**IMPORTANT INFORMATION**

**DO NOT DISCARD!**

Use this information sheet to assist with slide installation and setup.

File with maintenance or machine documentation.

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### Ordering Data

**TO ORDER SPECIFY:**
- Product, Series, Type, Three Position Unit, Slide Size, Slide Travel, Mid-Position Travel, Tool Plate Extension, and Options.

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**SLIDE TRAVEL (mm)**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>SERIES SK</th>
<th>SERIES SL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25 to 300</td>
<td>25 to 300</td>
</tr>
<tr>
<td>2</td>
<td>25 to 300</td>
<td>25 to 300</td>
</tr>
<tr>
<td>3</td>
<td>25 to 300</td>
<td>25 to 400</td>
</tr>
<tr>
<td>4</td>
<td>50 to 450</td>
<td>50 to 600</td>
</tr>
<tr>
<td>5</td>
<td>50 to 450</td>
<td>50 to 600</td>
</tr>
<tr>
<td>6</td>
<td>50 to 590</td>
<td>50 to 700</td>
</tr>
</tbody>
</table>

Available in 5 mm increments. Minimum travel required for all SK or SL slides for use with ISO cylinders is:
- Size 1: 25 mm
- Size 2: 25 mm
- Size 3: 25 mm

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**SLIDES WITH LINEAR BALL BUSHINGS**

<table>
<thead>
<tr>
<th>SLIDE SIZE</th>
<th>BORE SIZE (mm)</th>
<th>SHAFT SIZE (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>19</td>
<td>8</td>
</tr>
<tr>
<td>B</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>B</td>
<td>25</td>
<td>12</td>
</tr>
<tr>
<td>B</td>
<td>32</td>
<td>16</td>
</tr>
<tr>
<td>B</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>B</td>
<td>50</td>
<td>25</td>
</tr>
</tbody>
</table>

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**SLIDES WITH TC COMPOSITE BUSHINGS**

<table>
<thead>
<tr>
<th>SLIDE SIZE</th>
<th>BORE SIZE (mm)</th>
<th>SHAFT SIZE (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>19</td>
<td>8</td>
</tr>
<tr>
<td>C</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>C</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>C</td>
<td>25</td>
<td>12</td>
</tr>
<tr>
<td>C</td>
<td>32</td>
<td>16</td>
</tr>
<tr>
<td>D</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>D</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>C</td>
<td>40</td>
<td>25</td>
</tr>
<tr>
<td>C</td>
<td>40</td>
<td>25</td>
</tr>
<tr>
<td>C</td>
<td>50</td>
<td>25</td>
</tr>
</tbody>
</table>

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**TOOL PLATE EXTENSION**

Additional distance between tool plate and bearing body in 1 mm increments. Leave blank if additional extension is not required. Minimum tool plate extension for all SK slides only with ISO cylinders is 50 mm. (If tool plate extension is required).

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**SLIDE OPTIONS**

- AE - Travel Adjustment and Shock Pads on extension*
- AR - Travel Adjustment and Shock Pads on retraction*
- BR - Shock Pads on retraction*
- BS - Shock Pads on extension for use with option `-GM` or `-GO` only**
- BT - Shock Pads on retraction for use with option `-GM` or `-GO` only**
- GG - Travel Adjustment and Shock Pads on extension with provisions for Proximity Switch mounting in both directions*
- GH - Travel Adjustment and Shock Pads on retraction with provisions for Proximity Switch mounting on retraction only**
- GI - Travel Adjustment and Shock Pads with provisions for Proximity Switch mounting in both directions**
- GM - Provisions for Shock Absorber mounting on extension**
- GN - Provisions for Shock Absorber mounting on retraction**
- GD - Provisions for Shock Absorber mounting on extension and retraction**
- JJ - Translational fit dowel holes (in both tool plate and housing)
- JB - Precision fit dowel holes (in both tool plate and housing)
- J1 - Corrosion resistant guide shafts (ends unpainted)

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**NOTES:**

1) BR and -GG options not available with tool plate extension.

2) *Shock pads come standard with the travel adjustment options and do not need to be specified separately when travel adjustment is ordered.

3) **Shock absorber ready options include shock absorber stop brackets mounted on the shaft and a stop collar on the opposite shaft.

4) Shock absorbers, proximity switches, and all mounting kits must be ordered separately.

5) Cushion and port controls are available on -DB and -PB options only (locations 1 & 5) on 3-position units.

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**WITH CYLINDER OPTIONS**

- DB - Cushion controls both directions (standard locations are 1 & 5) See note 5.
- DE - Cushion control extend only (standard in location 1)
- DR - Cushion control retract only (standard in location 5)
- E - Series 1750 Solid State Magnetic Piston (for size 1 only)
- H47 - Rodsk® cylinder with locking device adaptor (not available on size 1)
- LB - Imperial ports (metric ports standard) (see catalog for port sizes)
- M - Magnetic Piston for Series 1750 Reed Switches on size 1 and Series 6250 Reed Switches on all other sizes (2 through 6)
- PB - Port controls both directions (standard locations are 1 & 5) See note 5. (not available on size 1) (see catalog for port sizes)
- PE - Port controls extend only (standard in location 1) (not available on size 1)
- PR - Port control retract only (standard in location 5) (not available on size 1)
- SL - Slide: Port location (standard locations are 1 & 5) (not available on 3-pos. units)

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**SLIDES WITH PROXIMITY SWITCH MOUNTING**

- 3 POSITION DETAIL
  - MID-POSITION TRAVEL
    - Specify for 3 position units.
    - Travel from retract position 1 to mid-position 2.

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**For additional technical assistance, call:**

P.O. Box 9070, Fort Wayne, IN 46899

1-800-624-8511
GENERAL INFORMATION: SERIES SK & SL SLIDES

PRESSURE RATINGS
All Series SK and SL Slides with PHD Cylinders have a maximum working pressure of 10 bar and are for pneumatic use only.

BREAKAWAY
Units with linear ball bushings will have 1.4 bar breakaway with zero applied load. Units with TC bushings see product sizing catalog.

OPERATING TEMPERATURES
Standard Series SK and SL Slides are recommended for use in temperatures from –29° to +82°C. Consult PHD for temperatures beyond this range.

LUBRICATION
All slides are permanently lubricated at the factory for service under normal conditions. PHD Cylinders can be used with un lubricated air. Life can be extended by periodic lubrication of the shafts and the use of lubricated air with the cylinders. Silicon-based lubricants should not be used with PHD’s TC bushings.

MAXIMUM SLIDE VELOCITY
Maximum velocity for Series SK and SL slides with PHD Cylinders is 2 m/s on all sizes. The above figures are based on optimum operating conditions and no load with 6 bar working pressure. Consult ISO cylinder suppliers for units with -H11 and -H12 options. Many factors affect slide velocity such as air line size, valve port size, and variations of slide manufacturing tolerances. Contact PHD customer service for assistance with high velocity applications.

PORT CONTROL AND CUSHION ADJUSTMENT POSITIONS

Port Control™ and cushion needles are located in position number 1 (top surface) on the cylinders. Positions may vary if optional port positions are specified. Port Controls are used to adjust the slide’s speed and should be adjusted prior to adjusting the cushions. Clockwise adjustment provides a slower slide speed while counterclockwise adjustment provides a faster speed.

Cushion adjustments control the rate of deceleration. Clockwise adjustment increases the cushion effect while counterclockwise adjustment decreases the cushion effect.

Do not loosen the hex needle retainers. The adjustment needles are self-locking and require no locking nut to retain position.

CUSTOM PRODUCTS
A model number “ML-xxxx” indicates the unit is a custom product. Contact your local distributor or PHD, Inc. for a complete product description.

TOTAL TRAVEL LENGTH
Tolerance on nominal travel length is ±2.5 mm/-0 mm. Tolerance on 3-position travel length is ±1 mm.

TRAVEL ADJUSTMENT STOP COLLARS OPTIONS -AR & -AE
Adjust one collar and tighten to proper torque (see chart below). Then adjust other collar so that both collars and pads make contact evenly.

-AR TRAVEL ADJUSTMENT AND SHOCK PADS ON RETRACTION

-AE TRAVEL ADJUSTMENT AND SHOCK PADS ON EXTENSION

<table>
<thead>
<tr>
<th>COLLAR SCREW FOR MODEL NO.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>sxB, sxD</td>
<td>4.6 [40]</td>
<td>4.6 [40]</td>
<td>8.5 [75]</td>
<td>15.8 [140]</td>
<td>15.8 [140]</td>
<td>15.8 [140]</td>
</tr>
<tr>
<td>sxE</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>39.6 [350]</td>
</tr>
</tbody>
</table>

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Phone (260) 747-6151 • Fax (260) 747-6754
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