# HepcoMotion<sup>®</sup>

**Shaft** precision steel and aluminium shaft

### Introducing the HepcoMotion® Precision Shaft

Correct Shaft selection is vital if maximum performance is to be achieved from your linear system. Hepco Precision Shaft has been developed to provide excellent performance when used with Pacific liner technology, allowing optimal transfer of the Frelon material to the Shaft. Successful transfer in turn will provide a zero maintenance benefit as well as an extended life for users of Pacific linear/rotary bearings.

This precision hardened and ground Shaft is also the obvious choice for use with conventional recirculating linear bearing technology, offering excellent wear resistance.



#### **Shaft Options**

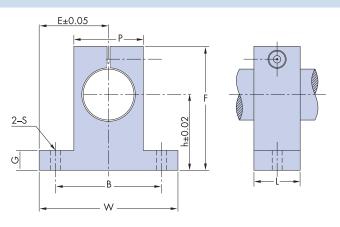
| Shaft Type  |              | Hardness |     |              |              |              |              | Dic          | ameter       | Optio | ns           |              |              |    |              |              |
|---|--------------|----------|-----|--------------|--------------|--------------|--------------|--------------|--------------|-------|--------------|--------------|--------------|----|--------------|--------------|
| Metric  | REF          | RC       | TOL | 5            | 6            | 8            | 10           | 12           | 16           | 20    | 25           | 30           | 40           | 50 | 60           | 80           |
| Metric Carbon Steel<br>CK53 Hardened<br>and Ground            | NIM          | 60       | hó  | ~            | $\checkmark$ | $\checkmark$ |              | $\checkmark$ | ~            | V     |              | $\checkmark$ | V            | V  | V            | $\checkmark$ |
| Metric Stainless Steel<br>(400 Series) Hardened<br>and Ground | NIMSS        | 50       | hó  | $\checkmark$ | $\checkmark$ | $\checkmark$ |              | $\checkmark$ | $\checkmark$ | V     |              | $\checkmark$ | $\checkmark$ | V  | $\checkmark$ | $\checkmark$ |
| Metric Soft Stainless<br>Steel (300 Series)<br>Ground         | NIM<br>SS316 | Х        | hó  | V            | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | V            | V     | $\checkmark$ | $\checkmark$ | $\checkmark$ | V  | $\checkmark$ | V            |
| Metric Hardcoat<br>Anodised Aluminium                         | NIMA         | x        | hó  | -            | _            | $\checkmark$ | $\checkmark$ |              | V            | V     |              | _            | _            | _  | _            | -            |

| Shaft Type  |              | Hardness |         | Diameter Options |     |              |              |              |              |   |              |              |              |
|---|--------------|----------|---------|------------------|-----|--------------|--------------|--------------|--------------|---|--------------|--------------|--------------|
| Imperial  | REF          | RC       | TOL     | 3/16             | 1/4 | 3/8          | 1/2          | 5/8          | 3/4          | 1 | 1 1/4        | 1 1/2        | 2            |
| Imperial Carbon Steel<br>CK53 Hardened<br>and Ground            | NIL          | 60       | Class L | $\checkmark$     | V   | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | V | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Imperial Stainless Steel<br>(400 Series) Hardened<br>and Ground | NILSS        | 50       | Class L | $\checkmark$     | V   | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | V | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Imperial Soft Stainless<br>Steel (300 Series)<br>Ground         | NIL<br>SS316 | Х        | Class L | $\checkmark$     | V   | V            |              | $\checkmark$ | V            |   | V            | V            | $\checkmark$ |
| Imperial Hardcoat<br>Anodised Aluminium                         | NILA         | Х        | Class L | $\checkmark$     | V   | $\checkmark$ | $\checkmark$ |              | $\checkmark$ | V | $\checkmark$ | $\checkmark$ | $\checkmark$ |

Other types of shaft available include: • Specials up to 150mm Ø

• Tubing Please enquire.

#### **Aluminium Shaft Supports**



| Nominal<br>Shaft | Part No. |    |      |     | Major | Dimen | sions |    |     |     | Mounting Bolt<br>Designation | Weight |  |  |
|------------------|----------|----|------|-----|-------|-------|-------|----|-----|-----|------------------------------|--------|--|--|
| Diameter         | Parr No. | h  | E    | w   | L     | F     | G     | Р  | В   | S   | Designation                  | g      |  |  |
| 10               | ASS 10   | 17 | 18.5 | 37  | 10    | 30    | 5     | 18 | 28  | 4.5 | M4                           | 24     |  |  |
| 12               | ASS 12   | 20 | 21   | 42  | 15    | 35    | 5.5   | 20 | 32  | 5.5 | M5                           | 30     |  |  |
| 16               | ASS 16   | 25 | 25   | 50  | 15    | 42    | 6     | 26 | 40  | 5.5 | M5                           | 40     |  |  |
| 20               | ASS 20   | 30 | 30   | 60  | 20    | 50    | 8     | 32 | 45  | 5.5 | M5                           | 70     |  |  |
| 25               | ASS 25   | 35 | 37   | 74  | 25    | 58    | 9     | 38 | 60  | 6.6 | M6                           | 130    |  |  |
| 30               | ASS 30   | 40 | 42   | 84  | 30    | 68    | 10    | 45 | 68  | 9   | M8                           | 180    |  |  |
| 40               | ASS 40   | 50 | 54   | 108 | 30    | 86    | 12    | 56 | 86  | 11  | M10                          | 420    |  |  |
| 50               | ASS 50   | 60 | 65   | 130 | 40    | 100   | 14    | 80 | 108 | 11  | M10                          | 750    |  |  |

Finish: Anodised

#### **Ordering Details**

| NIM        | Dia (mm)  | х | ι_ | (mm) |
|------------|-----------|---|----|------|
| NIMSS      |           | х | L_ |      |
|            | Dia (mm)  |   |    | (mm) |
| NIMSS316   |           | х | L_ |      |
|            | Dia (mm)  |   |    | (mm) |
| NIMA       |           | х | L_ |      |
|            | Dia (mm)  |   |    | (mm) |
| NIL        |           | х | ι_ |      |
|            | Dia (ins) |   |    | (mm) |
| NILSS      |           | х | L_ |      |
|            | Dia (ins) |   |    | (mm) |
| NIL\$\$316 |           | х | L_ |      |
|            | Dia (ins) |   |    | (mm) |
| NILA       |           | х | L_ |      |
|            | Dia (ins) |   |    | (mm) |

Metric hardened and ground carbon steel shaft Metric hardened and ground stainless steel shaft Metric ground soft stainless steel shaft Metric hardcoat anodised aluminium shaft Imperial hardened and ground carbon steel shaft Imperial hardened and ground stainless steel shaft Imperial ground soft stainless steel shaft Imperial hardcoat anodised aluminium shaft



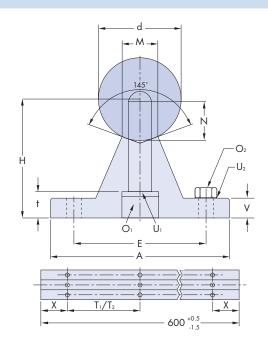
#### **Metric Shaft Support Rails**

Shaft support rails will prevent shaft deflection under load and provide a high level of rigidity in order to achieve optimum performance from your open type Pacific Bearing, or any other open recirculating linear bearing.

Support Rails are of low overall height making them particularly suitable for use with Hepco Pacific Pillow Blocks. The standard support rail is manufactured from aluminium alloy and comes in 600mm lengths only, these are then cut/butted together to fit to the overall length of the one piece shaft.

Shaft – All types of shaft can be supplied drilled for customer assembly or fitted to the support rails for ease of supply.

For standard 600mm aluminium support rails, X = half of T1 or T2. For support rails which require cutting/butting, customer to confirm Dim X



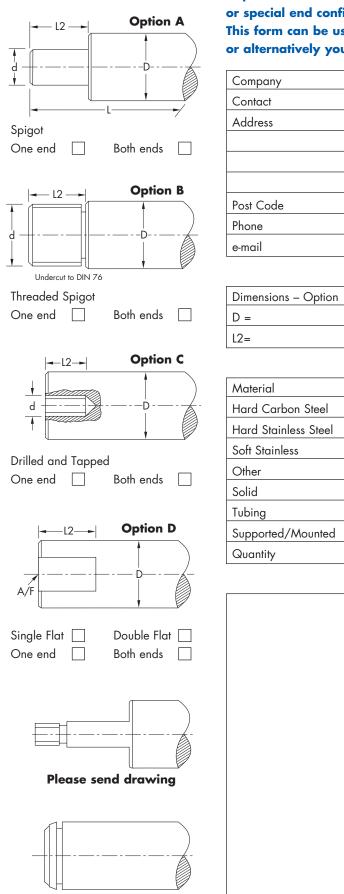
X = 1/2 hole pitch  $T_1$  or  $T_2$ 

| For Shaft<br>Diameter | d  | <b>H</b> <sub>1</sub><br>±0.01 | A  | v | м    | <b>O</b> <sub>1</sub> | U  | N  | E  | t    | O <sub>2</sub> SQ. | <b>U</b> <sub>2</sub><br>DIN7980 | TI  | T2  |
|-----------------------|----|--------------------------------|----|---|------|-----------------------|----|----|----|------|--------------------|----------------------------------|-----|-----|
| 12                    | 12 | 22                             | 40 | 5 | 5.8  | M 4X20                | 4  | 8  | 29 | 4.5  | M 4X12             | 4                                | 75  | 120 |
| 16                    | 16 | 26                             | 45 | 5 | 7    | M 5X20                | 5  | 9  | 33 | 7.6  | M 5X16             | 5                                | 100 | 150 |
| 20                    | 20 | 32                             | 52 | 6 | 8.3  | M 6X25                | 6  | 11 | 37 | 8.6  | M 6X16             | 6                                | 100 | 150 |
| 25                    | 25 | 36                             | 57 | 6 | 10.8 | M 8X30                | 8  | 15 | 42 | 9    | M 6X16             | 6                                | 120 | 200 |
| 30                    | 30 | 42                             | 69 | 7 | 11   | M10X35                | 10 | 17 | 51 | 10   | M 8X25             | 8                                | 150 | 200 |
| 40                    | 40 | 50                             | 73 | 8 | 15   | M10X40                | 10 | 19 | 55 | 9.5  | M 8X25             | 8                                | 200 | 300 |
| 50                    | 50 | 60                             | 84 | 9 | 19   | M12X45                | 12 | 21 | 63 | 11.2 | M10X30             | 10                               | 200 | 300 |



| Shaft & Support Rail Fully Assembled | Simply prefix the sl<br>Example   |   | eference with AU<br>AU NIM 20 X L2000 T2    |  |  |
|--------------------------------------|---|---|---|--|--|
| Drilled Shaft Only                   | Simply state the shaft reference and add T1 or T2 depending upon shaft hole centres required                  |   |   |  |  |
|                                      | Example   | - | NIM 20 X L2000 T2                           |  |  |
| Support Rails Only                   | Aluminium Support Rails supplied in 600mm lengths only.<br>Simply state whether T1 or T2 drilling is required |   |   |  |  |
|                                      | Example<br>Hole Centre  | - | Support Rail for 20mm Shaft T2<br>SR20 – T2 |  |  |

#### **Machined Ends Data Sheet**



**Please send drawing** 

#### Hepco can machine all types of shaft to standard or special end configurations. This form can be used to fax us your requirements or alternatively you can send a drawing.

| Company   |     |
|-----------|-----|
| Contact   |     |
| Address   |     |
|           |     |
|           |     |
|           |     |
| Post Code |     |
| Phone     | Fax |
| e-mail    |     |

| Dimensions – Option |    | L =   | mm        |
|---------------------|----|-------|-----------|
| D =                 | mm | d =   | mm/thread |
| L2=                 | mm | A/F = | mm        |

| Material             |            |  |
|----------------------|------------|--|
| Hard Carbon Steel    | CK 53      |  |
| Hard Stainless Steel | 400 series |  |
| Soft Stainless       | 300 series |  |
| Other                |            |  |
| Solid                |            |  |
| Tubing               |            |  |
| Supported/Mounted    |            |  |
| Quantity             |            |  |

| Sketch |
|--------|
|        |
|        |
|        |
|        |
|        |
|        |
|        |
|        |
|        |
|        |

# HepcoMotion<sup>®</sup> Product Range



GV3 Linear Guidance and **Transmission System** 



SBD Sealed Belt Drive



HDS2 Heavy Duty Slide System



MCS Aluminium Frame and Machine Construction System



PRT2 Ring Slides and Track System



HDRT Heavy Duty Ring Slides and Track System



HLG Нерсо Linear Ball Guides



HDLS Heavy Duty Driven Linear System



HTS

Telescopic Ball

Bearing Slides

SL2

Stainless Steel Based

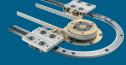
Slide System

HPS Powerslide-2 Guided Rodless Cylinder



MHD

Guidance System



DTS Heavy Duty Track Roller Driven Track System



**BSP Ballscrew Premier** 

(Simple|Select®) Vee Slide Linear Guidance Systems

PDU2 Profile Driven Unit

**PSD120** Profile Screw Driven Unit

# Bishop-Wisecarver Product Range

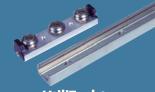
HepcoMotion® - Exclusive European partners and distributors for Bishop-Wisecarver since 1984.



Single Edge Slide System



Aluminium Based Slide System



**UtiliTrak**® Lightweight U Channel Guideway

For further information on HepcoMotion® products please request our leaflet 'FPL'

## HepcoMotion<sup>®</sup>

www.HepcoMotion.com

Lower Moor Business Park, Tiverton Way, Tiverton, Devon, England EX16 6TG Tel: +44 (0)1884 257000 Fax: +44 (0)1884 243500 E-mail: sales@hepcomotion.com

CATALOGUE No. Shaft 06 UK © 2016 Hepco Slide Systems Ltd.

Reproduction in whole or part without prior authorisation from Hepco is prohibited. Although every effort has been made to ensure the accuracy of the information in this catalogue, Hepco cannot accept liability for any omissions or errors. Hepco reserves the right to make alterations to the product resulting from technical developments. Many Hepco products are protected by: Patents, Copyright, Design Right or Registered Design. Infringement is strictly prohibited and may be challenged in law. The Customer's attention is drawn to the following clause in Hepco's conditions of sale:

It shall be the Customer's sole responsibility to ensure that goods supplied by Hepco will be suitable or fit for any particular application or purpose of the Customer, whether or not such application or purpose is known to Hepco. The Customer will be solely responsible for any errors in, or omissions from, any specifications or information the Customer provides. Hepco will not be obliged to verify whether any such specifications or information are correct or sufficient for any application or purpose. Hepco's full conditions of sale are available on request and will apply to all quotations and contracts for the supply of items detailed in this catalogue

HepcoMotion is the trading name of Hepco Slide Systems Ltd.