

# SD, SE



## VERSATILE THRUSTER PNEUMATIC SLIDE

### Major Benefits

- Offered in short or long body
- Can be ordered with standard or oversize shafts
- Standard dowel pin holes for ease of mounting
- Several switch options
- 5 bore sizes
- Versatile unit with over 45 standard options



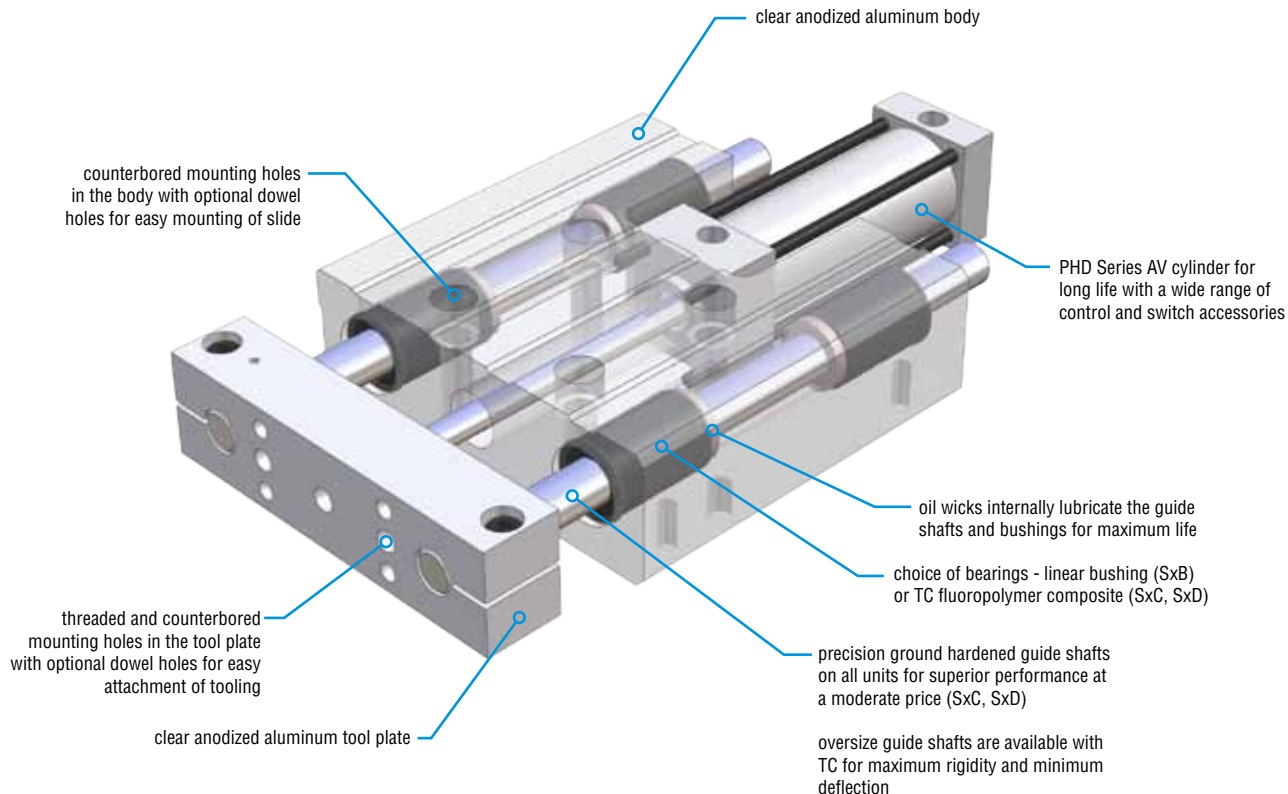
**SERIES SD**

*The SD version is compact and ideal for short travel in horizontal or vertical application, where slide length and weight are critical.*



**SERIES SE**

*The SE version has a greater distance between bushings for longer slide travels and greater shaft stability.*



SDSE

## BASIC MODEL

### TO ORDER SPECIFY:

Product, Series, Type, Three Position, Slide Size, Slide Travel, Mid-Position Travel, Tool Plate Extension, and Options.

**PRODUCT**  
S - Slide

**SERIES**  
D - Short Body  
E - Long Body

**THREE POSITION UNIT**  
(specify only if needed)

**TOOL PLATE EXTENSION**  
Additional distance between tool plate and bearing block in 1" increments. Leave blank if no additional extension is required. (specify only if needed)

S
E
B
E
25
x
2-1/4
x
1-1/8
x
1

| SLIDES WITH TC COMPOSITE BUSHINGS |            |                   |               |                       |
|-----------------------------------|------------|-------------------|---------------|-----------------------|
| TYPE                              | SLIDE SIZE | SHAFT SIZE DIA.   | CYLINDER BORE | EFF. AREA (EXTENSION) |
| C                                 | 22         | 3/8"              | 3/4"          | .44                   |
| D                                 | 22         | 1/2" (oversize)   | 3/4"          | .44                   |
| C                                 | 23         | 1/2"              | 1"            | .78                   |
| D                                 | 23         | 5/8" (oversize)   | 1"            | .78                   |
| C                                 | 24         | 5/8"              | 1-1/8"        | .99                   |
| D                                 | 24         | 3/4" (oversize)   | 1-1/8"        | .99                   |
| C                                 | 25         | 3/4"              | 1-3/8"        | 1.48                  |
| D                                 | 25         | 1" (oversize)     | 1-3/8"        | 1.48                  |
| C                                 | 26         | 1"                | 2"            | 3.14                  |
| D                                 | 26         | 1-3/8" (oversize) | 2"            | 3.14                  |

| SLIDES WITH LINEAR BALL BUSHINGS |            |                 |               |                       |
|----------------------------------|------------|-----------------|---------------|-----------------------|
| TYPE                             | SLIDE SIZE | SHAFT SIZE DIA. | CYLINDER BORE | EFF. AREA (EXTENSION) |
| B                                | 22         | 3/8"            | 3/4"          | .44                   |
| B                                | 23         | 1/2"            | 1"            | .78                   |
| B                                | 24         | 5/8"            | 1-1/8"        | .99                   |
| B                                | 25         | 3/4"            | 1-3/8"        | 1.48                  |
| B                                | 26         | 1"              | 2"            | 3.14                  |

**SLIDE TRAVEL (in)**  

| SIZE           | SERIES D |
|----------------|----------|
| 22 - 1/4 to 12 |          |
| 23 - 1/4 to 14 |          |
| 24 - 1/4 to 18 |          |
| 25 - 1/4 to 18 |          |
| 26 - 1/4 to 22 |          |

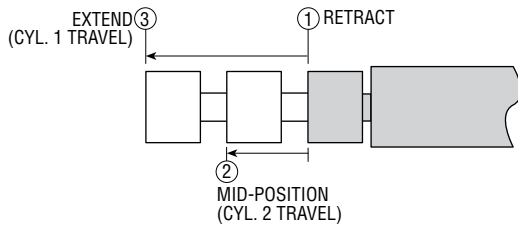
  

| SIZE           | SERIES E |
|----------------|----------|
| 22 - 1/4 to 16 |          |
| 23 - 1/4 to 18 |          |
| 24 - 1/4 to 24 |          |
| 25 - 1/4 to 24 |          |
| 26 - 1/4 to 28 |          |

Available in 1/4" increments.  
Consult factory for longer travel lengths.

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

### 3 POSITION DETAIL



**!** Options may affect unit length. See dimensional pages and option information details.

**📖** Refer to this product's online catalog in the product section for complete information including related dimensions and additional specifications. See link at bottom of this page.



### CAD & Sizing Assistance

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# ORDERING DATA: SERIES SD & SE SLIDES

## ADDITIONAL OPTIONS

### SHOCK ABSORBER OPTIONS

- GM - Provisions for Shock Absorber mounting on extension\*
- GN - Provisions for Shock Absorber mounting on retraction\*
- GO - Provisions for Shock Absorber mounting on extension and retraction\*
- G2 - Shock Absorber and 8 mm Proximity Switch Ready on extension and retraction\*
- G3 - Shock Absorber and 8 mm Proximity Switch Ready on extension\*
- G4 - Shock Absorber and 8 mm Proximity Switch Ready on retraction\*
- G12 - Shock Absorber and 12 mm Proximity Switch Ready on extension and retraction\*
- G13 - Shock Absorber and 12 mm Proximity Switch Ready on extension\*
- G14 - Shock Absorber and 12 mm Proximity Switch Ready on retraction\*
- BK - HushStop on extension for use with appropriate shock absorber option -Gx
- BL - HushStop on retraction for use with appropriate shock absorber option -G x
- BS - Shock Pads on extension for use with option -GM, -GO, -G2, -G3, -G12, or -G13 only\*
- BT - Shock Pads on retraction for use with option -GN, -GO, -G2, -G4, -G12, or -G14 only\*



### OPTIONS

- PB - Port Controls® on extension and retraction\*
- DB - Adjustable Cushions on extension and retraction\*
- U7 - Ports and control needles in position 3 (180° from standard)
- E - Solid State Magnetic Piston
- M - Reed Switch Magnetic Piston
- BR - Shock Pads on retraction\*
- BJ - HushStop on retraction\*
- GV - Side mounting holes in position 2
- H1 - Slide only, no cylinder
- H4 - Replacement cylinder only (see note 7)
- H47 - Rodlok unit preassembled (see note 7)
- J1 - Close fit dowel pin holes in the tool plate
- J2 - Normal fit dowel pin holes in the tool plate
- J6 - Normal fit dowel pin holes in the body. Close fit dowel pin holes are standard in the body.
- L10 - Oversize ports (sizes 25 & 26 only)
- Q1 - Corrosion resistant guide shafts
- V1 - Fluoro-Elastomer Seals
- Z1 - Electroless nickel plate on all external ferrous parts excluding piston rod, rod end, and guide shafts

### SHOCK PADS

STANDARD HUSHSTOP

- |    |     |   |
|----|-----|---|
| AR | AT  | - Travel Adjustment and Shock Pads on retraction*   |
| AE | AS  | - Travel Adjustment and Shock Pads on extension*  |
| GG | G22 | - Travel Adjustment and Shock Pads on extension with provisions for Proximity Switch mounting in both directions* |
| GH | G23 | - Travel Adjustment and Shock Pads on retraction with provisions for Proximity Switch mounting on retract only*   |
| GI | G24 | - Travel Adjustment and Shock Pads with provisions for Proximity Switch mounting in both directions*              |

### GENERAL SLIDE OPTIONS

#### NOTES:

- 1) Shock absorbers must be ordered separately. See option pages. Shock mounting brackets must be ordered separately for -GM, -GN, and -GO option.
- 2) Provisions for shock absorber mounting options include shock stops mounted on the shaft, a stop collar on the opposite shaft, and threaded holes in the slide body for mounting the shock bracket.
- 3) For stop and travel adjustment kits see option pages or chart below.
- 4) BJ, -BR and -GG options not available with tool plate extension.
- 5) Proximity switches and brackets must be ordered separately for -GG, -GH, -GI, -GM, -GN, or -GO options. See option pages and the Switches and Sensors section.
- 6) For HushStop options (AS, AT, BJ, BK, BL, G22, G23, & G24) stop locations may vary due to compression of softer shock pad.
- 7) Rodlok must be ordered separately when a replacement cylinder -H4 is ordered with an -H47 unit.
- 8) \*Caution: Unit dimensions are affected by these options. You must allow for these changes. See option drawings for complete details. Shock pads come standard with the travel adjustment options and do not need to be specified separately when travel adjustment is ordered.

### PROXIMITY SWITCHES

| PART NO.     | DESCRIPTION   |
|--------------|---|
| 51422-005-02 | 8 mm Inductive Proximity Switch NPN (Sink) with 2 meter Cable       |
| 51422-006-02 | 8 mm Inductive Proximity Switch PNP (Source) with 2 meter Cable     |
| 15561-001    | 12 mm Inductive Proximity Switch NPN (Sink) with 3 meter cable      |
| 15561-002    | 12 mm Inductive Proximity Switch PNP (Source) with 3 meter cable    |
| 15561-003    | 12 mm Inductive Proximity Switch VAC Solid State with 3 meter cable |

See Switches and Sensors section for switch details. Switches and brackets are ordered separately.

### PROXIMITY SWITCH BRACKET AND TARGET KITS

| SLIDE SIZE | SWITCH SIZE |            |
|------------|-------------|------------|
|            | 8 mm        | 12 mm      |
| 22         | 53101-01-1  | 63998-01-1 |
| 23         | 53101-01-1  | 63998-01-1 |
| 24         | 53101-02-1  | 63998-02-1 |
| 25         | 53101-02-1  | 63998-02-1 |
| 26         | 53101-03-1  | 63998-03-1 |

Kit contains all components for standard non-Z1 unit for one direction only.

# ENGINEERING DATA: SERIES SD & SE SLIDES

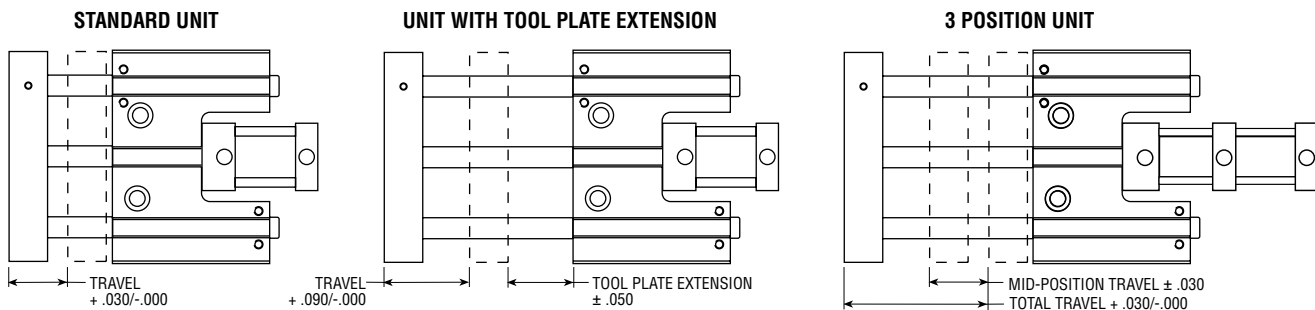
| SPECIFICATIONS        | SERIES SD/SE   |
|-----------------------|--|
| OPERATING PRESSURE    | 20 psi min to 150 psi max [1.4 bar min to 10 bar max] air  |
| OPERATING TEMPERATURE | -20° to + 180°F [-29° to + 82°C]                           |
| TRAVEL TOLERANCE      | Nominal travel, +.030/- .000 in [+ .76/- 0.0 mm]           |
| TOOL PLATE EXTENSION  | + .090/- .000 [+2.3/-0.0 mm]                               |
| 3-POSITION            | Mid-location ± .030 [0.76 mm]                              |
| REPEATABILITY         | ± .001" [± .025 mm] of original position                   |
| VELOCITY              |  |
| W/OUT PORT CONTROLS   | 50 in/sec [1.3 m/sec] max., zero load at 100 psi [6.9 bar] |
| WITH OPTION PB        | 16 in/sec [.4 m/sec] max., zero load at 100 psi [6.9 bar]  |
| LUBRICATION           | Factory lubricated for life                                |
| MAINTENANCE           | Field repairable   |

SDSE

| SIZE | TYPE | SHAFT DIAMETER |      | BORE DIAMETER |      | EFFECTIVE AREA |                 | SERIES SD BASE WEIGHT |       | SERIES SE BASE WEIGHT |      | TRAVEL WEIGHT ADDER |       | TYPICAL DYNAMIC LOAD |    |     |
|------|------|----------------|------|---------------|------|----------------|-----------------|-----------------------|-------|-----------------------|------|---------------------|-------|----------------------|----|-----|
|      |      | in             | mm   | in            | mm   | DIRECTION      | in <sup>2</sup> | mm <sup>2</sup>       | lb    | kg                    | lb   | kg                  | lb/in | kg/mm                | lb | N   |
| 22   | B    | .375           | 9.5  | .750          | 19.1 | EXTEND         | .44             | 285                   | 1.59  | .72                   | 2.38 | 1.08                | .10   | .002                 | 8  | 36  |
|      | C    | .375           | 9.5  |               |      | RETRACT        | .39             | 254                   | 1.59  | .72                   | 2.38 | 1.08                | .10   | .002                 |    |     |
|      | D    | .500           | 12.7 |               |      |                |                 |                       | 1.66  | .75                   | 2.55 | 1.16                | .15   | .003                 |    |     |
| 23   | B    | .500           | 12.7 | 1.000         | 25.4 | EXTEND         | .79             | 506                   | 3.25  | 1.47                  | 4.6  | 2.10                | .18   | .003                 | 15 | 67  |
|      | C    | .500           | 12.7 |               |      | RETRACT        | .71             | 457                   | 3.25  | 1.47                  | 4.6  | 2.10                | .18   | .003                 |    |     |
|      | D    | .625           | 15.9 |               |      |                |                 |                       | 3.27  | 1.48                  | 4.8  | 2.17                | .25   | .004                 |    |     |
| 24   | B    | .625           | 15.9 | 1.125         | 28.6 | EXTEND         | 1.00            | 642                   | 4.70  | 2.13                  | 6.4  | 2.88                | .28   | .005                 | 25 | 111 |
|      | C    | .625           | 15.9 |               |      | RETRACT        | .88             | 570                   | 4.70  | 2.13                  | 6.4  | 2.88                | .28   | .005                 |    |     |
|      | D    | .750           | 19.1 |               |      |                |                 |                       | 4.75  | 2.15                  | 6.5  | 2.95                | .35   | .006                 |    |     |
| 25   | B    | .750           | 19.1 | 1.375         | 34.9 | EXTEND         | 1.49            | 958                   | 8.57  | 3.89                  | 11.7 | 5.31                | .42   | .007                 | 35 | 156 |
|      | C    | .750           | 19.1 |               |      | RETRACT        | 1.29            | 832                   | 8.57  | 3.89                  | 11.7 | 5.31                | .42   | .007                 |    |     |
|      | D    | 1.000          | 25.4 |               |      |                |                 |                       | 8.74  | 3.96                  | 12.3 | 5.58                | .62   | .011                 |    |     |
| 26   | B    | 1.000          | 25.4 | 2.000         | 50.8 | EXTEND         | 3.14            | 2026                  | 16.57 | 7.52                  | 23.7 | 10.73               | .70   | .012                 | 50 | 223 |
|      | C    | 1.000          | 25.4 |               |      | RETRACT        | 2.84            | 1829                  | 16.57 | 7.52                  | 23.7 | 10.73               | .70   | .012                 |    |     |
|      | D    | 1.375          | 34.9 |               |      |                |                 |                       | 17.55 | 7.96                  | 25.8 | 11.72               | 1.07  | .019                 |    |     |

**NOTE:** Thrust capacity, allowable mass and dynamic moment capacity must be considered when selecting a slide. Refer to sizing software or the product technical manual for complete sizing and selection information.

## TOLERANCES



## CYLINDER FORCE CALCULATIONS

IMPERIAL      METRIC  
 $F = P \times A$        $F = 0.1 \times P \times A$

F = Cylinder Force      lbs      N  
P = Operating Pressure      psi      bar  
A = Effective Area      in<sup>2</sup>      mm<sup>2</sup>

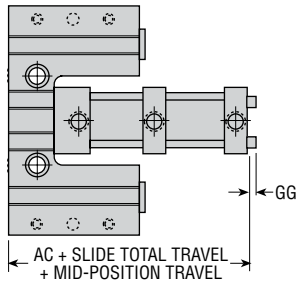
(Extend or Retract)



## Sizing & Application Assistance

Use PHD's free online Product Sizing Application or view the Product Sizing Catalog at: [www.phdinc.com/apps/sizing](http://www.phdinc.com/apps/sizing)

# DIMENSIONS: SERIES SD SLIDES



**3 POSITION DETAIL**



**CAD & Sizing Assistance**  
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**OPTIONAL CC DOWEL PIN HOLES**

| SLIDE MODEL | OPTION J1/**    | OPTION J2/J6    |
|-------------|-----------------|-----------------|
|             | CLOSE FIT       | NORMAL FIT      |
| Sxx22       | .1884 x .250 DP | .1913 x .250 DP |
| Sxx23       | .2509 x .312 DP | .2520 x .312 DP |
| Sxx24       | .2509 x .312 DP | .2520 x .312 DP |
| Sxx25       | .3759 x .470 DP | .3770 x .470 DP |
| Sxx26       | .3759 x .500 DP | .3770 x .500 DP |

**3 POSITION TRAVEL OPTION**

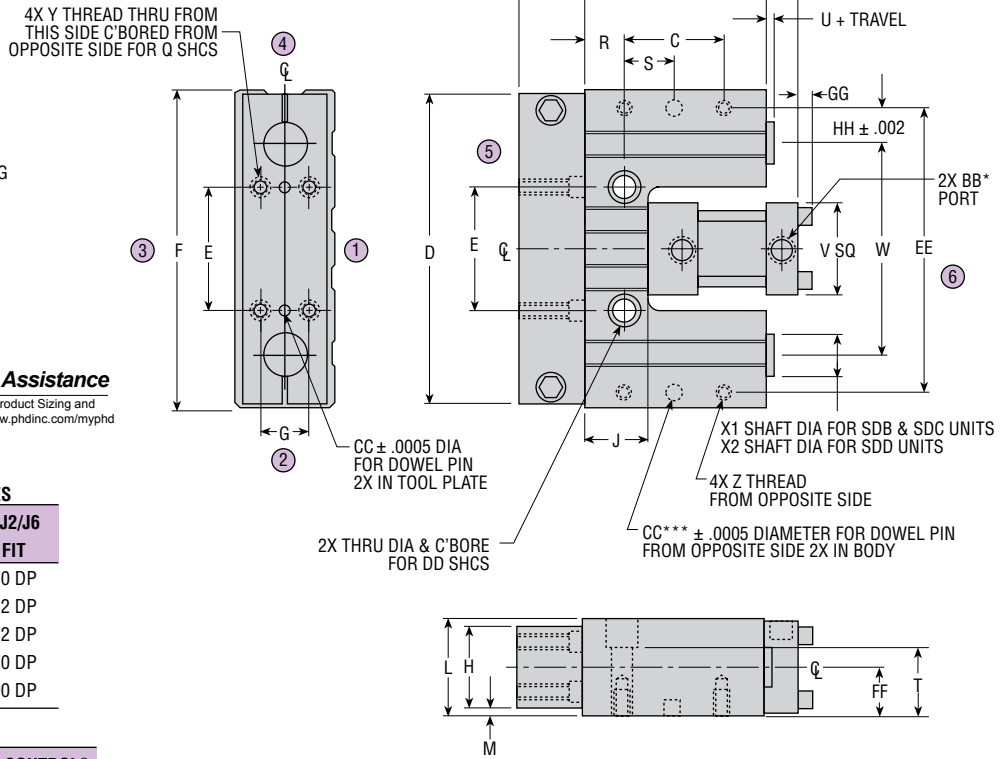
| SLIDE MODEL | *FOR EACH |         | *PORT CONTROL® |
|-------------|-----------|---------|----------------|
|             | AC        | CUSHION | PB             |
| SDxE22      | 5.102     | .500    | .250           |
| SDxE23      | 5.292     | .500    | .250           |
| SDxE24      | 5.792     | .500    | .250           |
| SDxE25      | 6.894     | .875    | —              |
| SDxE26      | 8.587     | —       | —              |

**OPTION ADDERS**

| SIZE | PB    | DB    | BR/BJ | AR/AT | AE/AS | GG/GN/G22 | GH/GM/G23 | GI/GO/G24 |
|------|-------|-------|-------|-------|-------|-----------|-----------|-----------|
| 22   | .250  | 1.000 | .250  | .750  | .750  | .750      | .750      | 1.500     |
| 23   | .250  | 1.000 | .250  | .750  | .750  | .750      | .750      | 1.500     |
| 24   | .250  | 1.000 | .250  | .750  | .750  | .750      | .750      | 1.500     |
| 25   | 0.000 | 1.750 | .250  | .750  | .750  | .750      | .750      | 1.500     |
| 26   | 0.000 | 0.000 | .250  | .875  | .875  | .875      | .875      | 1.750     |

| BORE SIZE | LETTER SIZE | DIMENSION |      |       |       |       |       |       |       |       |       |      |       |                |       |       |       |      |
|-----------|-------------|-----------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|----------------|-------|-------|-------|------|
|           |             | A         | B    | C     | D     | E**   | F     | G     | H     | J     | L     | M    | O     | Q              | R     | S     | T     | U    |
| 22        | 3/4         | 2.390     | .680 | 1.375 | 3.800 | 1.625 | 3.880 | .580  | 1.000 | .790  | 1.200 | .100 | .700  | #10 x .215 DP  | .500  | .500  | .825  | .160 |
| 23        | 1           | 2.880     | .380 | 1.500 | 4.720 | 1.875 | 4.820 | .750  | 1.250 | .980  | 1.500 | .125 | .950  | #10 x .215 DP  | .625  | .750  | 1.045 | .045 |
| 24        | 1-1/8       | 3.390     | .370 | 1.750 | 5.400 | 2.000 | 5.500 | .900  | 1.500 | 1.480 | 1.700 | .100 | .950  | 1/4 x .275 DP  | .750  | .875  | 1.260 | .035 |
| 25        | 1-3/8       | 3.650     | .704 | 1.750 | 6.450 | 2.375 | 6.550 | 1.300 | 2.000 | 1.500 | 2.200 | .100 | 1.200 | 5/16 x .338 DP | .875  | .875  | 1.542 | .025 |
| 26        | 2           | 5.000     | .346 | 3.000 | 8.375 | 3.125 | 8.500 | 1.625 | 2.500 | 1.700 | 2.750 | .125 | 1.450 | 3/8 x .400 DP  | 1.000 | 1.500 | 2.050 | .175 |

| SIZE | V     | W     | X1    | X2    | Y       | Z               | AB    | BB       | CC***          | DD   | EE**  | FF    | GG   | HH    |
|------|-------|-------|-------|-------|---------|-----------------|-------|----------|----------------|------|-------|-------|------|-------|
| 22   | 1.000 | 2.625 | .375  | .500  | 1/4-20  | #10-24 x .37 DP | 3.116 | 1/8 NPT* | .1884 x .25 DP | 1/4  | 3.437 | .600  | —    | .406  |
| 23   | 1.375 | 3.250 | .500  | .625  | 1/4-20  | 1/4-20 x .40 DP | 3.306 | 1/8 NPT  | .2509 x .31 DP | 5/16 | 4.330 | .750  | —    | .540  |
| 24   | 1.500 | 3.625 | .625  | .750  | 5/16-18 | 1/4-20 x .50 DP | 3.806 | 1/8 NPT  | .2509 x .31 DP | 3/8  | 5.000 | .850  | —    | .688  |
| 25   | 1.875 | 4.250 | .750  | 1.000 | 3/8-16  | 3/8-16 x .69 DP | 4.354 | 1/8 NPT  | .3759 x .47 DP | 3/8  | 5.875 | 1.100 | .265 | .813  |
| 26   | 2.500 | 5.750 | 1.000 | 1.375 | 1/2-13  | 3/8-16 x .75 DP | 5.346 | 1/4 NPT  | .3759 x .50 DP | 1/2  | 7.750 | 1.375 | .322 | 1.000 |



**NOTES:**

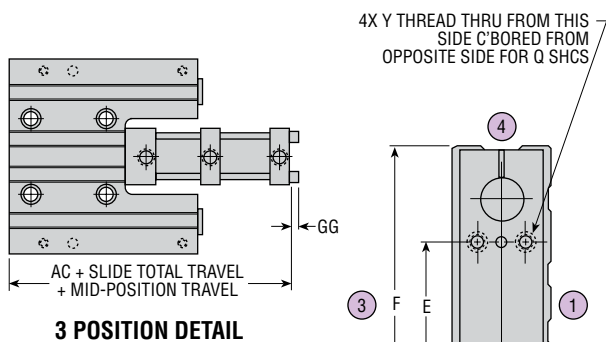
- FOR OPTIONS PB AND DB, ADD TO CYLINDER'S LENGTH (AFFECTS DIMENSIONS B, AB, AC)
- FOR OPTIONS BR, BJ, AR, AT, GN, G23 AND GH, ADD BETWEEN DIMENSIONS O AND AC, O AND AB
- FOR OPTIONS GM, AE, AS, AND GG, G22 ADD TO DIMENSION U
- FOR OPTIONS GO AND GI, ADD HALF BETWEEN DIMENSIONS O AND AC, O AND AB, AND HALF TO DIMENSION U
- SEE OPTION PAGES FOR DETAILED OPTION INFORMATION
- STROKE IS + .030/- .000
- ALL DIMENSIONS ARE CENTERED ON DESIGNATED CENTERLINE OF THE UNIT UNLESS OTHERWISE SPECIFIED
- PORT LOCATION FOR SDx26 IS NOT ON CENTERLINE
- \*PORT IS #10-32 WITH OPTION -PB ON SIZE 22
- \*\*TOLERANCE IS ± .0008 BETWEEN CLOSE FIT DOWEL PIN HOLES. TOLERANCE IS ± .001 BETWEEN NORMAL FIT DOWEL PIN HOLES
- \*\*\*CLOSE FIT DOWEL PINS ARE STANDARD IN BODY
- CIRCLED NUMBERS INDICATE POSITION

All dimensions are reference only unless specifically toleranced.

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# DIMENSIONS: SERIES SE SLIDES

SDSE



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### OPTIONAL CC DOWEL PIN HOLES

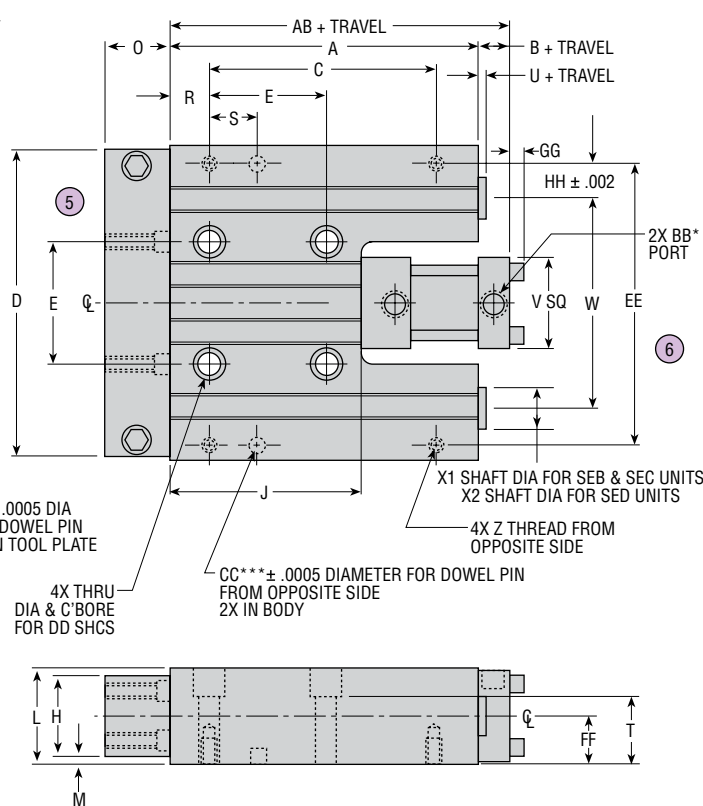
| SLIDE MODEL | OPTION J1/**    | OPTION J2/J6    |
|-------------|-----------------|-----------------|
|             | CLOSE FIT       | NORMAL FIT      |
| Sxx22       | .1884 x .250 DP | .1913 x .250 DP |
| Sxx23       | .2509 x .312 DP | .2520 x .312 DP |
| Sxx24       | .2509 x .312 DP | .2520 x .312 DP |
| Sxx25       | .3759 x .470 DP | .3770 x .470 DP |
| Sxx26       | .3759 x .500 DP | .3770 x .500 DP |

### 3 POSITION TRAVEL OPTION

| SLIDE MODEL | *FOR EACH *PORT CONTROL® |         |      |
|-------------|--------------------------|---------|------|
|             | AC                       | CUSHION | PB   |
| SExE22      | 6.852                    | .500    | .250 |
| SExE23      | 7.292                    | .500    | .250 |
| SExE24      | 7.542                    | .500    | .250 |
| SExE25      | 9.144                    | .875    | —    |
| SExE26      | 11.587                   | —       | —    |

### OPTION ADDERS

| SIZE | PB   | DB    | BR/BJ | AR/AT | AE/AS | GG/GN/G22 | GH/GM/G23 | GI/GO/G24 |
|------|------|-------|-------|-------|-------|-----------|-----------|-----------|
| 22   | .250 | 1.000 | .250  | .750  | .750  | .750      | .750      | 1.500     |
| 23   | .250 | 1.000 | .250  | .750  | .750  | .750      | .750      | 1.500     |
| 24   | .250 | 1.000 | .250  | .750  | .750  | .750      | .750      | 1.500     |
| 25   | .000 | 1.750 | .250  | .750  | .750  | .750      | .750      | 1.500     |
| 26   | .000 | .000  | .250  | .875  | .875  | .875      | .875      | 1.750     |



### NOTES:

- 1) FOR OPTIONS PB AND DB, ADD TO CYLINDER'S LENGTH (AFFECTS DIMENSIONS B, AB, AC)
- 2) FOR OPTIONS BR, BJ, AR, AT, GN, AND GH, G23 ADD BETWEEN DIMENSIONS O AND AC, O AND AB
- 3) FOR OPTIONS GM, AE, AS, AND GG, G22 ADD TO DIMENSION U
- 4) FOR OPTIONS GO AND GI, ADD HALF BETWEEN DIMENSIONS O AND AC, O AND AB, AND HALF TO DIMENSION U
- 5) SEE OPTION PAGES FOR DETAILED OPTION INFORMATION
- 6) STROKE IS + .030/- .000
- 7) ALL DIMENSIONS ARE CENTERED ON DESIGNATED CENTERLINE OF THE UNIT UNLESS OTHERWISE SPECIFIED
- 8) PORT LOCATION FOR SEx26 IS NOT ON CENTERLINE
- 9) \*PORT IS #10-32 WITH OPTION -PB ON SIZE 22
- 10)\*\*TOLERANCE IS ± .0008 BETWEEN CLOSE FIT DOWEL PIN HOLES, TOLERANCE IS ± .001 BETWEEN NORMAL FIT DOWEL PIN HOLES
- 11) \*\*\*CLOSE FIT DOWEL PINS ARE STANDARD IN BODY
- 12) CIRCLED NUMBERS INDICATE POSITION

| SIZE | BORE SIZE | LETTER DIMENSION |      |       |       |       |       |       |       |       |       |      |       |                |       |       |       |      |
|------|-----------|------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|----------------|-------|-------|-------|------|
|      |           | A                | B    | C     | D     | E**   | F     | G     | H     | J     | L     | M    | O     | Q              | R     | S     | T     | U    |
| 22   | 3/4       | 4.140            | .680 | 3.125 | 3.800 | 1.625 | 3.880 | .580  | 1.000 | 2.540 | 1.200 | .100 | .700  | #10 x .215 DP  | .500  | .500  | .825  | .160 |
| 23   | 1         | 4.770            | .490 | 3.500 | 4.720 | 1.875 | 4.820 | .750  | 1.250 | 2.980 | 1.500 | .125 | .950  | #10 x .215 DP  | .625  | .750  | 1.045 | .045 |
| 24   | 1-1/8     | 5.020            | .490 | 3.500 | 5.400 | 2.000 | 5.500 | .900  | 1.500 | 3.230 | 1.700 | .100 | .950  | 1/4 x .275 DP  | .750  | .875  | 1.260 | .035 |
| 25   | 1-3/8     | 5.770            | .834 | 4.000 | 6.450 | 2.375 | 6.550 | 1.300 | 2.000 | 3.750 | 2.200 | .100 | 1.200 | 5/16 x .338 DP | .875  | .875  | 1.542 | .025 |
| 26   | 2         | 8.000            | .346 | 6.000 | 8.375 | 3.125 | 8.500 | 1.625 | 2.500 | 4.700 | 2.750 | .125 | 1.450 | 3/8 x .400 DP  | 1.000 | 1.500 | 2.050 | .175 |

| SIZE | V     | W     | X1    | X2    | Y                       | Z | AB    | BB       | CC***          | DD   | EE**  | FF    | GG   | HH    |
|------|-------|-------|-------|-------|-------------------------|---|-------|----------|----------------|------|-------|-------|------|-------|
| 22   | 1.000 | 2.625 | .375  | .500  | 1/4-20#10-24 x .37 DP   |   | 4.866 | 1/8 NPT* | .1884 x .25 DP | 1/4  | 3.437 | .600  | —    | .406  |
| 23   | 1.375 | 3.250 | .500  | .625  | 1/4-20#1/4-20 x .40 DP  |   | 5.306 | 1/8 NPT  | .2509 x .31 DP | 5/16 | 4.330 | .750  | —    | .540  |
| 24   | 1.500 | 3.625 | .625  | .750  | 5/16-18#1/4-20 x .50 DP |   | 5.556 | 1/8 NPT  | .2509 x .31 DP | 3/8  | 5.000 | .850  | —    | .688  |
| 25   | 1.875 | 4.250 | .750  | 1.000 | 3/8-16#3/8-16 x .69 DP  |   | 6.604 | 1/8 NPT  | .3759 x .47 DP | 3/8  | 5.875 | 1.100 | .265 | .813  |
| 26   | 2.500 | 5.750 | 1.000 | 1.375 | 1/2-13#3/8-16 x .75 DP  |   | 8.346 | 1/4 NPT  | .3759 x .50 DP | 1/2  | 7.750 | 1.375 | .322 | 1.000 |



# OPTIONS: SERIES SD & SE SLIDES

## **PB** PORT CONTROL®

The exclusive PHD Port Control®, based on the “meter-out” principle, features an adjustable needle and check seal. Both are built into the cylinder head and cap and are used to control the speed of the slide over its entire travel.

**NOTE:** Port Controls add 1/4" to the cylinder length (affects dimensions AB, AC, and B) on sizes 22, 23, and 24.

## **E** MAGNET FOR PHD SOLID STATE SWITCHES

This option equips the cylinder with a magnetic band on the piston for use with PHD 1750 Solid State Switches.

## **M** MAGNET FOR PHD REED SWITCHES

This option equips the cylinder with a magnetic band on the piston for use with PHD 1750 Reed Switches.

See Switches Section at [phdinc.com](http://phdinc.com) for specific Solid State and Reed Switch information. **SWITCHES MUST BE ORDERED SEPARATELY.**

## **BJ** HushStop SHOCK PADS ON RETRACTION

This option provides composite shock pads on retraction only, eliminating metal-to-metal contact as the tool plate reaches the slide body. This option, quieter than the BR option, greatly reduces noise and shock upon slide retraction. Not available with tool plate extension. Due to the composite shock pads, stop locations may vary. For close tolerance stop locations, use BR option.

## **AR** TRAVEL ADJUSTMENT AND SHOCK PADS ON RETRACTION

This option provides both travel adjustment stop collars and polyurethane shock pads on retraction only. The travel adjustment stop collars provide infinite adjustment while the shock pads eliminate metal-to-metal contact, thereby quieting the unit.

## **AE** TRAVEL ADJUSTMENT AND SHOCK PADS ON EXTENSION

This option provides both travel adjustment stop collars and polyurethane shock pads on extension only. The travel adjustment stop collars provide infinite adjustment while the shock pads eliminate metal-to-metal contact, thereby quieting the unit.

## **U7** PORTS AND CONTROL NEEDLE IN POSITION 3

This option provides for the ports, Port Control®, and cushions to be in position 3, or underside of the unit (180° from standard).

## **DB** ADJUSTABLE CUSHIONS

PHD Cushions are designed for smooth deceleration at each end of travel. When the cushion is activated, the remaining volume in the cylinder must exhaust past an adjustable needle which controls the amount of deceleration. The wide adjustment range makes the cushion ideal for end of travel shock reduction. Cushion needles are located on the same side as the Port Control® needles for easy access and adjustment.

**NOTE:** Cushions add to the cylinder length (affects dimensions AB, AC, and B) add 1.000" on sizes 22, 23, and 24; and 1.750" on size 25.

## **L10** OVERSIZED PORTS (available on sizes 25 & 26 only)

This option provides an oversized port on the head and cap of the cylinder for size 25 and 26. This will then allow ports to match appropriate sized NFPA cylinder standards.

Size 25 ports become 1/4 NPT instead of 1/8 NPT. Size 26 ports become 3/8 NPT instead of 1/4 NPT. Ports will remain in standard port locations.

## **BR** SHOCK PADS ON RETRACTION

This option provides polyurethane shock pads on retraction only, eliminating metal-to-metal contact as the tool plate reaches the slide body. This option greatly reduces noise and shock upon slide retraction. Not available with tool plate extension.

## **AT** TRAVEL ADJUSTMENT AND HushStop SHOCK PADS ON RETRACTION

This option, quieter than the AR option, provides both travel adjustment stop collars and composite shock pads on retraction only. The travel adjustment stop collars provide infinite adjustment while the shock pads eliminate metal-to-metal contact, thereby quieting the unit. Due to the composite shock pads, stop locations may vary. For close tolerance stop locations, use the AR option.

## **AS** TRAVEL ADJUSTMENT AND HushStop SHOCK PADS ON EXTENSION

This option, quieter than the AE option, provides both travel adjustment stop collars and composite shock pads on extension only. The travel adjustment stop collars provide infinite adjustment while the shock pads eliminate metal-to-metal contact, thereby quieting the unit. Due to the composite shock pads, stop locations may vary. For close tolerance stop locations, use the AE option.



Options may affect unit length. See dimensional pages and option information details.



Refer to this product's online catalog in the product section for complete information including related dimensions and additional specifications. See link at bottom of this page.

## **G22** TRAVEL ADJUSTMENT AND HushStop SHOCK PADS ON EXTENSION WITH PROVISIONS FOR PROXIMITY SWITCH MOUNTING IN BOTH DIRECTIONS

This option, quieter than the GG option, provides both travel adjustment and composite shock pads on extension; and provisions for mounting of proximity switch targets and brackets on both ends. For close tolerance stop locations, use the GG option.

## **G23** TRAVEL ADJUSTMENT AND HushStop SHOCK PADS ON RETRACTION WITH PROVISIONS FOR PROXIMITY SWITCH MOUNTING ON RETRACTION

This option, quieter than the GH option, provides both travel adjustment and composite shock pads on retraction and provisions for mounting of proximity switch targets and brackets in the retraction direction only. For close tolerance stop locations, use the GH option.

## **G24** TRAVEL ADJUSTMENTS, HushStop SHOCK PADS, AND PROVISIONS FOR PROXIMITY SWITCHES IN BOTH DIRECTIONS

This option, quieter than the GI option, provides both travel adjustment and composite shock pads in both directions and provisions for mounting of proximity switch targets and brackets on both ends. For close tolerance stop locations, use the GI option.

## **Q1** CORROSION RESISTANT GUIDE SHAFTS

Extremely hard corrosion-resistant coating on the guide shafts for use in applications where moisture may corrode hardened ground shafts. End faces of the shafts remain uncoated. Consult PHD for fully coated shafts.

## **GG** TRAVEL ADJUSTMENT AND SHOCK PADS ON EXTENSION WITH PROVISIONS FOR PROXIMITY SWITCH MOUNTING IN BOTH DIRECTIONS

This option provides both travel adjustment and polyurethane shock pads on extension; and provisions for mounting of proximity switch targets and brackets on both ends. Not available with tool plate extension. With tool plate extension use GH option.

## **GH** TRAVEL ADJUSTMENT AND SHOCK PADS ON RETRACTION WITH PROVISIONS FOR PROXIMITY SWITCH MOUNTING ON RETRACTION

This option provides both travel adjustment and polyurethane shock pads on retraction and provisions for mounting of proximity switch targets and brackets in the retraction direction only.

## **GI** TRAVEL ADJUSTMENTS, SHOCK PADS, AND PROVISIONS FOR PROXIMITY SWITCHES IN BOTH DIRECTIONS

This option provides both travel adjustment and polyurethane shock pads in both directions and provisions for mounting of proximity switch targets and brackets on both ends.

## **V1** FLUORO-ELASTOMER SEALS

Fluoro-Elastomer seals are available for seal compatibility with certain fluids. Seal compatibility should be checked with the fluid manufacturer for proper application. Consult PHD for high temperature applications.

## **Z1** ELECTROLESS NICKEL PLATING

This option provides electroless nickel plating on all externally exposed ferrous parts except the guide shafts and cylinder rod end. This optional plating can be used for protecting the slide from severe or corrosive environments. The guide shafts can be made corrosion-resistant by specifying the -Q1 shaft option.

**NOTE:** Shock absorbers are not plated with -Z1 option.



Options may affect unit length. See dimensional pages and option information details.



Refer to this product's online catalog in the product section for complete information including related dimensions and additional specifications. See link at bottom of this page.



## **GM** PROVISIONS FOR SHOCK ABSORBER MOUNTING ON EXTENSION

This option provides for mounting a bracket for a shock absorber in the extend direction. This includes mounting holes in the slide body, a shock stop on one shaft, and a stop collar on the other shaft. This arrangement allows the shock absorber to double as a travel adjustment in the extension direction.

Shock stop and mounting bracket are supplied ready for proximity switch bracket and target mounting.

## **GO** PROVISIONS FOR SHOCK ABSORBER MOUNTING ON EXTENSION AND RETRACTION

This option provides for mounting brackets for shock absorbers in both the extend and retract direction. This includes two sets of mounting holes in the slide body, shock stops mounted on the shafts in each direction, and stop collars mounted on the opposite shafts. This arrangement allows the shock absorbers to double as travel adjustments in both directions.

Shock stops and brackets are supplied ready for proximity switch bracket and target mounting.

## **G3** SHOCK ABSORBER & PROXIMITY SWITCH READY ON EXTENSION

### **G13**

This option provides mounting brackets for a shock absorber and proximity switch on the extension only. This includes mounting brackets for both shock absorber and proximity switch, a proximity target and mounting hardware, with a stop collar and stop on the shafts. This arrangement allows the shock absorber to double as a travel adjustment in the extension direction.

G3 = 8 mm Proximity Switch

G13 = 12 mm Proximity Switch

## **GN** PROVISIONS FOR SHOCK ABSORBER MOUNTING ON RETRACTION

This option provides for mounting a bracket for a shock absorber in the retract direction. This includes mounting holes in the slide body, a shock stop on one shaft, and a stop collar on the other shaft. This arrangement allows the shock absorber to double as a travel adjustment in the retraction direction.

Shock stop and mounting bracket are supplied ready for proximity switch bracket and target mounting.

## **G2** SHOCK ABSORBER AND PROXIMITY SWITCH READY ON EXTENSION AND RETRACTION

### **G12**

This option provides mounting brackets for shock absorbers and proximity switches in both directions. This includes mounting brackets for both shock absorbers and proximity switches, proximity targets, and mounting hardware with stop collars and stops mounted on the shafts. This arrangement allows the shock absorbers to double as travel adjustments in both directions.

G2 = 8 mm proximity switch

G12 = 12 mm proximity switch

## **G4** SHOCK ABSORBER & PROXIMITY SWITCH READY ON RETRACTION

### **G14**

This option provides mounting brackets for a shock absorber and proximity switch on the retraction only. This includes mounting brackets for both shock absorber and proximity switch, shaft, a proximity target and mounting hardware, with a stop collar and stop on the other shafts. This arrangement allows the shock absorber to double as a travel adjustment in the retract direction.

G4 = 8 mm Proximity Switch

G14 = 12 mm Proximity Switch

**The shock absorber and shock mounting kit must be ordered separately.**



Options may affect unit length. See dimensional pages and option information details.



Refer to this product's online catalog in the product section for complete information including related dimensions and additional specifications. See link at bottom of this page.

# OPTIONS: SERIES SD & SE SLIDES

SDSE

## BK HushStop SHOCK PADS ON EXTENSION

The -BK option adds composite shock pads on extension to the -GM, -GO, -G2, -G3, -G12, or -G13 shock absorber option. The shock pads are assembled between the shock stop (stop collar) and the slide body. The purpose of this option, quieter than the -BS option, is to complement the shock absorber by eliminating metal to metal contact at the end of slide extension. Shock pads do not affect length adders for shock absorber options.

Due to the composite shock pads, stop locations may vary. For close tolerance stop locations, use the -BS option.

## BS SHOCK PADS ON EXTENSION

The -BS option adds shock pads on extension to the -GM, -GO, -G2, -G3, -G12, or -G13 shock absorber option. The shock pads are assembled between the shock stop (stop collar) and the slide body. The purpose of this option is to complement the shock absorber by eliminating metal to metal contact at the end of slide extension. Shock pads do not affect length adders for shock absorber options.

## BT SHOCK PADS ON RETRACTION

The -BT option adds shock pads on retraction to the -GN, -GO, -G2, -G4, -G12, or -G14 shock absorber option. The shock pads are assembled between the shock stop (stop collar) and the slide body. The purpose of this option is to complement the shock absorber by eliminating metal to metal contact at the end of slide retraction. Shock pads do not affect length adders for shock absorber options.

## BL HushStop SHOCK PADS ON RETRACTION

The -BL option adds composite shock pads on retraction to the -GN, -GO, -G2, -G4, -G12, or -G14 shock absorber option. The shock pads are assembled between the shock stop (stop collar) and the slide body. The purpose of this option, quieter than the -BT option, is to complement the shock absorber by eliminating metal to metal contact at the end of slide retraction. Shock pads do not affect length adders for shock absorber options.

Due to the composite shock pads, stop locations may vary. For close tolerance stop locations, use the -BT option.



Options may affect unit length. See dimensional pages and option information details.



Refer to this product's online catalog in the product section for complete information including related dimensions and additional specifications. See link at bottom of this page.

## GV SIDE MOUNTING HOLES IN POSITION 2

This option provides an additional mounting pattern on one side of the slide body. This pattern is ideal if the slide is to be mounted on edge for applications where a narrow profile is required.

## H47 RODLOK SLIDE & RODLOK

PHD's Rodlok is ideal for locking the tool plate while in a static/stationary position. When the pressure is removed from the port of the Rodlok, the mechanism will grip the piston rod of the cylinder and prevent it from moving. The loads are held indefinitely without power. Rodlok performance is application and environment sensitive (cleanliness of rod or Rodlok will also affect performance). THE RODLOK IS NOT DESIGNED TO BE USED AS A PERSONNEL SAFETY DEVICE.

| SIZE | STATIC LOCKING FORCE* |      |
|------|-----------------------|------|
|      | lb                    | N    |
| 22   | 40                    | 180  |
| 23   | 56                    | 250  |
| 24   | 79                    | 350  |
| 25   | 135                   | 600  |
| 26   | 338                   | 1500 |

**NOTE:** \*Locking force given in table is the actual locking force with a dry clean rod and does not include any safety factor.

### REPLACEMENT RODLOK KITS

| MODEL NO. | LOCKING DEVICE KIT | ADAPTOR KIT* | COMPLETE RODLOK* |
|-----------|--------------------|--------------|------------------|
| SDx22     | 64476              | 63931-06     | 63935-06         |
| SEx22     | 64476              | 63931-07     | 63935-07         |
| SD/SEx23  | 64477              | 63931-08     | 63935-08         |
| SD/SEx24  | 64478              | 63931-09     | 63935-09         |
| SD/SEx25  | 64479              | 63931-10     | 63935-10         |
| SD/SEx26  | 64480              | 63931-05     | 63935-05         |

**NOTES:**

- \*Kits ship with cylinder mounting hardware.
- Part numbers listed above are intended for replacement purposes only and are to be used specifically on slides with the -H47 option.

The Rodlok locking device and adaptor can be purchased separately as kits. See chart above. The locking device and adaptor are not available with a corrosion resistant (-Z1 option) finish.



## PORT CONTROL®

The exclusive PHD Port Control®, based on the “meter-out” principle, features an adjustable needle and check seal. Both are built into the cylinder head and cap and are used to control the speed of the slide over its entire travel.

The self-locking needle has micrometer threads and is adjustable under pressure. It determines the orifice size which controls the exhaust volume only of the cylinder proper. The check seal is closed while fluid is exhausting from the cylinder, but opens to permit full flow of incoming fluids. The PHD Port Control® provides the optimum in speed control for slides. All adjustments are made from the top surface of the slide. It saves space and

eliminates the cost of installation and fittings for external flow control valves.

**NOTE:** Port Controls add 1/4" to the cylinder length (affects dimensions AB, AC, and B) on sizes 22, 23, and 24.

**MAXIMUM SLIDE VELOCITY**  
**SD & SE SLIDES**

**50 in/sec without Port Controls®**  
**16 in/sec with Port Controls®**

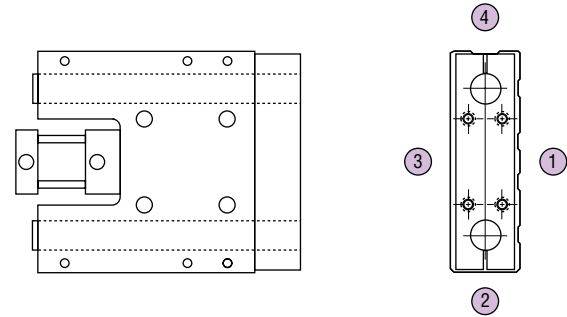
The above figures are based on a working pressure of 100 psi and a no load horizontal condition.

SDSE



## PORTS AND CONTROL NEEDLE IN POSITION 3

This option provides for the ports, Port Control®, and cushions to be in position 3, or underside of the unit (180° from standard).

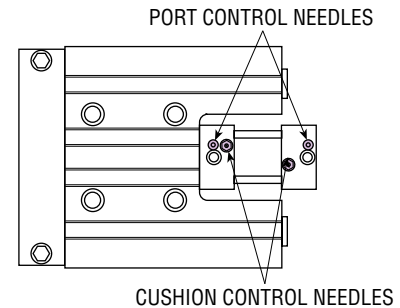


## ADJUSTABLE CUSHIONS

PHD Cushions are designed for smooth deceleration at each end of travel. When the cushion is activated, the remaining volume in the cylinder must exhaust past an adjustable needle which controls the amount of deceleration. The wide adjustment range makes the cushion ideal for end of travel shock reduction. Cushion needles are located on the same side as the Port Control® needles for easy access and adjustment.

**NOTE:** Cushions add to the cylinder length (affects dimensions AB, AC, and B) add 1.000" on sizes 22, 23, and 24; and 1.750" on size 25.

### PORT CONTROL® & CUSHION ADJUSTMENT POSITIONS



Effective cushion length 1/2" on size 22 through 24 and 3/4" on size 25.



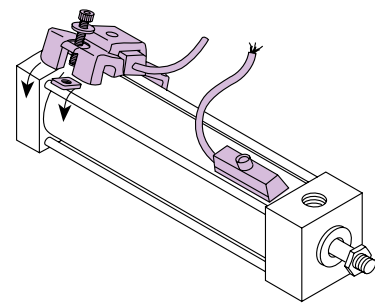
## MAGNET FOR PHD SOLID STATE SWITCHES

This option equips the cylinder with a magnetic band on the piston for use with PHD 1750 Solid State Switches.



## MAGNET FOR PHD REED SWITCHES

This option equips the cylinder with a magnetic band on the piston for use with PHD 1750 Reed Switches.



These cylinder-mounted switches are an easy and convenient way of interfacing the slide to various programmable controllers or logic systems. See page 2-54 for specific Solid State and Reed Switch information. **SWITCHES MUST BE ORDERED SEPARATELY.**

All dimensions are reference only unless specifically tolerated.

[www.phdinc.com/sdse](http://www.phdinc.com/sdse) • (800) 624-8511

# OPTIONS: SERIES SD & SE SLIDES



## OVERSIZED PORTS (available on sizes 25 & 26 only)

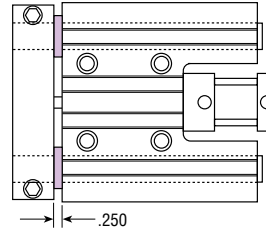
This option provides an oversized port on the head and cap of the cylinder for size 25 and 26. This will then allow ports to match appropriate sized NFPA cylinder standards.

Size 25 ports become 1/4 NPT instead of 1/8 NPT. Size 26 ports become 3/8 NPT instead of 1/4 NPT. Ports will remain in standard port locations.



## SHOCK PADS ON RETRACTION

This option provides polyurethane shock pads on retraction only, eliminating metal-to-metal contact as the tool plate reaches the slide body. This option greatly reduces noise and shock upon slide retraction. Not available with tool plate extension.

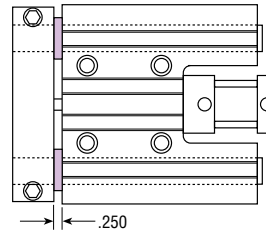


ADD TO BASIC SLIDE DIMENSIONS



## HushStop SHOCK PADS ON RETRACTION

This option provides composite shock pads on retraction only, eliminating metal-to-metal contact as the tool plate reaches the slide body. This option, quieter than the BR option, greatly reduces noise and shock upon slide retraction. Not available with tool plate extension. Due to the composite shock pads, stop locations may vary. For close tolerance stop locations, use BR option.

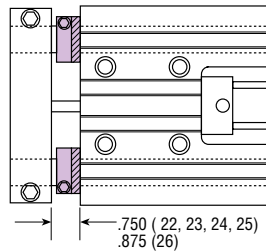


ADD TO BASIC SLIDE DIMENSIONS



## TRAVEL ADJUSTMENT AND SHOCK PADS ON RETRACTION

This option provides both travel adjustment stop collars and polyurethane shock pads on retraction only. The travel adjustment stop collars provide infinite adjustment while the shock pads eliminate metal-to-metal contact, thereby quieting the unit.

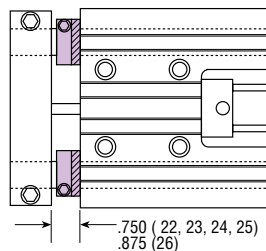


ADD TO BASIC SLIDE DIMENSIONS



## TRAVEL ADJUSTMENT AND HushStop SHOCK PADS ON RETRACTION

This option, quieter than the AR option, provides both travel adjustment stop collars and composite shock pads on retraction only. The travel adjustment stop collars provide infinite adjustment while the shock pads eliminate metal-to-metal contact, thereby quieting the unit. Due to the composite shock pads, stop locations may vary. For close tolerance stop locations, use the AR option.

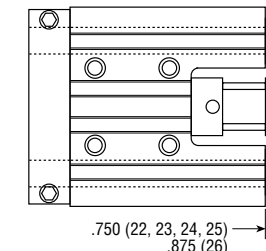


ADD TO BASIC SLIDE DIMENSIONS



## TRAVEL ADJUSTMENT AND SHOCK PADS ON EXTENSION

This option provides both travel adjustment stop collars and polyurethane shock pads on extension only. The travel adjustment stop collars provide infinite adjustment while the shock pads eliminate metal-to-metal contact, thereby quieting the unit.



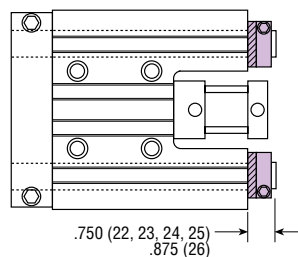
ADD TO BASIC SLIDE DIMENSIONS

All dimensions are reference only unless specifically toleranced.

# OPTIONS: SERIES SD & SE SLIDES

## AS TRAVEL ADJUSTMENT AND HushStop SHOCK PADS ON EXTENSION

This option, quieter than the AE option, provides both travel adjustment stop collars and composite shock pads on extension only. The travel adjustment stop collars provide infinite adjustment while the shock pads eliminate metal-to-metal contact, thereby quieting the unit. Due to the composite shock pads, stop locations may vary. For close tolerance stop locations, use the AE option.



ADD TO BASIC SLIDE DIMENSIONS

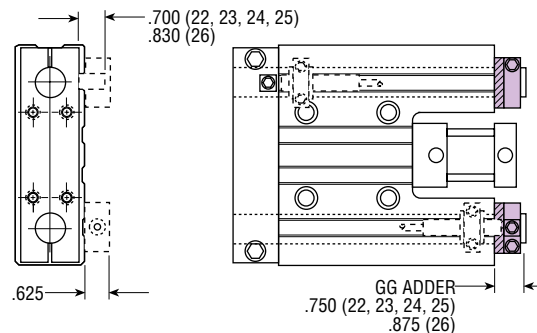
### STOP & TRAVEL ADJUSTMENT KITS

| KIT TYPE  | SHAFT     | 22       | 23       | 24       | 25       | 26       |
|---|-----------|----------|----------|----------|----------|----------|
| STANDARD TRAVEL ADJUSTMENT (-AR OR -AE)               | STANDARD  | 59737-01 | 59737-03 | 59737-05 | 59737-07 | 59737-09 |
|   | OVERSIZED | 59737-02 | 59737-04 | 59737-06 | 59737-08 | 59737-10 |
| HushStop TRAVEL ADJUSTMENT (-AT OR -AS)               | STANDARD  | 67653-01 | 67653-03 | 67653-05 | 67653-07 | 67653-09 |
|   | OVERSIZED | 67653-02 | 67653-04 | 67653-06 | 67653-08 | 67653-10 |
| STANDARD PROXIMITY & TRAVEL ADJUSTMENT (-GG OR -GH)   | STANDARD  | 59745-01 | 59745-03 | 59745-05 | 59745-07 | 59745-09 |
|   | OVERSIZED | 59745-02 | 59745-04 | 59745-06 | 59745-08 | 59745-10 |
| HushStop PROXIMITY & TRAVEL ADJUSTMENT (-G22 OR -G23) | STANDARD  | 67651-01 | 67651-03 | 67651-05 | 67651-07 | 67651-09 |
|   | OVERSIZED | 67651-02 | 67651-04 | 67651-06 | 67651-08 | 67651-10 |
| SHOCK ABSORBER STOP (-GM OR -GN)                      | STANDARD  | 59746-01 | 59746-03 | 59746-05 | 59746-07 | 59746-09 |
|   | OVERSIZED | 59746-02 | 59746-04 | 59746-06 | 59746-08 | 59746-10 |

Kit contains all components for standard non-Z1 units for one direction only.

## GG TRAVEL ADJUSTMENT AND SHOCK PADS ON EXTENSION WITH PROVISIONS FOR PROXIMITY SWITCH MOUNTING IN BOTH DIRECTIONS

This option provides both travel adjustment and polyurethane shock pads on extension; and provisions for mounting of proximity switch targets and brackets on both ends. **Switches and bracket kits must be ordered separately.** See page 2-40-11 for bracket/target kits and for switch ordering information. Not available with tool plate extension. With tool plate extension use GH option.

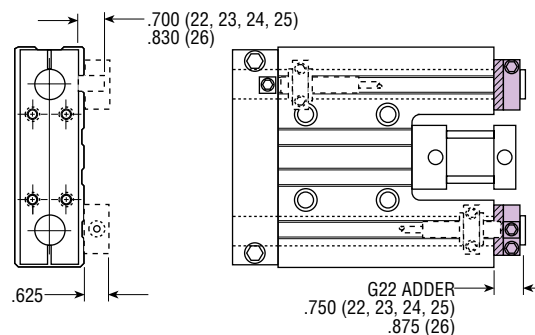


ADD TO BASIC SLIDE DIMENSIONS

## G22 TRAVEL ADJUSTMENT AND HushStop SHOCK PADS ON EXTENSION WITH PROVISIONS FOR PROXIMITY SWITCH MOUNTING IN BOTH DIRECTIONS

This option, quieter than the GG option, provides both travel adjustment and composite shock pads on extension; and provisions for mounting of proximity switch targets and brackets on both ends. **Switches and bracket kits must be ordered separately.** See page 2-40-11 for bracket/target kits and for switch ordering information.

Due to the composite shock pads, stop locations may vary. For close tolerance stop locations, use the GG option.



ADD TO BASIC SLIDE DIMENSIONS

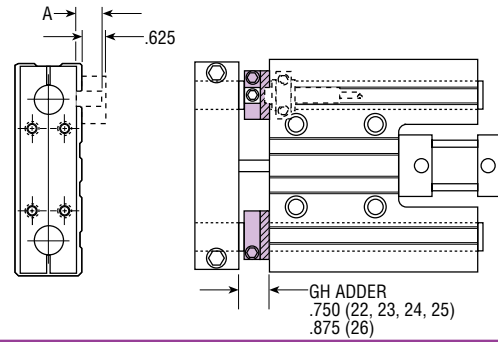
All dimensions are reference only unless specifically tolerated.

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# OPTIONS: SERIES SD & SE SLIDES

## GH TRAVEL ADJUSTMENT AND SHOCK PADS ON RETRACTION WITH PROVISIONS FOR PROXIMITY SWITCH MOUNTING ON RETRACTION

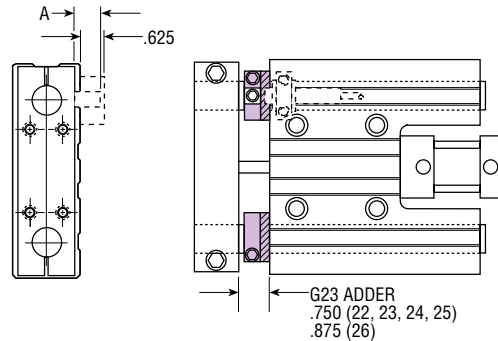
This option provides both travel adjustment and polyurethane shock pads on retraction and provisions for mounting of proximity switch targets and brackets in the retraction direction only. **Switches and bracket kits must be ordered separately.** See page 2-40-11 for bracket/target kits and for switch ordering information.



## G23 TRAVEL ADJUSTMENT AND HushStop SHOCK PADS ON RETRACTION WITH PROVISIONS FOR PROXIMITY SWITCH MOUNTING ON RETRACTION

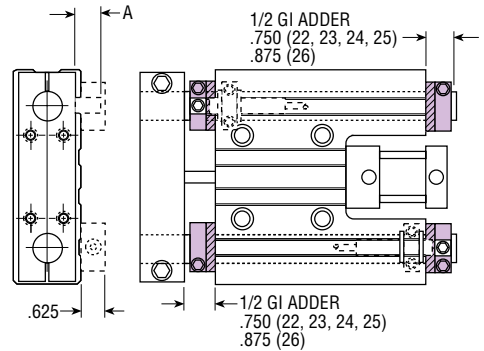
This option, quieter than the GH option, provides both travel adjustment and composite shock pads on retraction and provisions for mounting of proximity switch targets and brackets in the retraction direction only. **Switches and bracket kits must be ordered separately.** See page 2-40-11 for bracket/target kits and for switch ordering information.

Due to the composite shock pads, stop locations may vary. For close tolerance stop locations, use the GH option.



## GI TRAVEL ADJUSTMENTS, SHOCK PADS, AND PROVISIONS FOR PROXIMITY SWITCHES IN BOTH DIRECTIONS

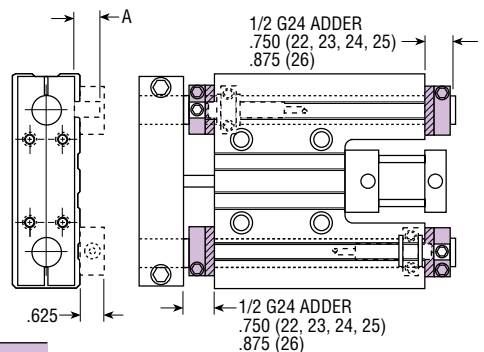
This option provides both travel adjustment and polyurethane shock pads in both directions and provisions for mounting of proximity switch targets and brackets on both ends. **Switches and bracket kits must be ordered separately.** See page 2-40-11 for bracket/target kits and for switch ordering information.



## G24 TRAVEL ADJUSTMENTS, HushStop SHOCK PADS, AND PROVISIONS FOR PROXIMITY SWITCHES IN BOTH DIRECTIONS

This option, quieter than the GI option, provides both travel adjustment and composite shock pads in both directions and provisions for mounting of proximity switch targets and brackets on both ends. **Switches and bracket kits must be ordered separately.** See page 2-40-11 for bracket/target kits and for switch ordering information.

Due to the composite shock pads, stop locations may vary. For close tolerance stop locations, use the GI option.



| SLIDE SIZE | A         |            |
|------------|-----------|------------|
|            | 8 mm PROX | 12 mm PROX |
| 22         | .700      | 1.500      |
| 23         | .700      | 1.500      |
| 24         | .700      | 1.000      |
| 25         | .700      | 1.000      |
| 26         | .830      | 1.125      |

ADD TO BASIC SLIDE DIMENSIONS

All dimensions are reference only unless specifically tolerated.

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# OPTIONS: SERIES SD & SE SLIDES

## Q1 CORROSION RESISTANT GUIDE SHAFTS

Extremely hard corrosion-resistant coating on the guide shafts for use in applications where moisture may corrode hardened ground shafts. End faces of the shafts remain uncoated. Consult PHD for fully coated shafts.

## V1 FLUORO-ELASTOMER SEALS

Fluoro-Elastomer seals are available for seal compatibility with certain fluids. Seal compatibility should be checked with the fluid manufacturer for proper application. Consult PHD for high temperature applications.

## Z1 ELECTROLESS NICKEL PLATING

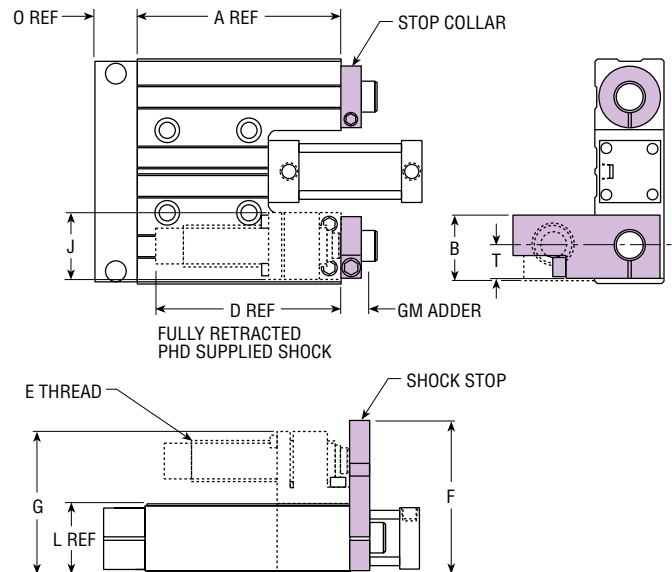
This option provides electroless nickel plating on all externally exposed ferrous parts except the guide shafts and cylinder rod end. This optional plating can be used for protecting the slide from severe or corrosive environments. The guide shafts can be made corrosion-resistant by specifying the -Q1 shaft option.

**NOTE:** Shock absorbers are not plated with -Z1 option.

## GM PROVISIONS FOR SHOCK ABSORBER MOUNTING ON EXTENSION

This option provides for mounting a bracket for a shock absorber in the extend direction. This includes mounting holes in the slide body, a shock stop on one shaft, and a stop collar on the other shaft. **The shock absorber and shock mounting kit must be ordered separately.** This arrangement allows the shock absorber to double as a travel adjustment in the extension direction.

See page 2-40-11 for shock mounting kit and shock absorber ordering information. Shock stop and mounting bracket are supplied ready for proximity switch bracket and target mounting.



ADD TO BASIC SLIDE DIMENSIONS

| SIZE | A REF. |       | B     | GM    |        | D          | E     |       | G     | J     | L     |       | O |
|------|--------|-------|-------|-------|--------|------------|-------|-------|-------|-------|-------|-------|---|
|      | SD     | SE    |       | ADDER | THREAD |            | REF.  | REF.  |       |       | T     |       |   |
| 22   | 2.390  | 4.140 | 1.000 | .750  | 4.00   | 3/4-16 UNF | 2.575 | 2.450 | 1.125 | 1.200 | .700  | .563  |   |
| 23   | 2.875  | 4.765 | 1.250 | .750  | 4.00   | 3/4-16 UNF | 2.875 | 2.750 | 1.125 | 1.500 | .950  | .695  |   |
| 24   | 3.390  | 5.015 | 1.500 | .750  | 4.75   | 1-12 UNF   | 3.575 | 3.450 | 1.650 | 1.700 | .950  | .815  |   |
| 25   | 3.650  | 5.765 | 2.000 | .750  | 4.75   | 1-12 UNF   | 4.075 | 3.950 | 1.650 | 2.200 | 1.200 | 1.050 |   |
| 26   | 5.000  | 8.000 | 2.500 | .875  | 4.75   | 1-12 UNF   | 4.875 | 4.750 | 2.000 | 2.750 | 1.450 | 1.325 |   |

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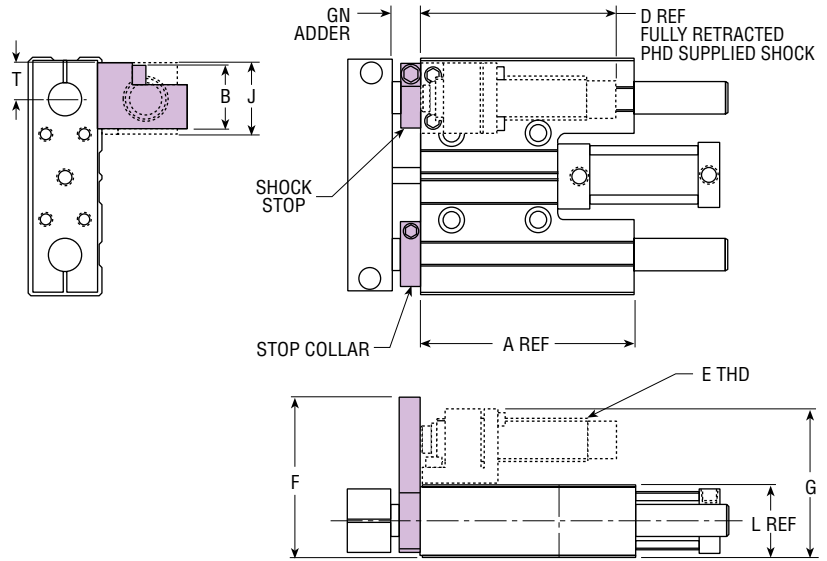
# OPTIONS: SERIES SD & SE SLIDES



## PROVISIONS FOR SHOCK ABSORBER MOUNTING ON RETRACTION

This option provides for mounting a bracket for a shock absorber in the retract direction. This includes mounting holes in the slide body, a shock stop on one shaft, and a stop collar on the other shaft. **The shock absorber and shock mounting kit must be ordered separately.** This arrangement allows the shock absorber to double as a travel adjustment in the retraction direction.

See page 2-40-11 for shock mounting kit and shock absorber ordering information. Shock stop and mounting bracket are supplied ready for proximity switch bracket and target mounting.



ADD TO BASIC SLIDE DIMENSIONS

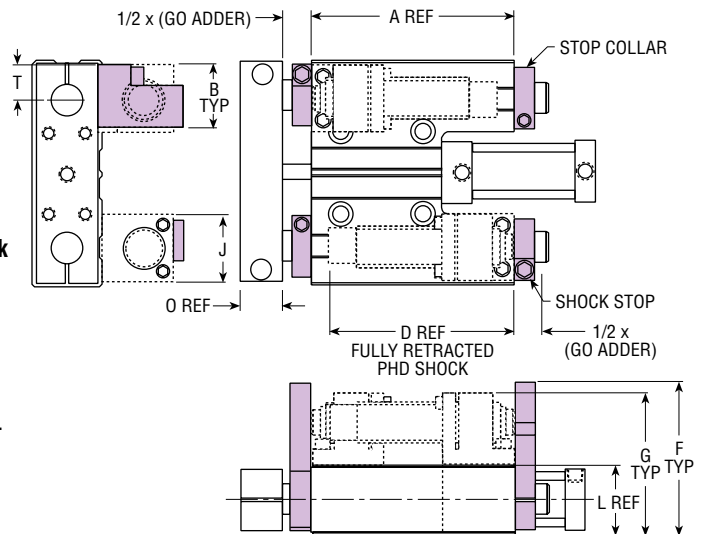
| SIZE | A REF. |       | B     | GN ADDER | D    | E THREAD   | F     | G     | J     | L     |       |
|------|--------|-------|-------|----------|------|------------|-------|-------|-------|-------|-------|
|      | SD     | SE    |       |          |      |            |       |       |       | REF.  | T     |
| 22   | 2.390  | 4.140 | 1.000 | .750     | 4.00 | 3/4-16 UNF | 2.575 | 2.450 | 1.125 | 1.200 | .563  |
| 23   | 2.875  | 4.765 | 1.250 | .750     | 4.00 | 3/4-16 UNF | 2.875 | 2.750 | 1.125 | 1.500 | .695  |
| 24   | 3.390  | 5.015 | 1.500 | .750     | 4.75 | 1-12 UNF   | 3.575 | 3.450 | 1.650 | 1.700 | .815  |
| 25   | 3.650  | 5.765 | 2.000 | .750     | 4.75 | 1-12 UNF   | 4.075 | 3.950 | 1.650 | 2.200 | 1.050 |
| 26   | 5.000  | 8.000 | 2.500 | .875     | 4.75 | 1-12 UNF   | 4.875 | 4.750 | 2.000 | 2.750 | 1.325 |



## PROVISIONS FOR SHOCK ABSORBER MOUNTING ON EXTENSION AND RETRACTION

This option provides for mounting brackets for shock absorbers in both the extend and retract direction. This includes two sets of mounting holes in the slide body, shock stops mounted on the shafts in each direction, and stop collars mounted on the opposite shafts. **The shock absorbers and shock mounting kits must be ordered separately.** This arrangement allows the shock absorbers to double as travel adjustments in both directions.

See page 2-40-11 for shock mounting kit and shock absorber ordering information. Shock stops and brackets are supplied ready for proximity switch bracket and target mounting.

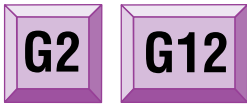


ADD TO BASIC SLIDE DIMENSIONS

| SIZE | A REF. |       | B     | GO ADDER | D     | E THREAD   | F     | G     | J     | L     |       | O REF. | T |
|------|--------|-------|-------|----------|-------|------------|-------|-------|-------|-------|-------|--------|---|
|      | SD     | SE    |       |          |       |            |       |       |       | REF.  | T     |        |   |
| 22   | 2.390  | 4.140 | 1.000 | 1.500    | 4.000 | 3/4-16 UNF | 2.575 | 2.450 | 1.125 | 1.200 | .700  | .563   |   |
| 23   | 2.875  | 4.765 | 1.250 | 1.500    | 4.000 | 3/4-16 UNF | 2.875 | 2.750 | 1.125 | 1.500 | .950  | .695   |   |
| 24   | 3.390  | 5.015 | 1.500 | 1.500    | 4.750 | 1-12 UNF   | 3.575 | 3.450 | 1.650 | 1.700 | .950  | .815   |   |
| 25   | 3.650  | 5.765 | 2.000 | 1.500    | 4.750 | 1-12 UNF   | 4.075 | 3.950 | 1.650 | 2.200 | 1.200 | 1.050  |   |
| 26   | 5.000  | 8.000 | 2.500 | 1.750    | 4.750 | 1-12 UNF   | 4.875 | 4.750 | 2.000 | 2.750 | 1.450 | 1.325  |   |

All dimensions are reference only unless specifically toleranced.

# OPTIONS: SERIES SD & SE SLIDES



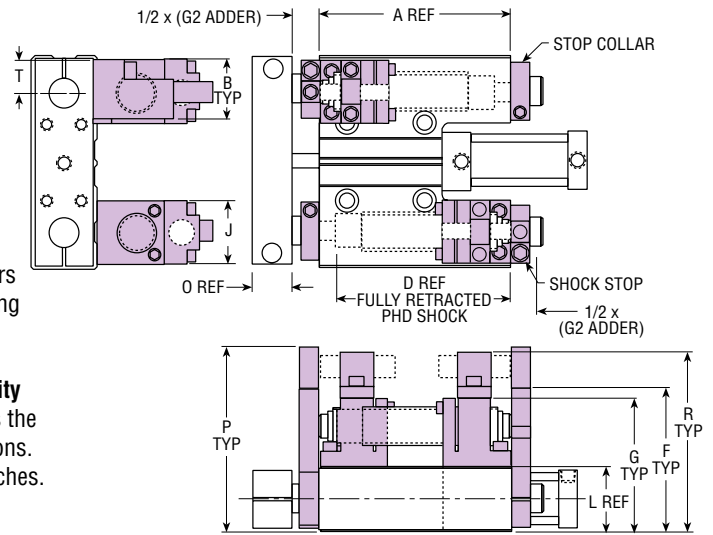
## SHOCK ABSORBER AND PROXIMITY SWITCH READY ON EXTENSION AND RETRACTION

This option provides mounting brackets for shock absorbers and proximity switches in both directions. This includes mounting brackets for both shock absorbers and proximity switches, proximity targets, and mounting hardware with stop collars and stops mounted on the shafts. **The shock absorbers and proximity switches must be ordered separately.** This arrangement allows the shock absorbers to double as travel adjustments in both directions.

See page 2-40-11 for shock absorbers and proximity switches.

G2 = 8 mm proximity switch

G12 = 12 mm proximity switch



ADD TO BASIC SLIDE DIMENSIONS

| SIZE | A REF. |       | G2/G12 |       | E     | F          | G     | J     | L     | O     | P     |        | R     |       | T     |       |
|------|--------|-------|--------|-------|-------|------------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
|      | SD     | SE    | B      | ADDER |       |            |       |       |       |       | D     | THREAD | 8 mm  | 12 mm |       | 8 mm  |
| 22   | 2.390  | 4.140 | 1.000  | 1.500 | 4.000 | 3/4-16 UNF | 2.575 | 2.450 | 1.125 | 1.200 | .700  | 3.275  | 4.075 | 3.075 | 3.700 | .563  |
| 23   | 2.875  | 4.765 | 1.250  | 1.500 | 4.000 | 3/4-16 UNF | 2.875 | 2.750 | 1.125 | 1.500 | .950  | 3.575  | 4.375 | 3.375 | 4.000 | .695  |
| 24   | 3.390  | 5.015 | 1.500  | 1.500 | 4.750 | 1-12 UNF   | 3.575 | 3.450 | 1.650 | 1.700 | .950  | 4.275  | 4.575 | 4.075 | 4.330 | .815  |
| 25   | 3.650  | 5.765 | 2.000  | 1.500 | 4.750 | 1-12 UNF   | 4.075 | 3.950 | 1.650 | 2.200 | 1.200 | 4.775  | 5.075 | 4.575 | 4.830 | 1.050 |
| 26   | 5.000  | 8.000 | 2.500  | 1.750 | 4.750 | 1-12 UNF   | 4.875 | 4.750 | 2.000 | 2.750 | 1.450 | 5.705  | 6.000 | 5.375 | 5.625 | 1.325 |

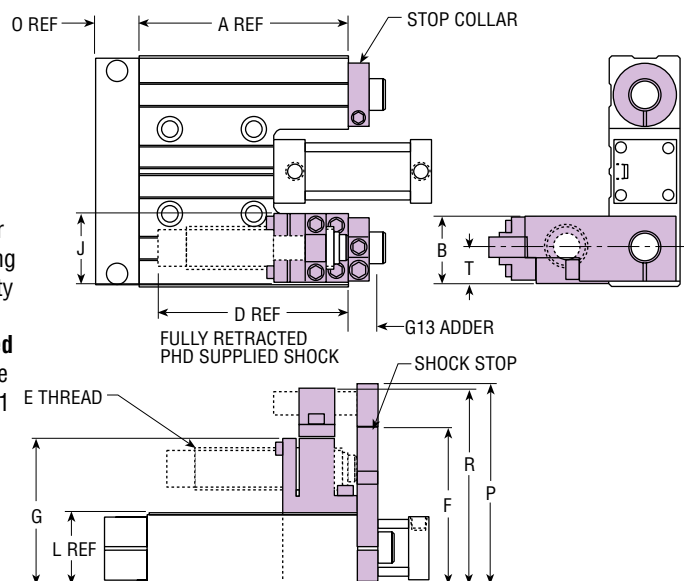


## SHOCK ABSORBER & PROXIMITY SWITCH READY ON EXTENSION

This option provides mounting brackets for a shock absorber and proximity switch on the extension only. This includes mounting brackets for both shock absorber and proximity switch, a proximity target and mounting hardware, with a stop collar and stop on the shafts. **The shock absorber and proximity switch must be ordered separately.** This arrangement allows the shock absorber to double as a travel adjustment in the extension direction. See page 2-40-11 for shock absorbers and proximity switches.

G3 = 8 mm Proximity Switch

G13 = 12 mm Proximity Switch

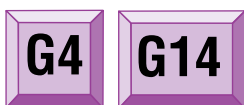


ADD TO BASIC SLIDE DIMENSIONS

| SIZE | A REF. |       | G3/G13 |       | E    | F          | G     | J     | L     | O     | P     |        | R     |       | T     |       |
|------|--------|-------|--------|-------|------|------------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
|      | SD     | SE    | B      | ADDER |      |            |       |       |       |       | D     | THREAD | 8 mm  | 12 mm |       | 8 mm  |
| 22   | 2.390  | 4.140 | 1.125  | .750  | 4.00 | 3/4-16 UNF | 2.575 | 2.450 | 1.125 | 1.200 | .700  | 3.275  | 4.075 | 3.075 | 3.700 | .563  |
| 23   | 2.875  | 4.765 | 1.250  | .750  | 4.00 | 3/4-16 UNF | 2.875 | 2.750 | 1.125 | 1.500 | .950  | 3.575  | 4.375 | 3.375 | 4.000 | .695  |
| 24   | 3.390  | 5.015 | 1.500  | .750  | 4.75 | 1-12 UNF   | 3.575 | 3.450 | 1.650 | 1.700 | .950  | 4.275  | 4.575 | 4.075 | 4.330 | .815  |
| 25   | 3.650  | 5.765 | 2.000  | .750  | 4.75 | 1-12 UNF   | 4.075 | 3.950 | 1.650 | 2.200 | 1.200 | 4.775  | 5.075 | 4.575 | 4.830 | 1.050 |
| 26   | 5.000  | 8.000 | 2.500  | .875  | 4.75 | 1-12 UNF   | 4.875 | 4.750 | 2.000 | 2.750 | 1.450 | 5.705  | 6.000 | 5.375 | 5.625 | 1.325 |

All dimensions are reference only unless specifically tolerated.

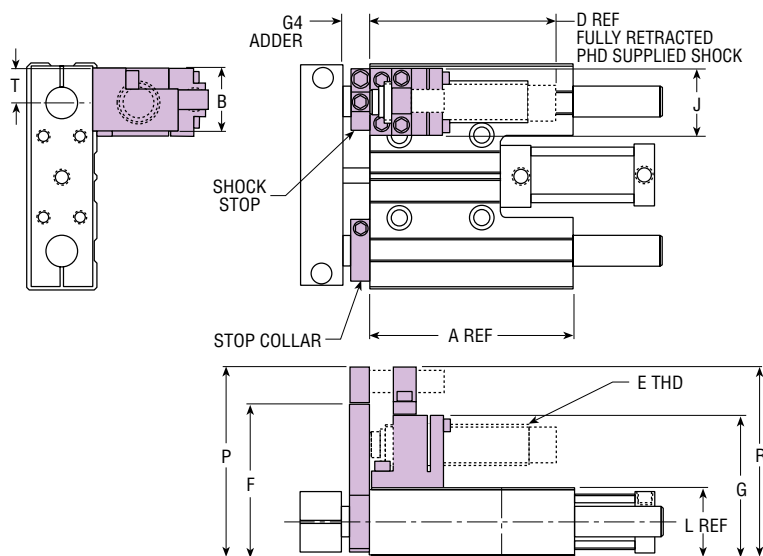
# OPTIONS: SERIES SD & SE SLIDES



## SHOCK ABSORBER & PROXIMITY SWITCH READY ON RETRACTION

This option provides mounting brackets for a shock absorber and proximity switch on the retraction only. This includes mounting brackets for both shock absorber and proximity switch, shaft, a proximity target and mounting hardware, with a stop collar and stop on the other shafts. **The shock absorber and proximity switch must be ordered separately.** This arrangement allows the shock absorber to double as a travel adjustment in the retract direction. See page 2-40-11 for shock absorbers and proximity switches.

G4 = 8 mm Proximity Switch  
G14 = 12 mm Proximity Switch



ADD TO BASIC SLIDE DIMENSIONS

| SIZE | A REF. |       | B     | G4/G14 ADDER |      | D    | E          |       | F     | G     | J     | P     |       | R     |       | T     |
|------|--------|-------|-------|--------------|------|------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|      | SD     | SE    |       | REF.         | 8 mm |      | 12 mm      | 8 mm  |       |       |       | 12 mm |       |       |       |       |
| 22   | 2.390  | 4.140 | 1.125 | .750         | .750 | 4.00 | 3/4-16 UNF | 2.575 | 2.450 | 1.125 | 1.200 | 3.275 | 4.075 | 3.075 | 3.700 | .563  |
| 23   | 2.875  | 4.765 | 1.250 | .750         | .750 | 4.00 | 3/4-16 UNF | 2.875 | 2.750 | 1.125 | 1.500 | 3.575 | 4.375 | 3.375 | 4.000 | .695  |
| 24   | 3.390  | 5.015 | 1.500 | .750         | .750 | 4.75 | 1-12 UNF   | 3.575 | 3.450 | 1.650 | 1.700 | 4.275 | 4.575 | 4.075 | 4.330 | .815  |
| 25   | 3.650  | 5.765 | 2.000 | .750         | .750 | 4.75 | 1-12 UNF   | 4.075 | 3.950 | 1.650 | 2.200 | 4.775 | 5.075 | 4.575 | 4.830 | 1.050 |
| 26   | 5.000  | 8.000 | 2.500 | .875         | .875 | 4.75 | 1-12 UNF   | 4.875 | 4.750 | 2.000 | 2.750 | 5.705 | 6.000 | 5.375 | 5.625 | 1.325 |

## SHOCK KITS

Each shock mounting kit contains one shock bracket with all necessary hardware for mounting one shock absorber in either direction. Slide unit must be ordered as provisions for shock absorber. **Shock absorbers must be ordered separately.** See PHD Product Sizing Catalog for kit numbers.

## SHOCK ABSORBERS

**Shock absorbers are ordered separately** and should be properly matched to the slide application. See PHD Product Sizing Catalog for proper shock absorber selection and shock numbers.

## BS SHOCK PADS ON EXTENSION

The -BS option adds shock pads on extension to the -GM, -GO, -G2, -G3, -G12, or -G13 shock absorber option. The shock pads are assembled between the shock stop (stop collar) and the slide body. The purpose of this option is to complement the shock absorber by eliminating metal to metal contact at the end of slide extension. Shock pads do not affect length adders for shock absorber options.

## BT SHOCK PADS ON RETRACTION

The -BT option adds shock pads on retraction to the -GN, -GO, -G2, -G4, -G12, or -G14 shock absorber option. The shock pads are assembled between the shock stop (stop collar) and the slide body. The purpose of this option is to complement the shock absorber by eliminating metal to metal contact at the end of slide retraction. Shock pads do not affect length adders for shock absorber options.

## BK HushStop® SHOCK PADS ON EXTENSION

The -BK option adds composite shock pads on extension to the -GM, -GO, -G2, -G3, -G12, or -G13 shock absorber option. The shock pads are assembled between the shock stop (stop collar) and the slide body. The purpose of this option, quieter than the -BS option, is to complement the shock absorber by eliminating metal to metal contact at the end of slide extension. Shock pads do not affect length adders for shock absorber options.

Due to the composite shock pads, stop locations may vary. For close tolerance stop locations, use the -BS option.

## BL HushStop® SHOCK PADS ON RETRACTION

The -BL option adds composite shock pads on retraction to the -GN, -GO, -G2, -G4, -G12, or -G14 shock absorber option. The shock pads are assembled between the shock stop (stop collar) and the slide body. The purpose of this option, quieter than the -BT option, is to complement the shock absorber by eliminating metal to metal contact at the end of slide retraction. Shock pads do not affect length adders for shock absorber options.

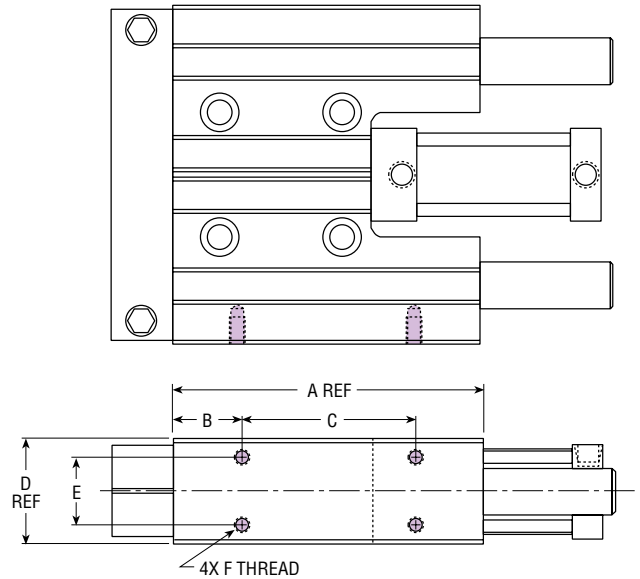
Due to the composite shock pads, stop locations may vary. For close tolerance stop locations, use the -BT option.

All dimensions are reference only unless specifically toleranced.

# OPTIONS: SERIES SD & SE SLIDES

## GV SIDE MOUNTING HOLES IN POSITION 2

This option provides an additional mounting pattern on one side of the slide body. This pattern is ideal if the slide is to be mounted on edge for applications where a narrow profile is required.



NOTE: MTG HOLES CENTERED ON CENTERLINE OF UNIT

### OPTION ADDERS

| MODEL | A     | B     | C     | D     | E     | F THREAD         |
|-------|-------|-------|-------|-------|-------|------------------|
| SDx22 | 2.390 | .750  | .625  | 1.200 | .750  | 10-24 x .375 DP  |
| SEx22 | 4.140 | .750  | 2.375 | 1.200 | .750  | 10-24 x .375 DP  |
| SDx23 | 2.875 | .937  | .875  | 1.500 | 1.062 | 1/4-20 x .375 DP |
| SEx23 | 4.765 | .937  | 2.875 | 1.500 | 1.062 | 1/4-20 x .375 DP |
| SDx24 | 3.390 | 1.063 | 1.125 | 1.700 | 1.125 | 1/4-20 x .430 DP |
| SEx24 | 5.015 | 1.063 | 2.875 | 1.700 | 1.125 | 1/4-20 x .430 DP |
| SDx25 | 3.650 | 1.313 | .875  | 2.200 | 1.500 | 3/8-16 x .650 DP |
| SEx25 | 5.765 | 1.313 | 3.125 | 2.200 | 1.500 | 3/8-16 x .650 DP |
| SDx26 | 5.000 | 1.500 | 2.000 | 2.750 | 2.000 | 3/8-16 x .750 DP |
| SEx26 | 8.000 | 1.500 | 5.000 | 2.750 | 2.000 | 3/8-16 x .750 DP |

## H47 RODLOK SLIDE & RODLOK

PHD's Rodlok is ideal for locking the tool plate while in a static/stationary position. When the pressure is removed from the port of the Rodlok, the mechanism will grip the piston rod of the cylinder and prevent it from moving. The loads are held indefinitely without power. Rodlok performance is application and environment sensitive (cleanliness of rod or Rodlok will also affect performance). THE RODLOK IS NOT DESIGNED TO BE USED AS A PERSONNEL SAFETY DEVICE.

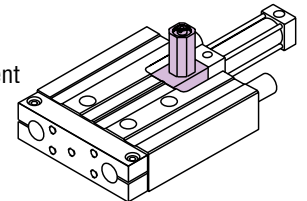
| SIZE | STATIC LOCKING FORCE* |      |
|------|-----------------------|------|
|      | lb                    | N    |
| 22   | 40                    | 180  |
| 23   | 56                    | 250  |
| 24   | 79                    | 350  |
| 25   | 135                   | 600  |
| 26   | 338                   | 1500 |

NOTE: \*Locking force given in table is the actual locking force with a dry clean rod and does not include any safety factor.

### OPERATING PRESSURE

The operating pressure for the locking device is different than the operating pressure for the slide to which it is attached. The locking device of the Rodlok is designed with an operating pressure range of 60 psi [4 bar] minimum to 150 psi [10 bar] maximum. The Series SD/SE Slide with a Rodlok attached has an operating pressure range of 45 psi [3 bar] minimum to 150 psi [10 bar] maximum.

NOTE: When ordering a replacement cylinder (-H4), Rodlok must be ordered separately.



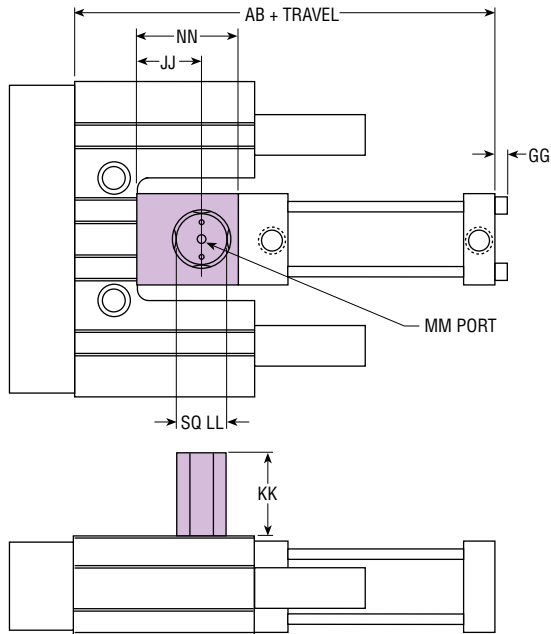
| BORE in  | DEVICE WEIGHT lb | ADAPTOR WEIGHT lb | TOTAL WEIGHT lb |
|----------|------------------|-------------------|-----------------|
| SDx22    | 0.10             | 0.10              | 0.22            |
| SEx22    | 0.10             | 0.10              | 0.22            |
| SD/SEx23 | 0.14             | 0.18              | 0.35            |
| SD/SEx24 | 0.14             | 0.22              | 0.41            |
| SD/SEx25 | 0.20             | 0.40              | 0.70            |
| SD/SEx26 | 0.58             | 0.70              | 1.54            |

NOTE: Total weight includes rod adder for -H46/-H47 cylinder.

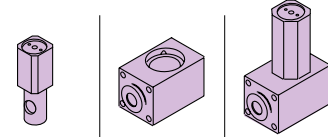
All dimensions are reference only unless specifically toleranced.

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# OPTIONS: SERIES SD & SE SLIDES



## REPLACEMENT RODLOK KITS



| MODEL NO. | LOCKING DEVICE KIT | ADAPTOR KIT* | COMPLETE RODLOK* |
|-----------|--------------------|--------------|------------------|
| SDx22     | 64476              | 63931-06     | 63935-06         |
| SEx22     | 64476              | 63931-07     | 63935-07         |
| SD/SEx23  | 64477              | 63931-08     | 63935-08         |
| SD/SEx24  | 64478              | 63931-09     | 63935-09         |
| SD/SEx25  | 64479              | 63931-10     | 63935-10         |
| SD/SEx26  | 64480              | 63931-05     | 63935-05         |

### NOTES:

- \*Kits ship with cylinder mounting hardware.
- Part numbers listed above are intended for replacement purposes only and are to be used specifically on slides with the -H47 option.

The Rodlok locking device and adaptor can be purchased separately as kits. See chart above. The locking device and adaptor are not available with a corrosion resistant (-Z1 option) finish.

| LETTER DIM. | MODEL NUMBER |        |        |        |        |        |        |        |         |         |
|-------------|--------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
|             | SDxx22       | SExx22 | SDxx23 | SExx23 | SDxx24 | SExx24 | SDxx25 | SExx25 | SDxx26  | SExx26  |
| GG          | -            | -      | -      | -      | -      | -      | .265   | .265   | .322    | .322    |
| KK          | 1.309        | 1.309  | 1.336  | 1.336  | 1.236  | 1.236  | 1.459  | 1.459  | 1.912   | 1.912   |
| LL          | .728         | .728   | .787   | .787   | .787   | .787   | .886   | .886   | 1.279   | 1.279   |
| MM          | 10-32        | 10-32  | 10-32  | 10-32  | 10-32  | 10-32  | 10-32  | 10-32  | 1/8 NPT | 1/8 NPT |
| NN          | 1.50         | 1.50   | 1.50   | 1.50   | 1.50   | 1.50   | 1.750  | 1.750  | 3.000   | 3.000   |
| JJ          | .875         | .875   | .875   | .875   | .875   | .875   | .750   | .750   | 1.299   | 1.299   |
| AB          | 4.570        | 6.320  | 4.760  | 6.760  | 5.250  | 7.010  | 6.104  | 8.354  | 8.346   | 11.346  |

All dimensions are reference only unless specifically tolerated.

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# ACCESSORIES: SERIES SD & SE SLIDES

## SWITCHES & BRACKETS

(FOR USE WITH -E OR -M OPTIONS)

See *Switches and Sensors* section for complete switch specifications.

### BRACKETS

| SLIDE SIZE | COMPACT SWITCH BRACKET NO. |
|------------|----------------------------|
| 22         | 17000-31-5                 |
| 23         | 17000-32-5                 |
| 24         | 17000-33-5                 |
| 25         | 17000-34-5                 |
| 26         | 58050-02                   |

Each bracket contains components for one direction.

## PROXIMITY SWITCHES

| OPTION | TYPE | PART NO.   | DESCRIPTION   |
|--------|------|------------|---|
| -E     | HALL | 17503-2-06 | Sink Type 10-30 VDC                                   |
|        |      | 17504-2-06 | Source Type 10-30 VDC                                 |
|        |      | 17523-2    | Sink Type 10-30 VDC, Quick Connect                    |
|        |      | 17524-2    | Source Type 10-30 VDC, Quick Connect                  |
| -M     | REED | 17502-2-06 | Sink or Source Type 10-30 VDC                         |
|        |      | 17509-3-06 | AC Type 110-120 VAC with Current Limit                |
|        |      | 17522-2    | Sink or Source Type 10-30 VDC, Quick Connect          |
|        |      | 17529-3    | AC Type 110-120 VAC, Quick Connect with Current Limit |

## STRAIN RELIEF KITS

Compact switch bracket for sizes 22, 23, 24, and 25 have built in strain reliefs. Compact Switch Strain Relief Kit for size 26 is 18412. Consult PHD for availability of other PHD Switches and Brackets.

## PROXIMITY SWITCH BRACKET & TARGET KITS (FOR USE WITH PROPER -Gxxx OPTION)

See *Switches and Sensors* section for complete switch specifications.

Each kit contains a bracket, target, and hardware for mounting one threaded proximity switch on an SD or SE Slide. Switches must be ordered separately. **Slides must be ordered with provisions for proximity switches in order for these bracket and target kits to function. See individual proximity & switch ready options for switch dimensions.**

### PROXIMITY SWITCH BRACKET AND TARGET KITS

| SLIDE SIZE | SWITCH SIZE |            |
|------------|-------------|------------|
|            | 8 mm        | 12 mm      |
| 22         | 53101-01-1  | 63998-01-1 |
| 23         | 53101-01-1  | 63998-01-1 |
| 24         | 53101-02-1  | 63998-02-1 |
| 25         | 53101-02-1  | 63998-02-1 |
| 26         | 53101-03-1  | 63998-03-1 |

Kit contains all components for standard non-Z1 unit for one direction only.

## PROXIMITY SWITCHES

| PART NO.     | DESCRIPTION   |
|--------------|---|
| 51422-005-02 | 8 mm Inductive Proximity Switch NPN (Sink) with 2 meter Cable       |
| 51422-006-02 | 8 mm Inductive Proximity Switch PNP (Source) with 2 meter Cable     |
| 15561-001    | 12 mm Inductive Proximity Switch NPN (Sink) with 3 meter cable      |
| 15561-002    | 12 mm Inductive Proximity Switch PNP (Source) with 3 meter cable    |
| 15561-003    | 12 mm Inductive Proximity Switch VAC Solid State with 3 meter cable |

## SHOCK ABSORBERS

See individual shock ready options for shock absorber dimensions.



| SLIDE SIZE | PHD SHOCK ABSORBER NUMBER* |
|------------|----------------------------|
| 22         | 57057-02-x                 |
| 23         | 57057-02-x                 |
| 24         | 57057-03-x                 |
| 25         | 57057-03-x                 |
| 26         | 57057-03-x                 |

\* See PHD product sizing software or Sizing Catalog for proper shock selection.

| SLIDE SIZE | PHD SHOCK MOUNTING KIT |
|------------|------------------------|
| 22         | 54108-11               |
| 23         | 54108-11               |
| 24         | 54109-11               |
| 25         | 54109-11               |
| 26         | 54110-11               |

Kit contains components for standard non-Z1 units for one direction only.