**
  - **Use multiple magnets after cutting**
  - **Great for cutting laser tables, burn/laser tables, and smooth.**
  - **Polish Rough**
  - **Low Carbon Alloys/High Carbon Steel**
  - **Surface Condition**

#### XPL Series
- **No power supply required**
- **Manual On/Off**
- **Easy to rotate handle with a wide range of diameters can be handled**
- **Use multiple magnets after cutting**
- **Great for cutting laser tables, burn/laser tables, and smooth.**
- **Polish Rough**
- **Low Carbon Alloys/High Carbon Steel**
- **Surface Condition**

#### EPL Series
- **No power supply required**
- **Manual On/Off**
- **Easy to rotate handle with a wide range of diameters can be handled**
- **Use multiple magnets after cutting**
- **Great for cutting laser tables, burn/laser tables, and smooth.**
- **Polish Rough**
- **Low Carbon Alloys/High Carbon Steel**
- **Surface Condition**

#### APL Series
- **No power supply required**
- **Manual On/Off**
- **Easy to rotate handle with a wide range of diameters can be handled**
- **Use multiple magnets after cutting**
- **Great for cutting laser tables, burn/laser tables, and smooth.**
- **Polish Rough**
- **Low Carbon Alloys/High Carbon Steel**
- **Surface Condition**

#### MPL Series
- **No power supply required**
- **Manual On/Off**
- **Easy to rotate handle with a wide range of diameters can be handled**
- **Use multiple magnets after cutting**
- **Great for cutting laser tables, burn/laser tables, and smooth.**
- **Polish Rough**
- **Low Carbon Alloys/High Carbon Steel**
- **Surface Condition**

### Lift Magnet Considerations

**FEATURES**
- **SafeHold Lift Magnets**
- **No power supply required**
- **Manual On/Off**
- **Easy to rotate handle with a wide range of diameters can be handled**
- **Use multiple magnets after cutting**
- **Great for cutting laser tables, burn/laser tables, and smooth.**
- **Polish Rough**
- **Low Carbon Alloys/High Carbon Steel**
- **Surface Condition**

**Carbon Content**
- Magnet capacity is based on lifting low carbon steel.
- Materials containing less iron and more carbon will reduce magnet capacity.
- A large block of steel will have less iron and more carbon, which will lower the lifting capacity.

**Surface Condition**
- Paint, coatings, scale, or any other material between the load and magnet will adversely affect the magnetic power of the magnet. Field cleaned and load free are ideal.

**Flats**
- **Magnetic**
  - load plates to frames/castings
  - load plates after cutting
  - use multiple magnets on a separate load for large pieces

**Round**
- **Magnetic**
  - load plates to frames/castings
  - load plates after cutting
  - use multiple magnets on a separate load for large pieces

**Irregular Shapes**
- **Magnetic**
  - use multiple magnets on a separate load for large pieces

**Structural**
- **Magnetic**
  - use multiple magnets on a separate load for large pieces

**Material Thickness Capacity Ratings**
- 1 1/2
- 1 1/4
- 1
- 1/2
- 3/4
- 1 1/4
- 2
- 2 1/2
- 3 1/4
- 4
- 5
- 6

**Min. to Max OD**
- 3/8
- 5/16
- 3/8
- 1/2
- 3/4
- 1 1/4
- 2
- 2 1/2
- 3 1/4
- 4
- 5
- 6
**Lift Magnet Considerations**

**Carbide Content**

Magnet capacity is based on lifting low carbon steel. Materials containing less iron and/or high carbon can reduce lifting capacity.

**Surface Condition**

Using carbon steel samples, the holding power of a magnet is rated in relation to the condition of the surface. The score is based on how easy it is to remove the magnet with the pull of the load perpendicular to the face of the magnet.

**Sag - Unsupported Overhang**

The sag rating of a magnet is equal to the pull of the load perpendicular to the face of the magnet. Sagging or bending of the load causes the load to drop off the magnet. Sagging is caused by the face of the magnet not being perpendicular to the load. This, in turn, causes a magnet to drop off the load. Magents with lower sag ratings should be considered for use on surfaces that may sag.

**Weight Rating**

- 12"
- 18"
- 24"
- 30"
- 36"
- 48"
- 60"
- 72"

---

### Dimensions

<table>
<thead>
<tr>
<th>Material</th>
<th>Rod</th>
<th>Flat</th>
<th>Round x Max Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 Gauge</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>250 lbs</td>
</tr>
<tr>
<td>12 Gauge</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>750 lbs</td>
</tr>
<tr>
<td>13 Gauge</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>1,430 lbs</td>
</tr>
<tr>
<td>14 Gauge</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>1,880 lbs</td>
</tr>
<tr>
<td>15 Gauge</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>NR</td>
</tr>
<tr>
<td>16 Gauge</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>300 lbs</td>
</tr>
<tr>
<td>17 Gauge</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>500 lbs</td>
</tr>
<tr>
<td>18 Gauge</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>1,000 lbs</td>
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---

**Material Thickness**

- 0.012" (1/80"")
- 0.015" (1/50"")
- 0.016" (1/60"")
- 0.017" (1/70"")
- 0.018" (1/80"")
- 0.019" (1/90"")
- 0.020" (1/100"")
- 0.021" (1/110"")
- 0.022" (1/120"")
- 0.023" (1/130"")
- 0.024" (1/140"")
- 0.025" (1/150"")

---

**Materials**

- Low Carbon Alloys
- High Carbon Steels
- Stainless Steels
- Aluminum
- Copper
- Brass

---

**Surface Condition**

- Clean and smooth
- Paint, coatings, scale, or any other material on the surface of the magnet
- Rust, corrosion, or any other condition that could reduce the magnet's holding power
- Heat-treated, tempered, or hardenable materials
- Welded or burn/laser tables
- Structural tubing, channels and beams
- Irregular shapes
- Carbon, cast iron, and other materials that may reduce the magnet's holding power

---

**Lift Magnet Features**

- SafeHold Permanent Lift Magnets
  - No power supply required
  - Manual On/Off
  - Locking mechanism built into handle
  - Lift flat and round material
- SafeHold MPL Series
  - No power supply required
  - Easy to rotate handle with no backlash
  - Six models with capacities up to 3,800 lbs on flat material
- Eriez’ SafeHold® Permanent Lift Magnets
  - No power supply required
  - Manual On/Off
  - Easy to rotate handle with no backlash
  - Lift flat and round material
  - Six models with capacities up to 3,500 lbs on flat material

---

**Eriez’ SafeHold® Permanent Lift Magnets**

- No power supply required
- Manual On/Off
- Easy to rotate handle with no backlash
- Lift flat and round material
- Six models with capacities up to 3,800 lbs on flat material
- Access and they can handle both flat and round material. These permanent magnets turn on and off with the actuation of a magnet. Super compact rare earth magnets turn on and off anywhere that limits operator access. Eriez’ SafeHold® Permanent Lift Magnets are ideal for loading and unloading steel sheets from structural tubing, channels and beams. They are capable of handling flat and round materials cut to length and square or round electrical tubing.
Additional Lift Magnet Considerations

Load Factors
This sheet, rough and irregular surfaces, and deformed and scaled affect lifting power adversely and must be considered in establishing a safety factor. This magnet must be positioned on the load's center of gravity. Tilted or unbalanced loads significantly affect the holding power of the magnet.

Capacity
Maximum attractive force is approximately twice the rated lifting capacity. Capacity ratings listed in the Operating Manual refer to the rated capacity of the magnet face in full contact with the load surfaces. The load factors listed should be used when determining appropriate safety factors for a given load. A minimum of 3 to 1 safety factor must be applied based on the actual breakaway force for a given load. Refer to ASME Standard B30.20 for inspection and operating procedures of Close Proximity Operated Lift Magnets and read the Operating Manual before using magnet.

Application Information

**Pipes**
- Material: ________
- Diameter: O.D. ________ L.D. ________ Length: ________ Weight: ________

**Bundles**
- Material: ________
- Max. O.D.: ________ Min. O.D.: ________ Length: ________ Weight: ________

Service, Repair & Certification
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Eriez’ certified repairs come with a one-year “As New” warranty.

Load Factors
This sheet, rough and irregular surfaces, and deformed and scaled affect lifting power adversely and must be considered in establishing a safety factor. This magnet must be positioned on the load’s center of gravity. Tilted or unbalanced loads significantly affect the holding power of the magnet.

Capacity
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Application Information

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**Bundles**
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- Max. O.D.: ________ Min. O.D.: ________ Length: ________ Weight: ________

Service, Repair & Certification
Eriez’ lift magnets are built in compliance with ASME B30.20. Eriez can inspect your magnets to ensure they remain in compliance. Our procedure includes:
- Inspection of lift magnet surface and resurfacing of poles, if needed
- Inspection of all other parts
- Replacement of all damaged parts
- Replacement of warning labels and capacity markings
- Load testing and certification
Eriez’ certified repairs come with a one-year “As New” warranty.