### Carriage Load Capacity

<table>
<thead>
<tr>
<th>Service Interval</th>
<th>L&lt;sub&gt;1&lt;/sub&gt;</th>
<th>M&lt;sub&gt;1&lt;/sub&gt;</th>
<th>M&lt;sub&gt;2&lt;/sub&gt;</th>
<th>M&lt;sub&gt;3&lt;/sub&gt;</th>
<th>M&lt;sub&gt;4&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 100 500 K</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500N 500K 50N 140N</td>
<td></td>
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</tr>
</tbody>
</table>

To determine service interval, first calculate the load factor LF using this equation.

\[
LF = \frac{L_{max}}{M_{max}} + \frac{M_{max}}{M_{max}} + \frac{M_{max}}{M_{max}} + \frac{M_{max}}{M_{max}} \leq f
\]

### Service Interval Note

- LF will be several times this interval.
- Note that stroke length is 15 mm shorter.

**Units with plain beams will be supplied with 6045 tapped holes in pattern "A" (see model) unless alternative mounting is specified.

### Technical Specifications

#### Parameter

| Pulley radius (r) | mm | 1.53 |
| Linear motion force (F<sub>L</sub>) | N | 250 |
| Linear motion/shaft rev. (L<sub>M</sub>) | mm | 96 |
| Weight of whole T slot beam unit (kg) | 0.00256 x 1.4 |
| Weight of whole plain beam unit (kg) | 0.007 x 1.4 |
| Mass of carriage (kg) | 0.45 |
| Mass of bell (kg) | 0.045 |
| Drive efficiency (%) | 0.9 |
| Break away friction (μ) | μN |
| Coefficient of friction (μ) | 0.02 |
| Moment of inertia of pulley (kgm<sup>2</sup>) | 0.14 |
| T slot beam moment of inertia (kgm<sup>2</sup>) | 1.8 x 10<sup>-4</sup> |
| T slot beam moment of inertia (kgm<sup>2</sup>) | 3.5 x 10<sup>-3</sup> |
| Plain beam moment of inertia (kgm<sup>2</sup>) | 2.2 x 10<sup>-3</sup> |
| Plain beam moment of inertia (kgm<sup>2</sup>) | 5.8 x 10<sup>-3</sup> |
| Bumper impact energy (Joules) | 3 |

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**Bishop-Wisecarver Corporation**: Manufacturer of the original DualWax™ guide wheel and industry leader in guided motion technology, and exclusive North and Central American partner and distributor for HepcoMotion products since 1994.

**Bishop-Wisecarver**

- DualWax™ Guide Wheels
- LoPro™ Linear Motion System
- MiniWax™ Linear Slide System
- QuickRail™ Linear Motion System
- SRX-150 Linear Motion System
- UniRail™ Linear Motion Guide

**HepcoMotion**

- DAAUPD: Double Acting Profile Driven Unit
- DLS: Linear System
- DTS: Driven Track System
- GCT: Linear Guide and Transmission System
- HCB: Heavy Duty Compact Beam
- HCDS: Heavy Duty Compact Screw
- HELS: Heavy Duty Linear System
- HEPT: Heavy Duty Ring Slides and Track System
- HES: Heavy Duty Slide System
- MCH: Heavy Duty Track Roller Guide System
- MCM: Machine Construction System
- PDU: Profile Driven Unit
- PRT: Precision-Ring and Track System
- PSL240: Profile Screw Driven Unit
- SBC: Screw Belt Drive
- Simple-Select®
- SL2 Stainless Steel Based Slide System

### HepcoMotion®

- PDU2 Profile Driven Unit
- Compact Linear Transmission

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**Product Orders**

Please call Bishop-Wisecarver with your specific length requirements and additional ordering needs. Our technical staff is available to assist with information specific to your application.

Bishop-Wisecarver provides a warranty on all linear motion guiding for a period of 12 months from date of shipment with certain terms and conditions.

Contact us for conditions and current information on warranty at bishop-wisecarver.com/contact_us following the link.
Profile Driven Unit

The PDU2 linear transmission unit delivers high performance at low development costs for applications such as food and pharmaceutical packaging. The belt driven units are manufactured to customer's individual length requirements and have a short turn around time.

HepcoMotion patented wheel technology enables the PDU2 to surpass other similar sized units by offering a load capacity of 50Kg and speeds up to 6m/s. This advanced engineering allows the unit’s wheels to run virtually friction-free on the inside surface of the profile without lubrication maintenance. The carriage plate of the PDU2 is designed to accommodate the mounting of a second unit and Bishop-Wisecarver also offers a full range of options, such as motors, belt switches and MCS aluminum frame systems.

Bishop-Wisecarver provides effective linear motion products for all manufacturing and technical applications. Please contact our product engineers or visit www.bwc.com for 2D and 3D CAD files. Our technical staff is available to assist with information specific to your application.

Simple Connection for Motors and Gearboxes
- Optional knurled range screws onto standard PDU2 unit
- Compatible with most types of coupling, motor and gearbox
- Assembled units with couplings and adapters available for most AC motors and gear boxes

Removable Carriage Plate
- Easily detached for customizing
- Easily rotated 180° to change the switch cam to the opposite side

Adjustable Switch Bracket
- 2 way adjustment to suit plain beam section

Carriage
- Multiple carriages on a single unit available
- High load capacity – 50Kg and 6m/s
- High speed - 6m/s
- Long Travel no Lubrication

Limit Switch and Bracket
- Mechanical and inductive versions available. IP67 rating

Aluminum Beam
- Cuts your need length up to 6m
- 6 T slots for mounting (compatible with MCS profiles)
- Self supporting beam
- Version without T slots is available for added strength, stiffness and washdown

Toothed Belt Drive
- Accurate high speed and long stroke
- Drives horizons up to 25mN

Dimensions
The main dimensions of the PDU2 are shown in the drawing below. For additional details, please contact Bishop-Wisecarver or visit www.bwc.com for 2D and 3D CAD files.

Ancillary Components

T track M5 = 0.403-1022, M6 = 0.403-1023

†Tooth cover (supplied fitted on each of the T tracks) = 1.040-1007

Drive Connections
The PDU2 can be supplied with a motor or gearbox. Connection kits are available in a wide range of motor sizes including IEC C08, C30, C105 and NEMA 23 and 34 are ready available. Bishop-Wisecarver can also manufacture the components required to fit customer’s specific motors and gearboxes.

Bishop-Wisecarver can supply assorted motors, optional holding brakes, encoders for positioning and inverter drives for power and control.

Axis Connections
The PDU2 allows easy connections between axes, MCS frames and other machine components. The configurations shown include part numbers for various brackets. Please note that tapped holes are required to suit the specific connections brackets for plain beam versions, mounting brackets and limit switch brackets.

The PDU2 will normally be supplied with these holes already inserted.

Note: Plain beam versions will be supplied with default “A” pattern mounting holes in positions.