## Parker Ironcore Linear Motor Economical Type

### R5 E-type Performance

<table>
<thead>
<tr>
<th>Model</th>
<th>Units</th>
<th>R5-1E</th>
<th>R5-2E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winding</td>
<td>Series/Parallel</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Peak Force</td>
<td>N</td>
<td>175</td>
<td>350</td>
</tr>
<tr>
<td>Continuous Force</td>
<td>N</td>
<td>55</td>
<td>110</td>
</tr>
<tr>
<td>Peak Power</td>
<td>A</td>
<td>7.9</td>
<td>7.9</td>
</tr>
<tr>
<td>Continuous Power</td>
<td>A</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Back EMF</td>
<td>Vrms/(m/s) 1</td>
<td>8.1</td>
<td>16.3</td>
</tr>
<tr>
<td>Force Constant</td>
<td>N/Arms</td>
<td>24.4</td>
<td>48.9</td>
</tr>
<tr>
<td>Resistance</td>
<td>Ω</td>
<td>3.5</td>
<td>7</td>
</tr>
<tr>
<td>Inductance</td>
<td>mH</td>
<td>14.8</td>
<td>29.6</td>
</tr>
<tr>
<td>Driver Capacity</td>
<td>W</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>Attractive Force</td>
<td>N</td>
<td>290</td>
<td>580</td>
</tr>
<tr>
<td>Electrical Cycle Length</td>
<td>mm</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Weight</td>
<td>Kg</td>
<td>0.65</td>
<td>1.2</td>
</tr>
</tbody>
</table>

* Specifications are based on maintaining the air gap between the coil and track shown in the drawings.
1) Peak force and current based on 5% duty cycle and one second duration.
2) Continuous force and current based on coil winding temperature maintained at 100 ºC.
3) Parameter for each Phase (Phase - to - Phase)
4) Parameter for each Phase (Phase - to - Phase)
5) Using Parker Driver
6) Electrical cycle length is distance coil must travel to complete 360º electrical cycle.

### Dimension (mm)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>L</th>
<th>W</th>
<th>H</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>CL1</th>
<th>G x H (N)</th>
<th>OAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>R5-1E-KS</td>
<td>1220</td>
<td>53</td>
<td>30.6</td>
<td>6</td>
<td>41</td>
<td>42</td>
<td>28</td>
<td>500</td>
<td>120.5</td>
<td>30.6</td>
<td></td>
</tr>
<tr>
<td>R5-2E-KS</td>
<td>2200</td>
<td>53</td>
<td>30.6</td>
<td>6</td>
<td>41</td>
<td>42</td>
<td>28</td>
<td>500</td>
<td>120.5</td>
<td>30.6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MODEL</th>
<th>L</th>
<th>W</th>
<th>H</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>I</th>
<th>J (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R5-160MN</td>
<td>180</td>
<td>55</td>
<td>11.1</td>
<td>5</td>
<td>45</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>42.6</td>
<td>0.9</td>
<td>30.6</td>
<td></td>
</tr>
<tr>
<td>R5-240MN</td>
<td>240</td>
<td>55</td>
<td>11.1</td>
<td>5</td>
<td>45</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>42.6</td>
<td>0.9</td>
<td>30.6</td>
<td></td>
</tr>
</tbody>
</table>

R5 Series Parallel
R5-1E-KS - R5-2E-KS R5-2E-KP

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**Parker**

ENGINEERING YOUR SUCCESS.
Parker
Ironcore Linear Motor
Economical Type

R7 E-type

Performance

<table>
<thead>
<tr>
<th>Model</th>
<th>Units</th>
<th>R7-1E</th>
<th>R7-2E</th>
<th>R7-3E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winding</td>
<td>Series/Parallel/Triple</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak Force</td>
<td>N</td>
<td>229</td>
<td>458</td>
<td>687</td>
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<tr>
<td>Continuous Force</td>
<td>N</td>
<td>75</td>
<td>150</td>
<td>225</td>
</tr>
<tr>
<td>Peak Power</td>
<td>A</td>
<td>7.3</td>
<td>7.3</td>
<td>7.3</td>
</tr>
<tr>
<td>Continuous Power</td>
<td>A</td>
<td>2.3</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Back EMF</td>
<td>Vrms/(m/s)</td>
<td>11</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>Force Constant</td>
<td>N/Arms</td>
<td>33</td>
<td>66.1</td>
<td>33</td>
</tr>
<tr>
<td>Resistance, $20^\circ C$</td>
<td>Ω</td>
<td>4.5</td>
<td>9</td>
<td>2.3</td>
</tr>
<tr>
<td>Inductance</td>
<td>mH</td>
<td>25.4</td>
<td>50.8</td>
<td>12.7</td>
</tr>
<tr>
<td>Driver Capacity</td>
<td>W</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Attractive Force</td>
<td>N</td>
<td>481</td>
<td>962</td>
<td>962</td>
</tr>
<tr>
<td>Electrical Cycle Length</td>
<td>mm</td>
<td>40</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Weight</td>
<td>Kg</td>
<td>0.8</td>
<td>1.6</td>
<td>1.6</td>
</tr>
</tbody>
</table>

* Specifications are based on the maintaining the air gap between the coil and track shown in the drawings.
1) Peak force and current based on 5% duty cycle and one second duration.
2) Continuous force and current based on coil winding temperature maintained at 100 ºC.
3) Parameter for each Phase (Phase - to - Phase)
4) Parameter for each Phase (Phase - to - Phase)
5) Using Parker Driver
6) Electrical cycle length is distance coil must travel to complete 360º electrical cycle.

Dimension(mm)

- MODEL L W H A B C D E CL1 G x H (N) L1 W1 (mm) H1 CL2 QAL
- R7-1E 92 68 30.6 6 56 42 26 500 4-M5 x DP6 28.5 49 500 125.5
- R7-2E 172 89 11.1 5 56 42 26 500 8-M5 x DP6 29.5 49 500 200.5
- R7-3E 252 120.5 11.5 5 56 42 26 500 12-M5 x DP6 60 49 500 280.5

- MODEL L W H A B C D E F G I J (N)
- R7-160MN 180 70 11.1 5 60 42 40 42 62.6 6.9 30.6
- R7-240MN 240 70 11.1 5 60 42 40 42 62.6 6.9 30.6

M8 Socket Head Screw (6)
Parker Ironcore Linear Motor Economical Type

R10 E-type Performance

<table>
<thead>
<tr>
<th>Model</th>
<th>Units</th>
<th>R10-1E</th>
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<th>R10-2E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winding</td>
<td>Series/Parallel</td>
<td>S</td>
<td>S</td>
<td>P</td>
</tr>
<tr>
<td>Peak Force</td>
<td>N</td>
<td>1,235</td>
<td>2,470</td>
<td>2,470</td>
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<tr>
<td>Continuous Force</td>
<td>N</td>
<td>530</td>
<td>1,060</td>
<td>1,060</td>
</tr>
<tr>
<td>Peak Power</td>
<td>A</td>
<td>19.8</td>
<td>19.8</td>
<td>39.6</td>
</tr>
<tr>
<td>Continuous Power</td>
<td>A</td>
<td>6.6</td>
<td>6.6</td>
<td>13.2</td>
</tr>
<tr>
<td>Back EMF</td>
<td>Vrms/(m/s) 1</td>
<td>26.8</td>
<td>63.5</td>
<td>26.8</td>
</tr>
<tr>
<td>Force Constant</td>
<td>N/Ams</td>
<td>80.3</td>
<td>160.6</td>
<td>80.3</td>
</tr>
<tr>
<td>Resistance, 20°C R</td>
<td>Ω</td>
<td>4</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Inductance</td>
<td>mH</td>
<td>51.2</td>
<td>102.4</td>
<td>25.6</td>
</tr>
<tr>
<td>Driver Capacity</td>
<td>W</td>
<td>1,000</td>
<td>3,500</td>
<td>3,500</td>
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<tr>
<td>Attractive Force</td>
<td>N</td>
<td>1,994</td>
<td>3,988</td>
<td>3,988</td>
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<tr>
<td>Electrical Cycle Length</td>
<td>mm</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Weight</td>
<td>Kg</td>
<td>5.8</td>
<td>10.4</td>
<td>10.4</td>
</tr>
</tbody>
</table>

* Specifications are based on the maintaining the air gap between the coil and track shown in the drawings.

1) Peak force and current based on 5% duty cycle and one second duration.
2) Continuous force and current based on coil winding temperature maintained at 100 ºC.
3) Parameter for each Phase (Phase - to - Phase)
4) Parameter for each Phase (Phase - to - Phase)
5) Using Parker Driver
6) Electrical cycle length is distance coil must travel to complete 360° electrical cycle.

Dimension (mm)

**Note:** Dimensions are given in millimeters (mm) and inches (in) as required. The diagrams illustrate the physical dimensions and features of the motor model.
Parker
Ironcore Linear Motor
Economical Type

R16 E-type

Performance

<table>
<thead>
<tr>
<th>Model</th>
<th>Units</th>
<th>R16-1E</th>
<th>R16-2E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winding</td>
<td>Series/Parallel</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Peak Force</td>
<td>N</td>
<td>2,430</td>
<td>4,860</td>
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<tr>
<td>Continuous Force</td>
<td>N</td>
<td>1,040</td>
<td>2,080</td>
</tr>
<tr>
<td>Peak Power</td>
<td>A</td>
<td>18.9</td>
<td>18.9</td>
</tr>
<tr>
<td>Continuous Power</td>
<td>A</td>
<td>6.3</td>
<td>6.3</td>
</tr>
<tr>
<td>Back EMF</td>
<td>V/Hz/m/s</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Force Constant</td>
<td>N/Arms</td>
<td>66</td>
<td>110.1</td>
</tr>
<tr>
<td>Resistance, 20°C</td>
<td>Ω</td>
<td>3.2</td>
<td>6.4</td>
</tr>
<tr>
<td>Inductance</td>
<td>mH</td>
<td>96.4</td>
<td>192.8</td>
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<tr>
<td>Driver Capacity</td>
<td>W</td>
<td>1,000</td>
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</tr>
<tr>
<td>Attractive Force</td>
<td>N</td>
<td>3,990</td>
<td>7,980</td>
</tr>
<tr>
<td>Electrical Cycle Length</td>
<td>mm</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Weight</td>
<td>Kg</td>
<td>11.1</td>
<td>18.1</td>
</tr>
</tbody>
</table>

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1) Peak force and current based on 5% duty cycle and one second duration.  
2) Continuous force and current based on coil winding temperature maintained at 100 ºC.  
3) Parameter for each Phase (Phase - to - Phase)  
4) Parameter for each Phase (Phase - to - Phase)  
5) Using Parker Driver  
6) Electrical cycle length is distance coil must travel to complete 360º electrical cycle.

Dimension (mm)

![Dimension diagram]