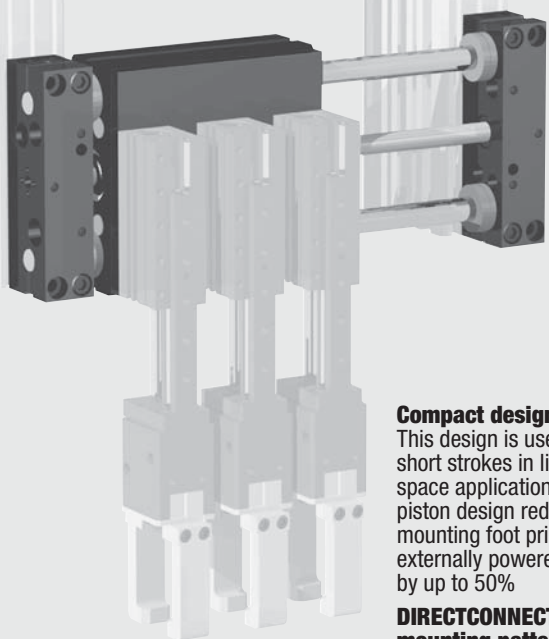
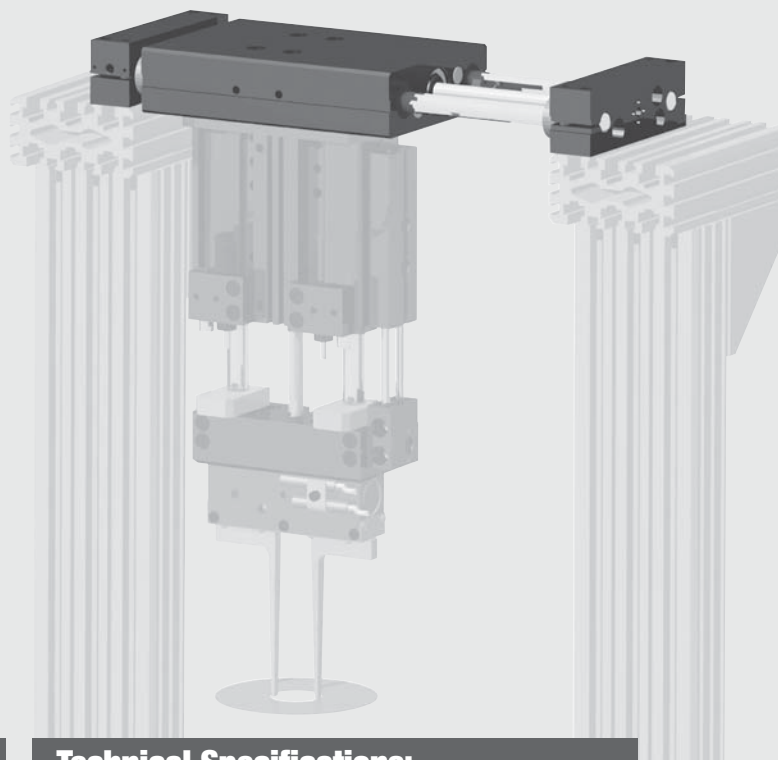


Internally Powered Base Slides



Compact design:
This design is used for short strokes in limited space applications. Internal piston design reduces the mounting foot print over externally powered slides by up to 50%

DIRECTCONNECT mounting patterns:
These slides have DIRECTCONNECT mounting patterns that connect to other slides without the need for adapter plates.

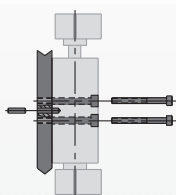


DLB SERIES

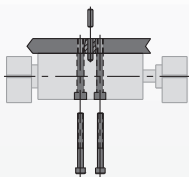
4.8

Mounting Information:

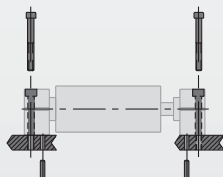
Mounts and operates in any orientation



Payload attaches to tapped holes in body with screws and locates using slip fit dowel pin holes



Payload attaches with screws through clearance and counter-bored holes in body and locates using slip fit dowel pin holes



End blocks mount with screws and locate with slip fit dowel pin holes

Technical Specifications:

| | | |
|---------------------------------|------------------------------|---------------|
| Pneumatic Specifications | Imperial | Metric |
| Pressure Operating Range* | 40-100 psi | 3-7 bar |
| Cylinder Type | Double Acting | |
| Dynamic Seals | Internally Lubricated Buna-N | |
| Valve Required to Operate | 4-way, 2-position | |

| | |
|---------------------------------|-----------------------------------|
| Air Quality Requirements | 40 Micron or Better |
| Air Filtration | Not Necessary** |
| Air Lubrication | Low Moisture Content (dry) |
| Air Humidity | |

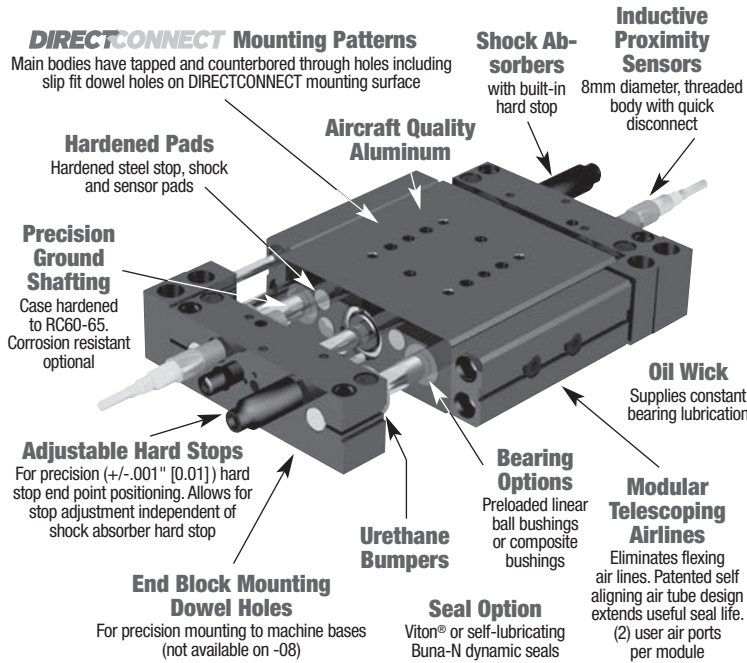
| | | |
|------------------------------------|-------------|-------------|
| Temperature Operating Range | | |
| Buna-N Seals (standard) | -30°~180° F | -35°~80° C |
| Viton® Seals (optional) | -20°~300° F | -30°~150° C |

| | |
|------------------------------------|----------------------------|
| Maintenance Specifications† | |
| Expected Life | 5 million cycles |
| Normal Application | 10+ million cycles† |
| w/ Preventative Maintenance | No |
| Field Repairable | No |
| Seal Repair Kits Available | No |

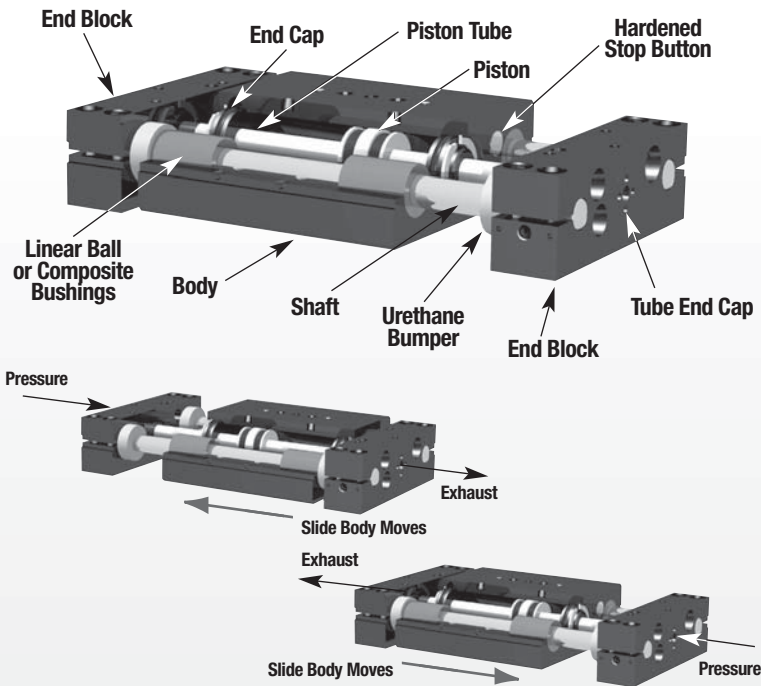
Application Restrictions
Flow controls, shock absorbers and urethane bumpers recommended for nearly all applications.
Use composite bushing in dirty or gritty environments.
Never use silicone based lubricants with composite bushings.

*Higher pressure possible. Consult factory with application details.
**Addition of lubrication will greatly increase service life
† See Maintenance Section

Product Features



Operating Principle

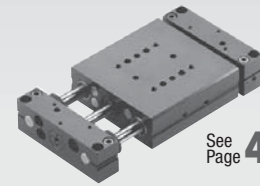


- A stationary piston is sandwiched between two fixed end blocks by two hollow piston tubes.
- The piston separates the cylinder bore in the body into two chambers
- The tubes fit into the piston in such a way that allows air to escape from the tube/ piston interface into one air chamber of the body.
- The body is guided by four linear bearings sliding on two shafts that are supported by the end blocks.
- The body has two end caps attached to each end of the cylinder bore which seals the air chambers.
- When air is supplied through a piston tube, it pressurizes that side of the cylinder of the body.
- The pressure creates a force against the end cap which pulls the body along with it.

Designed and manufactured in the USA

Style-B Short Body Slide

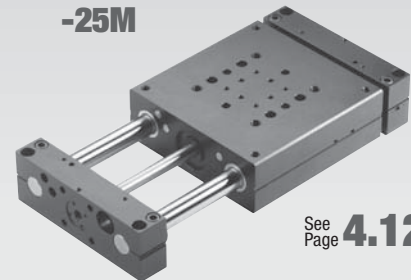
Size 10M (shown)
12M
16M



See Page **4.10**

Style-B Short Body Slide

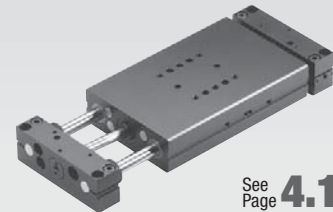
Size -20 (shown)
-25
-20M
-25M



See Page **4.12**

Style-L Long Body Slide

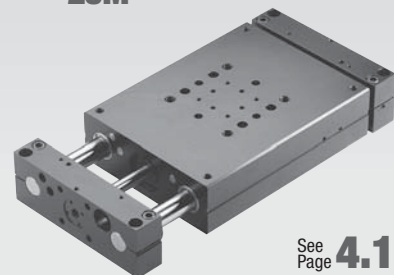
Size -10M (shown)
-12M
-16M



See Page **4.14**

Style-L Long Body Slide

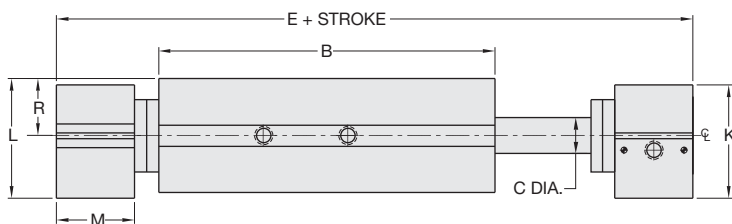
Size -20 (shown)
-25
-20M
-25M



See Page **4.16**



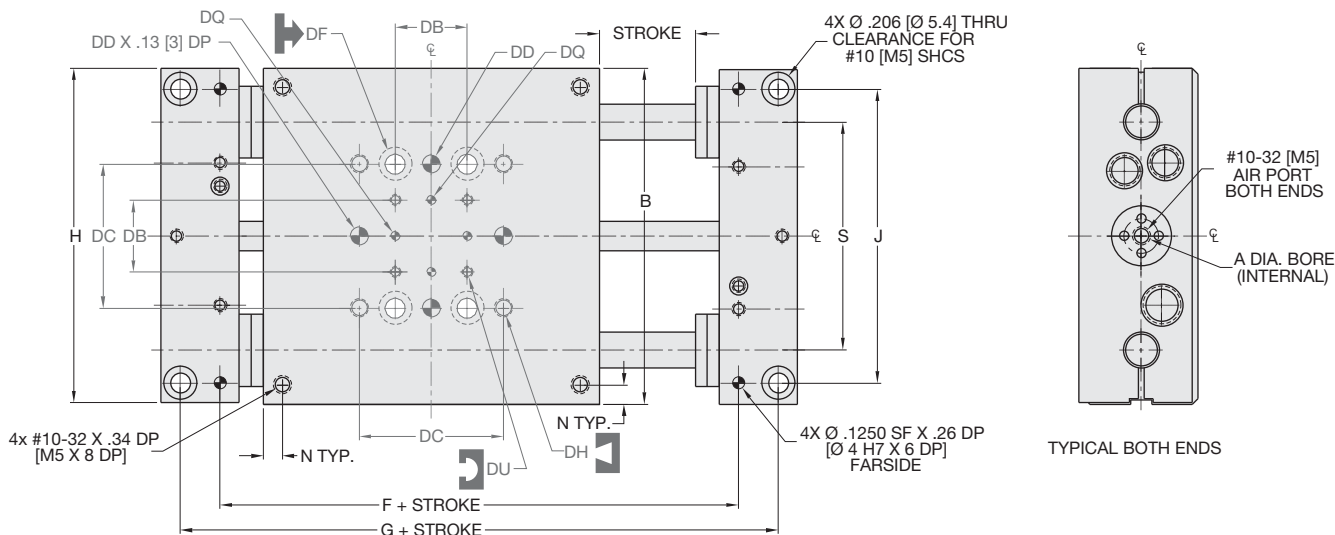
SHORT BODY SLIDE DLB -10M, 12M, 16M -B BUILT-IN REPAIRABLE CYLINDER



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Dimensions are symmetrical about centerline
 Third Angle Projection
 All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or (±.013mm)

| | Imperial in. | Metric [mm] |
|--|-----------------|----------------|
| | 0.00 = ±.01 | [0] = ±.25 |
| | 0.000 = ±.005 | [0.0] = ±.13 |
| | 0.0000 = ±.0005 | [0.00] = ±.013 |



TYPICAL BOTH ENDS

DLB SERIES

4.10

| MODEL # | BORE DIA. | | BODY SIZE | | SHAFT DIA. | | | | | | | | | |
|---------|-----------|-------|-----------|-------|------------|-------|-------|--------|-------|-------|------|------|-------|-------|
| | A | B | C | E | F | G | H | J | K | L | M | N | R | S |
| DLB-10 | ¾ | 3.50 | .375 | 5.63 | 4.3975 | 5.228 | 3.485 | 3.0600 | 1.178 | 1.245 | .813 | N/A | .594 | 2.375 |
| DLB-12 | 1 | 4.00 | .472 | 6.13 | 4.8975 | 5.728 | 3.985 | 3.5000 | 1.615 | 1.657 | .813 | .375 | .813 | 2.750 |
| DLB-16 | 1 | 4.75 | .630 | 6.88 | 5.6475 | 6.478 | 4.735 | 4.2500 | 1.615 | 1.657 | .813 | .375 | .813 | 2.750 |
| DLB-10M | 19 | 88.9 | 9.5 | 143.0 | 111.70 | 132.8 | 88.5 | 77.72 | 29.9 | 31.6 | 20.7 | N/A | 15.09 | 60.33 |
| DLB-12M | 25 | 101.6 | 12 | 155.7 | 124.40 | 145.5 | 101.2 | 88.90 | 41.0 | 42.1 | 20.7 | 9.5 | 20.65 | 69.85 |
| DLB-16M | 25 | 120.7 | 16 | 174.8 | 143.45 | 164.5 | 120.3 | 107.95 | 41.0 | 42.1 | 20.7 | 9.5 | 20.65 | 69.85 |

DIRECTCONNECT DIMENSIONS

STANDARD MOUNTING PATTERN FOR ALL SIZES

| | Imperial (inches) | Metric (mm) |
|----|-------------------|------------------|
| DB | .750 | 19.1 |
| DC | 1.500 | 38.1 |
| DD | .1880 X .25 DP | 5mm H7 X 6 DP |
| DF | Clearance for #10 | Clearance for M5 |
| DH | #10-32 X .34DP | M5 X 8.5DP |
| DQ | .0940 X .078 DP | 3H7 X 2 DP |
| DU | #4-40 X .25 DP | M3 X 6 DP |

How to Order: Basic Unit

BASIC MODEL METRIC STYLE STROKE SHAFTING

DLB - - **M** - **B** - - - **V** - **S**

SIZE

BEARING

VITON® SEALS

SIZE 10, 12, 16

METRIC M

STYLE B Short body slide with built-in repairable cylinder

BEARING B Linear ball bearings
C Composite bushings

STROKE (inches)
DLB-10 1-2 @ 1" increments
DLB-12 1-2 @ 1" increments
DLB-16 1-3 @ 1" increments

Custom strokes available.
Please consult factory.

STROKE (mm)
DLB-10M 25, 50
DLB-12M 25, 50
DLB-16M 25, 50, 80

VITON® V Viton® Seals

SHAFTING S Corrosion resistant shafting

Accessories: (Order Separately) DLB-10M DLB-12M DLB-16M QTY/SLIDE

SHOCK/STOP ACCESSORIES

| | | | | |
|----------------------|----------|----------|----------|--------|
| Shock Absorber | SHOK-028 | SHOK-010 | SHOK-010 | 1 or 2 |
| Adjustable Hard Stop | DLT-1023 | DLT-1023 | DLT-1023 | 1 or 2 |

INDUCTIVE SENSOR ACCESSORIES †

| | | | | |
|-------------------------------------|----------|----------|----------|--------|
| Inductive Sensor PNP Qk. Disconnect | OISP-011 | OISP-011 | OISP-011 | 1 or 2 |
| Inductive Sensor NPN Qk. Disconnect | OISN-011 | OISN-011 | OISN-011 | 1 or 2 |
| Quick Disconnect 2M Cable Length | CABL-010 | CABL-010 | CABL-010 | 1 or 2 |
| Quick Disconnect 5M Cable Length | CABL-013 | CABL-013 | CABL-013 | 1 or 2 |

PNEUMATIC ACCESSORIES

| | | | | |
|--|-----------|-----------|-----------|--------------|
| 1/8 NPT Telescopic Airlines (up to 2") | OTAL-037 | OTAL-037 | OTAL-037 | 1, 2, 3 or 4 |
| 1/8 NPT Telescopic Airlines (up to 3") | OTAL-038 | OTAL-038 | OTAL-038 | 1, 2, 3 or 4 |
| #10-32 Adjustable Flow Control | VLVF-007 | VLVF-007 | VLVF-007 | 1 or 2 |
| G1/8 Telescopic Airlines (up to 50mm) | OTAL-043 | OTAL-043 | OTAL-043 | 1, 2, 3 or 4 |
| G1/8 Telescopic Airlines (up to 80mm) | OTAL-044 | OTAL-044 | OTAL-044 | 1, 2, 3 or 4 |
| M5 Adjustable Flow Control | VLVF-008 | VLVF-008 | VLVF-008 | 1 or 2 |
| Cylinder Seal Repair Kit | SLKT-101 | SLKT-103 | SLKT-103 | 1 |
| Viton® Cylinder Seal Repair Kit | SLKT-101V | SLKT-103V | SLKT-103V | 1 |

†Sensor and cable sold separately

SAMPLE ORDER: DLB-12M-B-C-25

Exc Base Slide, Size 12 Metric, Short Body Style w/Built-in Cylinder, Composite Bushings, 25mm Stroke

DIRECTCONNECT

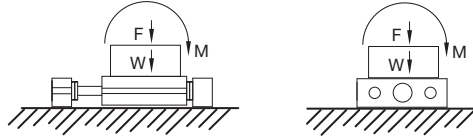


SHORT BODY SLIDE DLB -10M, 12M, 16M -B BUILT-IN REPAIRABLE CYLINDER

Loading Specifications Table - Style DLB-10M, 12M, 16M -B

| | 10 | 10M | 12 | 12M | 16 | 16M |
|---|-------------|---------|--------------|----------|--------------|----------|
| Maximum Payload (W) horizontal motion w/Shock Absorbers | 15 lbs. | 6.8 kg | 30 lbs. | 13.6 kg | 45 lbs. | 20.4 kg |
| Maximum Payload (W) vertical motion w/Shock Absorbers | 7 lbs. | 3.1 kg | 15 lbs. | 6.8 kg | 22 lbs. | 9.9 kg |
| Maximum Payload (W) horizontal motion w/Urethane Bumpers | 5 lbs. | 2.2 kg | 10 lbs. | 4.5 kg | 15 lbs. | 6.8 kg |
| Maximum Total Applied Load + Payload (F+W) | 25 lbs. | 111 N | 40 lbs. | 178 N | 70 lbs. | 311N |
| Total Maximum Moment about any Axis (M) | 75 in.-lbs. | 8.4 N-m | 150 in.-lbs. | 16.9 N-m | 300 in.-lbs. | 33.9 N-m |

F=Externally applied force
W=Weight of payload
F+W=Total force
M=Maximum moment



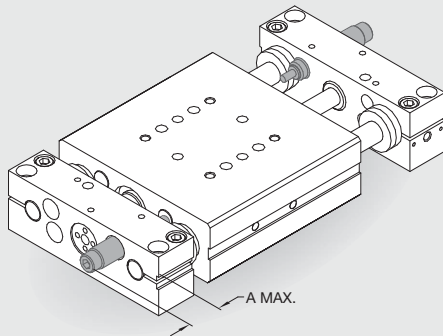
Shock Absorbers and Flow Controls are recommended for nearly all applications

| Specifications | DLB-10 | DLB-10M |
|---------------------------------|---------------|---------|
| Maximum Air Pressure | 100 psi | 6.9 bar |
| Thrust Force @ 80psi/5.5bar.. | 29 lbs. | 129 N |
| Weight (Basic Unit)..... | 2.08 lbs. | 0.93 kg |
| Additional Weight per Stroke .. | 0.08 lbs./in. | 1.4g/mm |
| Cylinder Bore Diameter | 3/4" | 19mm |
| Shaft Diameter | 0.375" | 9.5mm |

| Specifications | DLB-12 | DLB-12M |
|---------------------------------|---------------|---------|
| Maximum Air Pressure | 100 psi | 6.9 bar |
| Thrust Force @ 80psi/5.5bar.. | 57 lbs. | 254 N |
| Weight (Basic Unit)..... | 3.83 lbs. | 1.7 kg |
| Additional Weight per Stroke .. | 0.12 lbs./in. | 2.1g/mm |
| Cylinder Bore Diameter | 1.0" | 25mm |
| Shaft Diameter | 0.472" | 12mm |

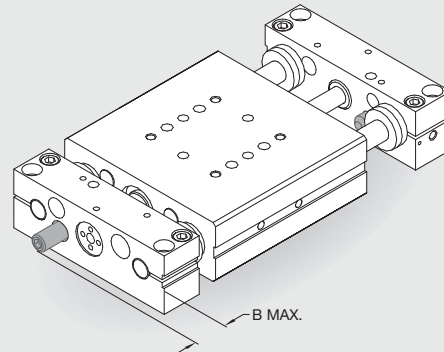
| Specifications | DLB-16 | DLB-16M |
|---------------------------------|---------------|---------|
| Maximum Air Pressure | 100 psi | 6.9 bar |
| Thrust Force @ 80psi/5.5bar.. | 57 lbs. | 254 N |
| Weight (Basic Unit)..... | 5.19 lbs. | 2.4 kg |
| Additional Weight per Stroke .. | 0.19 lbs./in. | 3.3g/mm |
| Cylinder Bore Diameter | 1.0" | 25mm |
| Shaft Diameter | .630" | 16mm |

Accessory Mounting Technical Data



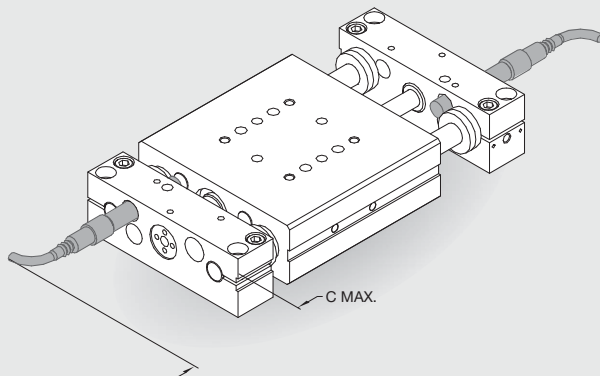
Shock Absorbers

- Full stroking piston rod
- Built-in hard stop
- Allen wrench adjustable



Adjustable Hard Stops

- For precision (+/- .001") hard stop end point positioning
- Allows for stop adjustment independent of shock absorber hard stop
- Allen wrench adjustable

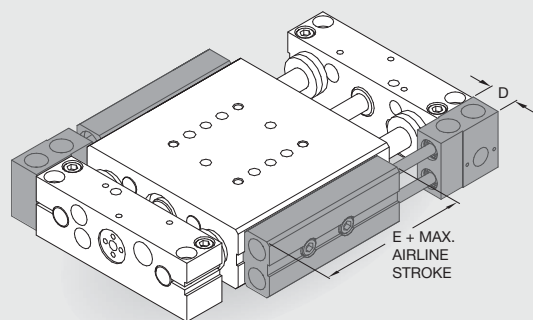


Inductive Proximity Sensors

- 8mm diameter
- Threaded quick disconnect with built-in LED output
- PNP and NPN available

Quick Disconnect Cable

- Threaded coupling with knurled head for secure electrical connections
- 2 meter cable length
- 5 meter cable length



Telescoping Airlines

- Eliminate flexing air lines
- Self aligning air tube design extends useful seal life
- Modular stackable design. Up to (4) modules can be stacked
- Modules can be mounted on either side of slide
- 1/8 NPT or G1/8 pipe threads
- (2) user air ports per module

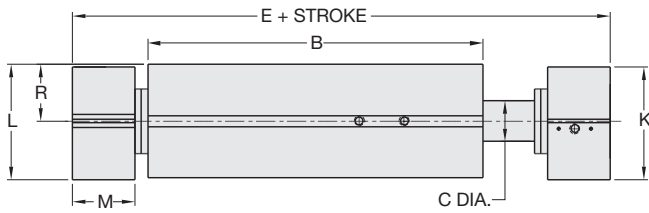
Flow Controls for Cylinders

- Thumb screw adjust with locking nut for adjusting cylinder speed
- #10-32 or M5 pipe threads

| | A | B | C | D | E |
|---------|--------|------|------|------|------|
| DLB-10 | .70" | .47 | 2.5 | .577 | 3.60 |
| DLB-12 | .95" | .47 | 2.5 | .577 | 3.60 |
| DLB-16 | .95" | .47 | 2.5 | .577 | 3.60 |
| DLB-10M | 17.8mm | 11.9 | 63.5 | 14.7 | 91.4 |
| DLB-12M | 24.1mm | 11.9 | 63.5 | 14.7 | 91.4 |
| DLB-16M | 24.1mm | 11.9 | 63.5 | 14.7 | 91.4 |

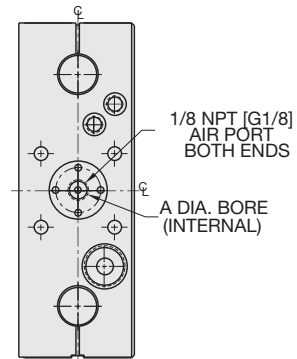
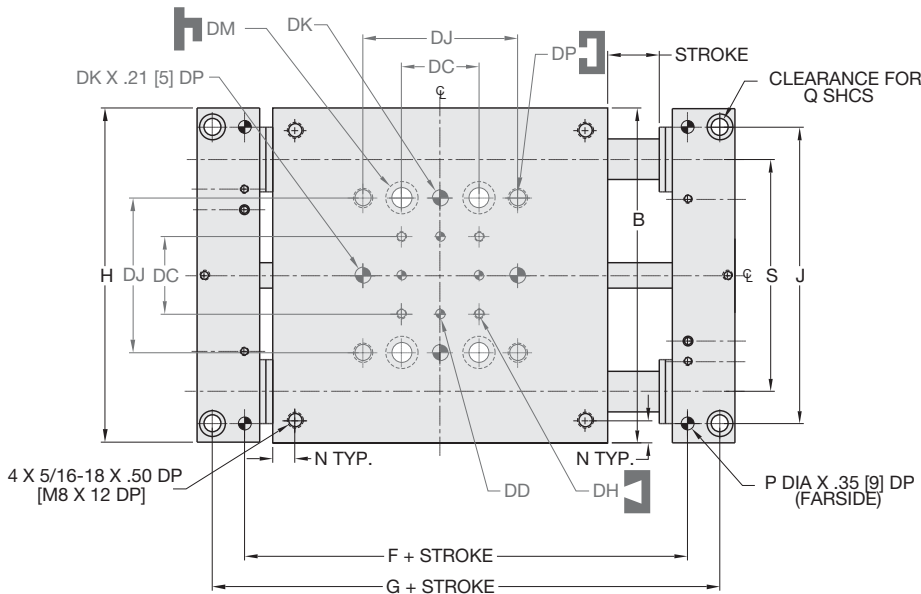


SHORT BODY SLIDE DLB -20M, 25M -B BUILT-IN REPAIRABLE CYLINDER



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

| | | |
|---|--|--|
| Dimensions are symmetrical about centerline | Third Angle Projection | All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or (±.013mm) |
| Metric Threads Course Pitch | Imperial in. 0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005 | Metric [mm] [0.] = ±.25 [0.0] = ±.13 [0.00] = ±.013 |



TYPICAL BOTH ENDS

DLB SERIES

4.12

DIRECTCONNECT DIMENSIONS STANDARD MOUNTING PATTERN FOR ALL SIZES

| MODEL # | BORE DIA. | | BODY SIZE | | SHAFT DIA. | | | | | | | | | | | | |
|---------|-----------|-------|-----------|-------|------------|--------|-------|--------|-------|-------|-------|------|-------|------|-------|--------|--|
| | A | B | C | E | F | G | H | J | K | L | M | N | P | Q | R | S | |
| DLB-20 | 1 1/2 | 6.50 | .787 | 9.42 | 7.5850 | 8.836 | 6.480 | 5.7500 | 2.180 | 2.236 | 1.210 | .438 | .2505 | 1/16 | 1.100 | 4.500 | |
| DLB-25 | 1 1/2 | 7.50 | .984 | 10.84 | 8.7320 | 10.108 | 7.480 | 6.7500 | 2.180 | 2.236 | 1.420 | .438 | .3130 | 3/8 | 1.100 | 5.250 | |
| DLB-20M | 38 | 165.1 | 20 | 239.3 | 192.66 | 224.4 | 164.6 | 146.05 | 55.4 | 56.8 | 30.7 | 11.1 | 6.00 | M8 | 27.94 | 114.30 | |
| DLB-25M | 38 | 190.5 | 25 | 275.3 | 221.79 | 256.7 | 190.0 | 171.45 | 55.4 | 56.8 | 36.1 | 11.1 | 8.00 | M10 | 27.94 | 133.35 | |

| | Imperial (inches) | Metric (mm) |
|----|----------------------|----------------------|
| DC | 1.500 | 38.1 |
| DD | .1880 X .25 DP | 5 mm H7 X 6 DP |
| DH | #10-32 X .34 DP | M5 X 8.5 DP |
| DJ | 3.000 | 76.2 |
| DK | .3130 X .37 DP | 8 mm H7 X 9.4 DP |
| DM | Clr & C'bore for 3/8 | Clr & C'bore for M10 |
| DP | 3/8-16 X .50 DP | M10 X 12 DP |

How to Order: Basic Unit

BASIC MODEL METRIC STYLE STROKE SHAFTING

DLB - **M** - **B** - - - **V** - **S**

SIZE

BEARING

VITON® SEALS

SIZE **20, 25**

METRIC **M**

STYLE **B** Short body slide with built-in repairable cylinder

BEARING **B** Linear ball bearings

C Composite bushings

STROKE (inches)

DLB-20 **1-4** @ 1" increments

DLB-25 **1-5** @ 1" increments

Custom strokes available.
Please consult factory.

STROKE (mm)

DLB-20M **25, 50, 80, 100**

DLB-25M **25, 50, 80, 100, 125**

VITON® **V** Viton® seals

SHAFTING **S** Corrosion resistant shafting

Accessories: (Order Separately)

SHOCK/STOP ACCESSORIES

Shock Absorber (adjustable dampening)
Adjustable Hard Stop

| | DLB-20M | DLB-25M | QTY/SLIDE |
|-----------------|-----------------|-----------------|---------------|
| SHOK-029 | SHOK-029 | SHOK-029 | 1 or 2 |
| DLT-1023 | DLT-1023 | DLT-1023 | 1 or 2 |

INDUCTIVE SENSOR Accessories†

Inductive Sensor PNP Qk. Disconnect
Inductive Sensor NPN Qk. Disconnect
Quick. Disconnect 2M Cable Length
Quick. Disconnect 5M Cable Length

| | DLB-20M | DLB-25M | QTY/SLIDE |
|-----------------|-----------------|-----------------|---------------|
| OISP-011 | OISP-011 | OISP-011 | 1 or 2 |
| OISN-011 | OISN-011 | OISN-011 | 1 or 2 |
| CABL-010 | CABL-010 | CABL-010 | 1 or 2 |
| CABL-013 | CABL-013 | CABL-013 | 1 or 2 |

PNEUMATIC Accessories

1/8 NPT Telescopic Airlines (up to 4")
1/8 NPT Telescopic Airlines (up to 5")
1/8 NPT Adjustable Flow Control
G1/8 Telescopic Airlines (up to 100mm)
G1/8 Telescopic Airlines (up to 125mm)
G1/8 Adjustable Flow Control
Cylinder Seal Repair Kit
Viton® Cylinder Seal Repair Kit

| | DLB-20M | DLB-25M | QTY/SLIDE |
|------------------|------------------|------------------|---------------------|
| OTAL-049 | OTAL-049 | OTAL-049 | 1, 2, 3 or 4 |
| OTAL-050 | OTAL-050 | OTAL-050 | 1, 2, 3 or 4 |
| VLVF-004 | VLVF-004 | VLVF-004 | 1 or 2 |
| OTAL-051 | OTAL-051 | OTAL-051 | 1, 2, 3 or 4 |
| OTAL-052 | OTAL-052 | OTAL-052 | 1, 2, 3 or 4 |
| VLVF-005 | VLVF-005 | VLVF-005 | 1 or 2 |
| SLKT-105 | SLKT-105 | SLKT-105 | 1 |
| SLKT-105V | SLKT-105V | SLKT-105V | 1 |

†Sensor and cable sold separately

SAMPLE ORDER: DLB-20-B-C-3-V

Ex: Base Slide, Size 20, Short Body Style w/Built-in Cylinder, Composite Bushings, 3 Inch Stroke, Viton® Seals

DIRECTCONNECT

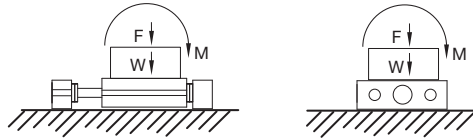


SHORT BODY SLIDE DLB -20M, 25M -B BUILT-IN REPAIRABLE CYLINDER

Loading Specifications Table - Style DLB-20M, 25M -B

| | 20 | 20M | 25 | 25M |
|---|--------------|----------|---------------|-----------|
| Maximum Payload (W) horizontal motion using Shock Absorbers | 60 lbs. | 27.2 kg | 100 lbs. | 45.3 kg |
| Maximum Payload (W) vertical motion using Shock Absorbers | 30 lbs. | 13.6 kg | 50 lbs. | 22.0 kg |
| Maximum Payload (W) horizontal motion using Urethane Bumpers | 20 lbs. | 9.1 kg | 25 lbs. | 11.3 kg |
| Maximum Total Applied Load + Payload (F+W) | 100 lbs. | 444 N | 150 lbs. | 667 N |
| Total Maximum Moment about any Axis (M) | 600 in.-lbs. | 67.7 N-m | 1200 in.-lbs. | 135.5 N-m |

F=Externally applied force
W=Weight of payload
F+W=Total force
M=Maximum moment

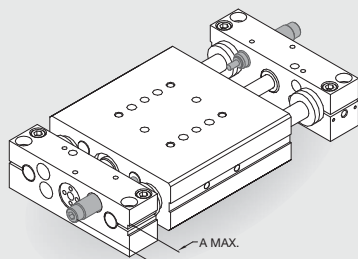


Shock Absorbers and Flow Controls are recommended for nearly all applications

| Specifications | DLB-20 | DLB-20M |
|------------------------------|---------------|----------|
| Maximum Air Pressure | 100 psi | 6.9 bar |
| Thrust Force @ 80psi/5.5bar | 126 lbs. | 560 N |
| Weight (Basic Unit) | 13.0 lbs. | 5.9 kg |
| Additional Weight per Stroke | 0.32 lbs./in. | 5.54g/mm |
| Cylinder Bore Diameter | 1-1/2" | 38mm |
| Shaft Diameter | 0.787" | 20mm |

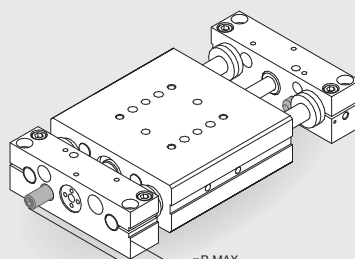
| Specifications | DLB-25 | DLB-25M |
|------------------------------|---------------|---------|
| Maximum Air Pressure | 100 psi | 6.9 bar |
| Thrust Force @ 80psi/5.5bar | 126 lbs. | 560 N |
| Weight (Basic Unit) | 18.2 lbs. | 8.2 kg |
| Additional Weight per Stroke | 0.47 lbs./in. | 8.4g/mm |
| Cylinder Bore Diameter | 1-1/2" | 38mm |
| Shaft Diameter | 0.984" | 25mm |

Accessory Mounting Technical Data



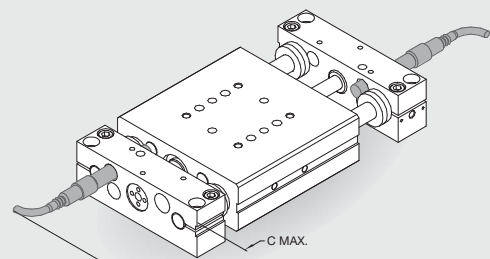
Shock Absorbers

- Full stroking piston rod
- Built-in hard stop
- Position adjustable
- Adjustable dampening



Adjustable Hard Stops

- For precision (+/- .001") hard stop end point positioning
- Allows for stop adjustment independent of shock absorber hard stop
- Allen wrench adjustable

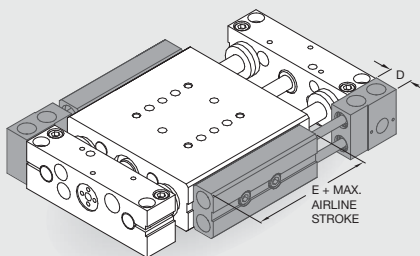


Inductive Proximity Sensors

- 8mm diameter
- Threaded quick disconnect with built-in LED output
- PNP and NPN available

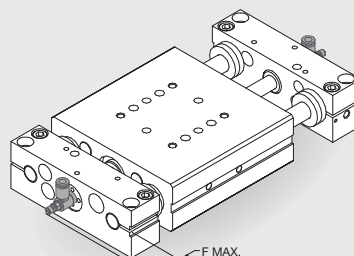
Quick Disconnect Cable

- Threaded coupling with knurled head for secure electrical connections
- 2 meter cable length
- 5 meter cable length



Telescoping Airlines

- Eliminate flexing air lines
- Self aligning air tube design extends useful seal life
- Modular stackable design. Up to (4) modules can be stacked
- Modules can be mounted on either side of slide
- 1/8 NPT or G1/8 pipe threads
- (2) user air ports per module



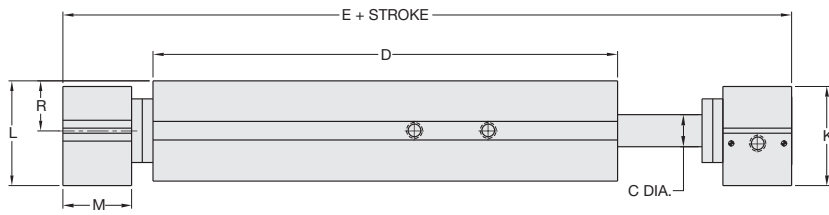
Flow Controls for Cylinders

- Thumb screw adjust with locking nut for adjusting cylinder speed
- 1/8 NPT or G1/8 pipe threads

| | A | B | C | D | E | F |
|---------|--------|-----|------|------|------|------|
| DLB-20 | 2.03" | .10 | 2.1 | .577 | 3.60 | 1.25 |
| DLB-25 | 1.82" | .10 | 1.9 | .577 | 3.60 | 1.25 |
| DLB-20M | 51.6mm | 2.5 | 53.8 | 14.7 | 91.4 | 31.8 |
| DLB-25M | 46.2mm | 2.5 | 48.3 | 14.7 | 91.4 | 31.8 |



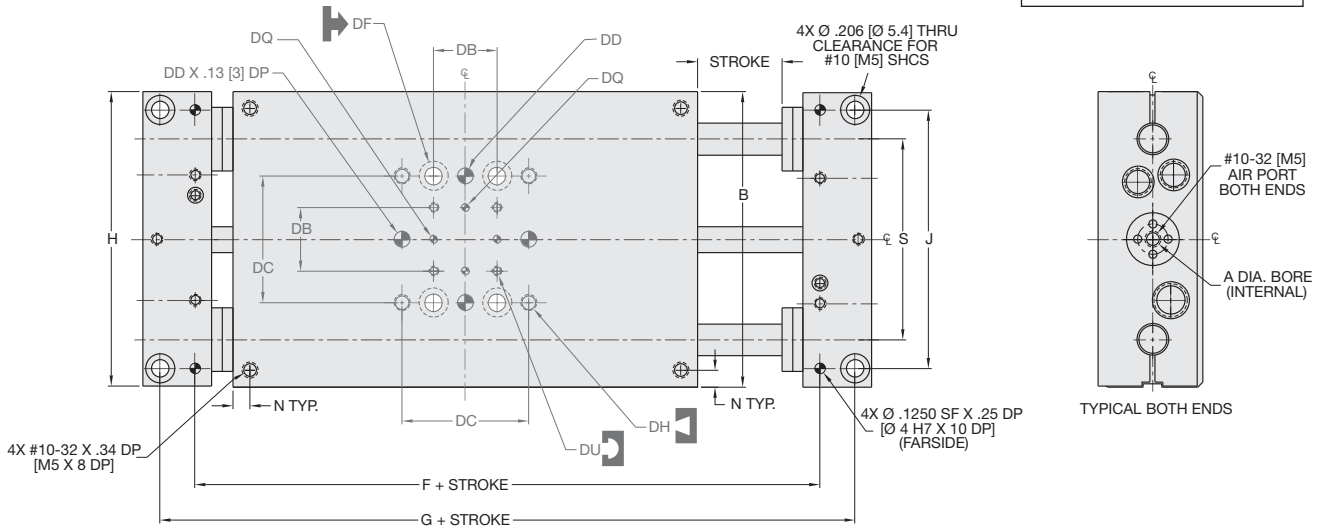
LONG BODY SLIDE DLB -10M, 12M, 16M -L BUILT-IN REPAIRABLE CYLINDER



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

- Dimensions are symmetrical about centerline
- Third Angle Projection
- All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]
- Metric Threads Course Pitch

| Imperial in. | Metric [mm] |
|-----------------|------------------|
| 0.00 = ±.01 | [0.] = [±.25] |
| 0.000 = ±.005 | [0.0] = [±.13] |
| 0.0000 = ±.0005 | [0.00] = [±.013] |



DLB SERIES

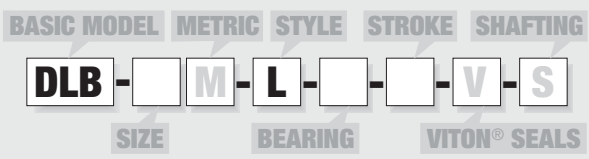
4.14

DIRECTCONNECT DIMENSIONS STANDARD MOUNTING PATTERN FOR ALL SIZES

| MODEL # | BORE DIA. | | C | BODY SIZE | | | | SHAFT DIA. | | | | BASIC UNIT DIMENSIONS | | | |
|---------|-----------|-------|------|-----------|-------|--------|-------|------------|--------|-------|-------|-----------------------|------|-------|-------|
| | A | B | | D | E | F | G | H | J | K | L | M | N | R | S |
| DLB-10 | 3/4 | 3.50 | .375 | 5.50 | 7.63 | 6.3975 | 7.228 | 3.485 | 3.0600 | 1.178 | 1.245 | .813 | N/A | .594 | 2.375 |
| DLB-12 | 1 | 4.00 | .472 | 6.50 | 8.63 | 7.3975 | 8.228 | 3.985 | 3.5000 | 1.615 | 1.657 | .813 | .375 | .813 | 2.750 |
| DLB-16 | 1 | 4.75 | .630 | 7.50 | 9.63 | 8.3975 | 9.228 | 4.735 | 4.2500 | 1.615 | 1.657 | .813 | .375 | .813 | 3.250 |
| DLB-10M | 19 | 88.9 | 9.5 | 139.7 | 193.8 | 162.50 | 183.6 | 88.5 | 77.72 | 29.9 | 31.6 | 20.7 | N/A | 15.09 | 60.33 |
| DLB-12M | 25 | 101.6 | 12 | 165.1 | 219.2 | 187.90 | 209.0 | 101.2 | 88.90 | 41.0 | 42.1 | 20.7 | 9.5 | 20.65 | 69.85 |
| DLB-16M | 25 | 120.7 | 16 | 190.5 | 244.6 | 213.30 | 234.4 | 120.3 | 107.95 | 41.0 | 42.1 | 20.7 | 9.5 | 20.65 | 82.55 |

| | Imperial (inches) | Metric (mm) |
|----|-------------------|------------------|
| DB | .750 | 19.1 |
| DC | 1.500 | 38.1 |
| DD | .1880 X .25 DP | 5mm H7 X 6 DP |
| DF | Clearance for #10 | Clearance for M5 |
| DH | #10-32 X .34DP | M5 X 8.5DP |
| DQ | .0940 X .078 DP | 3H7 X 2 DP |
| DU | #4-40 X .25 DP | M3 X 6 DP |

How to Order: Basic Unit



- SIZE** 10, 12, 16
- METRIC** M
- STYLE** L Long body slide with built-in repairable cylinder
- BEARING** B Linear ball bearings
C Composite bushings
- STROKE** (inches)
DLB-10 1-4 @ 1" increments
DLB-12 1-5 @ 1" increments
DLB-16 1-6 @ 1" increments
- STROKE** (mm)
DLB-10M 25, 50, 80, 100
DLB-12M 25, 50, 80, 100, 125
DLB-16M 25, 50, 80, 100, 125, 150
- VITON®** V Viton® seals
- SHAFTING** S Corrosion resistant shafting

Custom strokes available.
Please consult factory.

Accessories: (Order Separately)

| | DLB-10M | DLB-12M | DLB-16M | QTY/SLIDE |
|--|-----------|-----------|-----------|--------------|
| SHOCK/STOP ACCESSORIES | | | | |
| Shock Absorber | SHOK-028 | SHOK-010 | SHOK-010 | 1 or 2 |
| Adjustable Hard Stop | DLT-1023 | DLT-1023 | DLT-1023 | 1 or 2 |
| INDUCTIVE SENSOR ACCESSORIES† | | | | |
| Inductive Sensor PNP Qk. Disconnect | OISP-011 | OISP-011 | OISP-011 | 1 or 2 |
| Inductive Sensor NPN Qk. Disconnect | OISN-011 | OISN-011 | OISN-011 | 1 or 2 |
| Quick. Disconnect 2M Cable Length | CABL-010 | CABL-010 | CABL-010 | 1 or 2 |
| Quick. Disconnect 2M Cable Length | CABL-013 | CABL-013 | CABL-013 | 1 or 2 |
| PNEUMATIC ACCESSORIES | | | | |
| 1/8 NPT Telescopic Airlines (up to 4") | OTAL-049 | OTAL-049 | OTAL-049 | 1, 2, 3 or 4 |
| 1/8 NPT Telescopic Airlines (up to 5") | OTAL-050 | OTAL-050 | OTAL-050 | 1, 2, 3 or 4 |
| 1/8 NPT Telescopic Airlines (up to 6") | OTAL-039 | OTAL-039 | OTAL-039 | 1, 2, 3 or 4 |
| #10-32 Adjustable Flow Control | VLVF-007 | VLVF-007 | VLVF-007 | 1 or 2 |
| G1/8 Telescopic Airlines (up to 100mm) | OTAL-051 | OTAL-051 | OTAL-051 | 1, 2, 3 or 4 |
| G1/8 Telescopic Airlines (up to 125mm) | OTAL-052 | OTAL-052 | OTAL-052 | 1, 2, 3 or 4 |
| G1/8 Telescopic Airlines (up to 160mm) | OTAL-045 | OTAL-045 | OTAL-045 | 1, 2, 3 or 4 |
| M5 Adjustable Flow Control | VLVF-008 | VLVF-008 | VLVF-008 | 1 or 2 |
| Cylinder Seal Repair Kit | SLKT-101 | SLKT-103 | SLKT-103 | 1 |
| Viton® Cylinder Seal Repair Kit | SLKT-101V | SLKT-103V | SLKT-103V | 1 |

SAMPLE ORDER: DLB-12M-L-C-25-V
Ex: Base Slide, Size 12 Metric, Long Body Style w/Built-in Cylinder, Composite Bushings, 25mm Stroke, Viton® Seals

DIRECTCONNECT

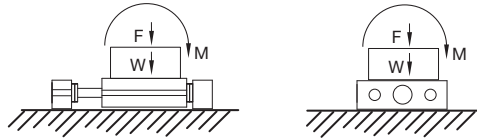


LONG BODY SLIDE DLB -10M, 12M, 16M -L BUILT-IN REPAIRABLE CYLINDER

Loading Specifications Table - Style DLB -010M, 12M, 16M -L

| | 10 | 10M | 12 | 12M | 16 | 16M |
|---|-------------|---------|--------------|----------|--------------|----------|
| Maximum Payload (W) horizontal motion w/Shock Absorbers | 15 lbs. | 6.8 kg | 30 lbs. | 13.6 kg | 45 lbs. | 20.4 kg |
| Maximum Payload (W) vertical motion w/Shock Absorbers | 7 lbs. | 3.1 kg | 15 lbs. | 6.8 kg | 22 lbs. | 9.9 kg |
| Maximum Payload (W) horizontal motion w/Urethane Bumpers | 5 lbs. | 2.2 kg | 10 lbs. | 4.5 kg | 15 lbs. | 6.8 kg |
| Maximum Total Applied Load + Payload (F+W) | 25 lbs. | 111 N | 40 lbs. | 178 N | 70 lbs. | 311N |
| Total Maximum Moment about any Axis (M) | 75 in.-lbs. | 8.4 N-m | 150 in.-lbs. | 16.9 N-m | 300 in.-lbs. | 33.9 N-m |

F=Externally applied force
W=Weight of payload
F+W=Total force
M=Maximum moment



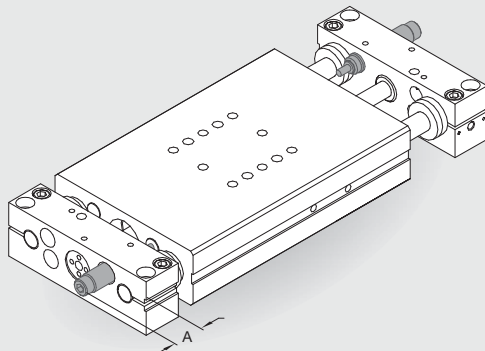
Shock Absorbers and Flow Controls are recommended for nearly all applications

| Specifications | DLB-10 | DLB-10M |
|---------------------------------|---------------|---------|
| Maximum Air Pressure | 100 psi | 6.9 bar |
| Thrust Force @ 80psi/5.5bar.. | 29 lbs. | 129 N |
| Weight (Basic Unit)..... | 3.34 lbs. | 1.5 kg |
| Additional Weight per Stroke .. | 0.08 lbs./in. | 1.4g/mm |
| Cylinder Bore Diameter | 3/4" | 19mm |
| Shaft Diameter | 0.375" | 9.5mm |

| Specifications | DLB-12 | DLB-12M |
|---------------------------------|---------------|---------|
| Maximum Air Pressure | 100 psi | 6.9 bar |
| Thrust Force @ 80psi/5.5bar.. | 57 lbs. | 254 N |
| Weight (Basic Unit)..... | 5.13 lbs. | 2.3 kg |
| Additional Weight per Stroke .. | 0.12 lbs./in. | 2.1g/mm |
| Cylinder Bore Diameter | 1.0" | 25mm |
| Shaft Diameter | 0.472" | 12mm |

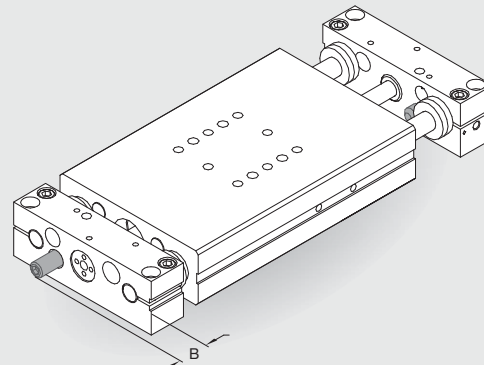
| Specifications | DLB-16 | DLB-16M |
|---------------------------------|---------------|---------|
| Maximum Air Pressure | 100 psi | 6.9 bar |
| Thrust Force @ 80psi/5.5bar.. | 57 lbs. | 254 N |
| Weight (Basic Unit)..... | 7.30 lbs. | 3.3 kg |
| Additional Weight per Stroke .. | 0.19 lbs./in. | 3.3g/mm |
| Cylinder Bore Diameter | 1.0" | 25mm |
| Shaft Diameter | 0.630" | 16mm |

Accessory Mounting Technical Data



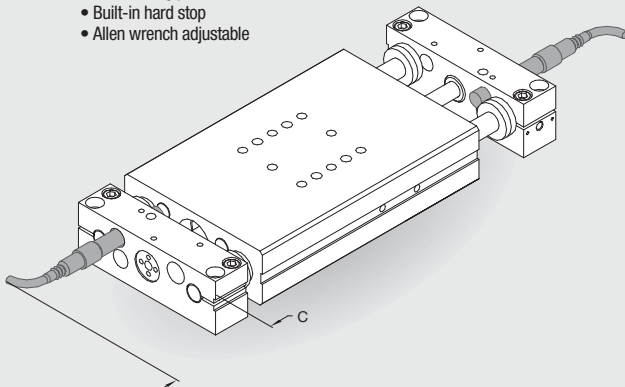
Shock Absorbers

- Full stroking piston rod
- Built-in hard stop
- Allen wrench adjustable



Adjustable Hard Stops

- For precision (+/- .001") hard stop end point positioning
- Allows for stop adjustment independent of shock absorber hard stop
- Allen wrench adjustable

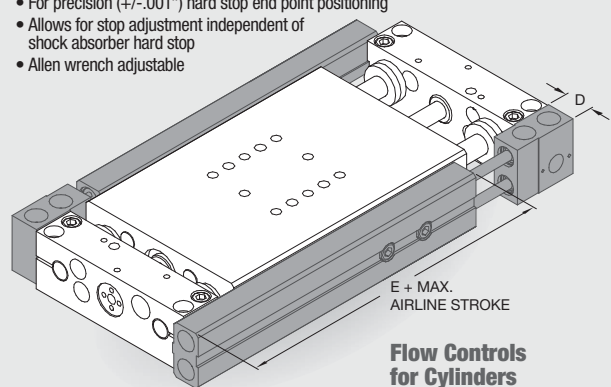


Inductive Proximity Sensors

- 8mm diameter
- Threaded quick disconnect with built-in LED output
- PNP and NPN available

Quick Disconnect Cable

- Threaded coupling with knurled head for secure electrical connections
- 2 meter cable length
- 5 meter cable length



Telescoping Airlines

- Eliminate flexing air lines
- Self aligning air tube design extends useful seal life
- Modular stackable design. Up to (4) modules can be stacked
- Modules can be mounted on either side of slide
- 1/8 NPT or G1/8 pipe threads
- (2) user air ports per module

Flow Controls for Cylinders

- Thumb screw adjust with locking nut for adjusting cylinder speed
- #10-32 or M5 pipe threads

| | A | B | C | D | E |
|---------|--------|------|------|------|------|
| DLB-10 | .70" | .47 | 2.5 | .577 | 3.60 |
| DLB-12 | .95" | .47 | 2.5 | .577 | 3.60 |
| DLB-16 | .95" | .47 | 2.5 | .577 | 3.60 |
| DLB-10M | 17.8mm | 11.9 | 63.5 | 14.7 | 91.4 |
| DLB-12M | 24.1mm | 11.9 | 63.5 | 14.7 | 91.4 |
| DLB-16M | 24.1mm | 11.9 | 63.5 | 14.7 | 91.4 |

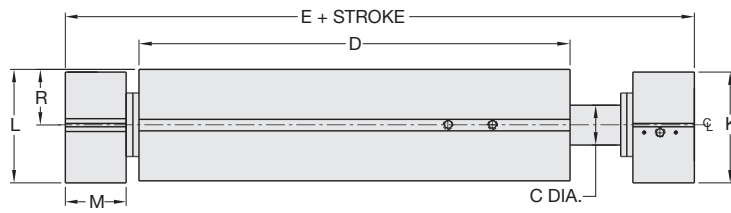


DLB SERIES

4.15

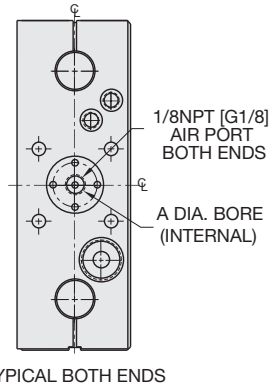
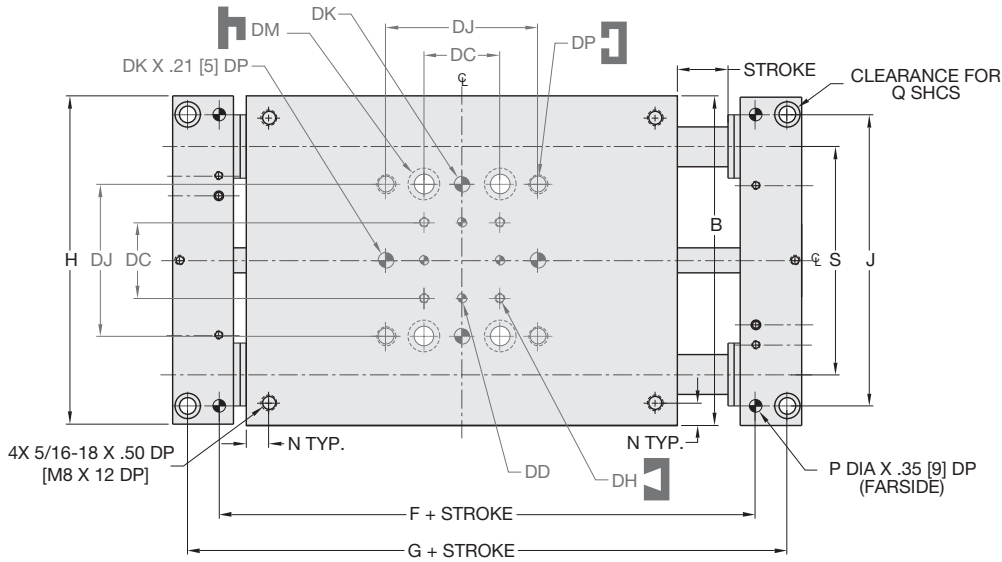
DIRECTCONNECT™

LONG BODY SLIDE DLB -20M, 25M -L BUILT-IN REPAIRABLE CYLINDER



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

| | | |
|---|---|--|
| | | |
| Dimensions are symmetrical about centerline | Third Angle Projection | All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or (±.013mm) |
| | Imperial in. | Metric [mm] |
| Metric Threads Course Pitch | 0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005 | 0.0 = ±.25 0.01 = ±.13 0.001 = ±.013 |



DLB SERIES

4.16

| MODEL # | BORE DIA. | | BODY SIZE | | SHAFT DIA. | | | | | | | | | | | | |
|---------|-----------|-------|-----------|-------|------------|---------|--------|-------|--------|-------|-------|-------|------|-------|------|-------|--------|
| | A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | S |
| DLB-20 | 1/2 | 6.50 | .787 | 8.50 | 11.42 | 9.5850 | 10.836 | 6.480 | 5.7500 | 2.180 | 2.236 | 1.210 | .438 | .2505 | 1/16 | 1.100 | 4.500 |
| DLB-25 | 1/2 | 7.50 | .984 | 9.50 | 12.84 | 10.7320 | 12.108 | 7.480 | 6.7500 | 2.180 | 2.236 | 1.420 | .438 | .3130 | 1/8 | 1.100 | 5.250 |
| DLB-20M | 38 | 165.1 | 20 | 215.9 | 290.1 | 243.46 | 275.2 | 164.6 | 146.05 | 55.4 | 56.8 | 30.7 | 11.1 | 6.00 | M8 | 27.94 | 114.30 |
| DLB-25M | 38 | 190.5 | 25 | 241.3 | 326.1 | 272.59 | 307.5 | 190.0 | 171.45 | 55.4 | 56.8 | 36.1 | 11.1 | 8.00 | M10 | 27.94 | 133.35 |

DIRECTCONNECT DIMENSIONS
STANDARD MOUNTING PATTERN FOR ALL SIZES

| | Imperial (inches) | Metric (mm) |
|----|----------------------|----------------------|
| DC | 1.500 | 38.1 |
| DD | .1880 X .25 DP | 5 mm H7 X 6 DP |
| DH | #10-32 X .34 DP | M5 X 8.5 DP |
| DJ | 3.000 | 76.2 |
| DK | .3130 X .37 DP | 8 mm H7 X 9.4 DP |
| DM | Clr & C'bore for 3/8 | Clr & C'bore for M10 |
| DP | 3/8-16 X .50 DP | M10 X 12 DP |

How to Order: Basic Unit

BASIC MODEL **METRIC** **STYLE** **STROKE** **SHAFTING**

DLB - - **M** - **L** - - - **V** - **S**

SIZE **BEARING** **VITON® SEALS**

SIZE 20, 25
METRIC M
STYLE L Long body slide with built-in repairable cylinder
BEARING B Linear ball bearings
C Composite bushings
STROKE (inches)
DLB-20 1-6 @ 1" increments Custom strokes available.
DLB-25 1-7 @ 1" increments Please consult factory.
STROKE (mm)
DLB-20M 25, 50, 80, 100, 125, 160
DLB-25M 25, 50, 80, 100, 125, 160, 175
VITON® V Viton® seals
SHAFTING S Corrosion resistant shafting

Accessories: (Order Separately)

| | DLB-20M | DLB-25M | QTY/SLIDE |
|---|-----------|-----------|--------------|
| SHOCK/STOP ACCESSORIES | | | |
| Shock Absorber (adjustable dampening) | SHOK-029 | SHOK-029 | 1 or 2 |
| Adjustable Hard Stop | DLT-1023 | DLT-1023 | 1 or 2 |
| INDUCTIVE SENSOR ACCESSORIES† | | | |
| Inductive Sensor PNP Qk. Disconnect | OISP-011 | OISP-011 | 1 or 2 |
| Inductive Sensor NPN Qk. Disconnect | OISN-011 | OISN-011 | 1 or 2 |
| Quick. Disconnect 2M Cable Length | CABL-010 | CABL-010 | 1 or 2 |
| Quick. Disconnect 5M Cable Length | CABL-013 | CABL-013 | 1 or 2 |
| PNEUMATIC ACCESSORIES | | | |
| 1/8 NPT Telescopic Airlines (up to 6") | OTAL-039 | OTAL-039 | 1, 2, 3 or 4 |
| 1/8 NPT Telescopic Airlines (up to 12") | OTAL-040 | OTAL-040 | 1, 2, 3 or 4 |
| 1/8 NPT Adjustable Flow Control | VLVF-004 | VLVF-004 | 1 or 2 |
| G1/8 Telescopic Airlines (up to 160mm) | OTAL-045 | OTAL-045 | 1, 2, 3 or 4 |
| G1/8 Telescopic Airlines (up to 300mm) | OTAL-046 | OTAL-046 | 1, 2, 3 or 4 |
| G1/8 Adjustable Flow Control | VLVF-005 | VLVF-005 | 1 or 2 |
| Cylinder Seal Repair Kit | SLKT-105 | SLKT-105 | 1 |
| Viton® Cylinder Seal Repair Kit | SLKT-105V | SLKT-105V | 1 |

†Sensor and cable sold separately

SAMPLE ORDER: DLB-20M-L-C-80-V

Ex: Base Slide, Size 20 Metric, Long Body Style w/Built-in Cylinder, Composite Bushings, 80mm Stroke, Viton® Seals

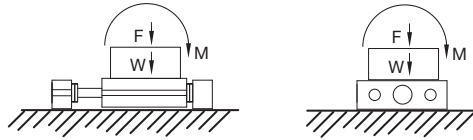


LONG BODY SLIDE DLB -20M, 25M -L BUILT-IN REPAIRABLE CYLINDER

Loading Specifications Table - Style DLB -20M, 25M -L

| | 20 | 20M | 25 | 25M |
|---|--------------|----------|---------------|-----------|
| Maximum Payload (W) horizontal motion using Shock Absorbers | 60 lbs. | 27.2 kg | 100 lbs. | 45.3 kg |
| Maximum Payload (W) vertical motion using Shock Absorbers | 30 lbs. | 13.6 kg | 50 lbs. | 22.0 kg |
| Maximum Payload (W) horizontal motion using Urethane Bumpers | 20 lbs. | 9.1 kg | 25 lbs. | 11.3 kg |
| Maximum Total Applied Load + Payload (F+W) | 100 lbs. | 444 N | 150 lbs. | 667 N |
| Total Maximum Moment about any Axis (M) | 600 in.-lbs. | 67.7 N-m | 1200 in.-lbs. | 135.5 N-m |

F=Externally applied force
W=Weight of payload
F+W=Total force
M=Maximum moment

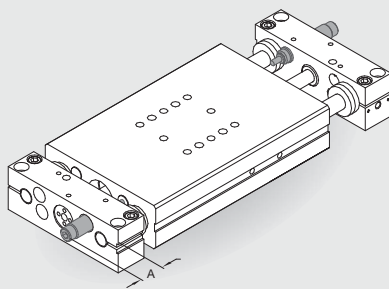


Shock Absorbers and Flow Controls are recommended for nearly all applications

| Specifications | DLB-20 | DLB-20M |
|------------------------------|---------------|---------|
| Maximum Air Pressure | 100 psi | 6.9 bar |
| Thrust Force @ 80psi/5.5bar | 126 lbs. | 560 N |
| Weight (Basic Unit) | 15.6 lbs. | 7.1 kg |
| Additional Weight per Stroke | 0.32 lbs./in. | 5.6g/mm |
| Cylinder Bore Diameter | 1-1/2" | 38mm |
| Shaft Diameter | 0.787" | 20mm |

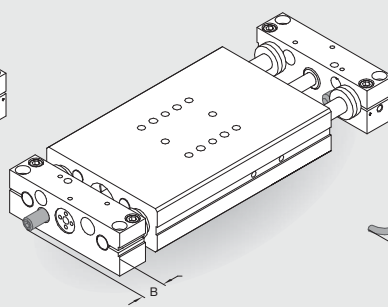
| Specifications | DLB-25 | DLB-25M |
|------------------------------|---------------|---------|
| Maximum Air Pressure | 100 psi | 6.9 bar |
| Thrust Force @ 80psi/5.5bar | 126 lbs. | 560 N |
| Weight (Basic Unit) | 21.4 lbs. | 9.7 kg |
| Additional Weight per Stroke | 0.47 lbs./in. | 8.4g/mm |
| Cylinder Bore Diameter | 1-1/2" | 38mm |
| Shaft Diameter | 0.984" | 25mm |

Accessory Mounting Technical Data



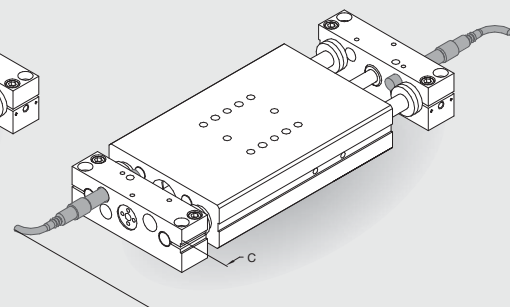
Shock Absorbers

- Full stroking piston rod
- Built-in hard stop
- Position adjustable
- Adjustable dampening



Adjustable Hard Stops

- For precision (+/- .001") hard stop end point positioning
- Allows for stop adjustment independent of shock absorber hard stop
- Allen wrench adjustable

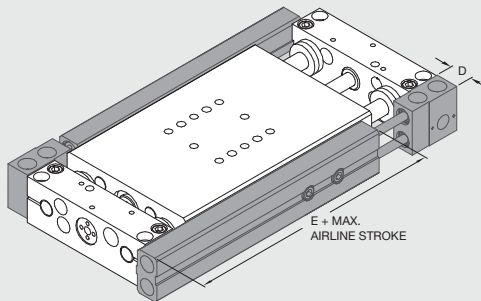


Inductive Proximity Sensors

- 8mm diameter
- Threaded quick disconnect with built-in LED output
- PNP and NPN available

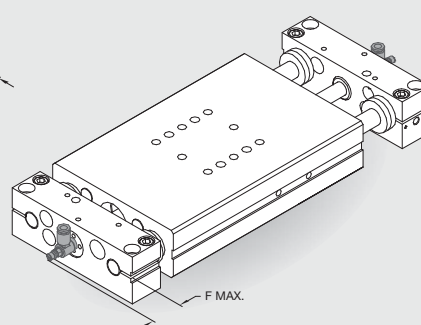
Quick Disconnect Cable

- Threaded coupling with knurled head for secure electrical connections
- 2 meter cable length
- 5 meter cable length



Telescoping Airlines

- Eliminate flexing air lines
- Self aligning air tube design extends useful seal life
- Modular stackable design. Up to (4) modules can be stacked
- Modules can be mounted on either side of slide
- 1/8 NPT or G1/8 pipe threads
- (2) user air ports per module

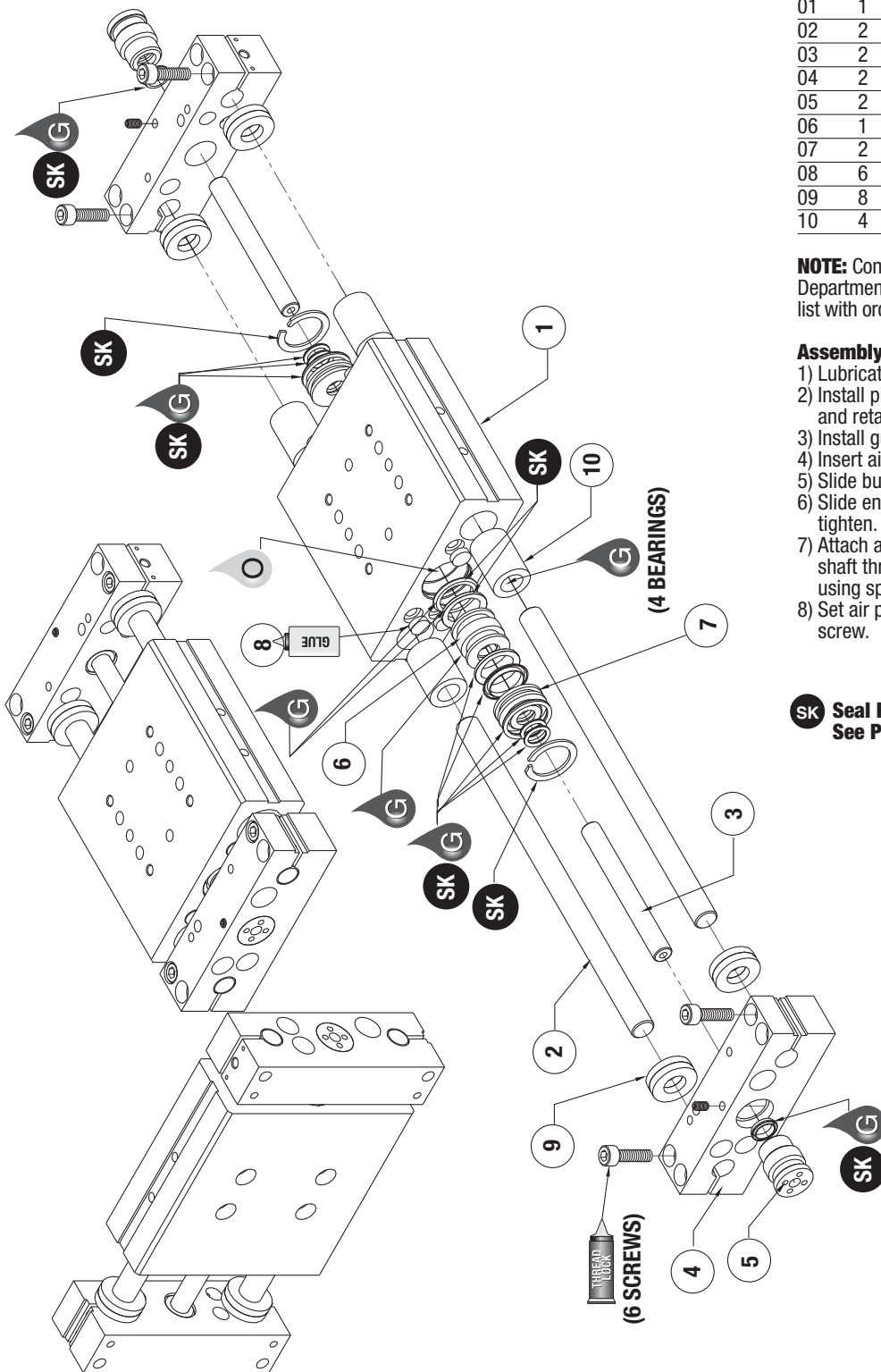


Flow Controls for Cylinders

- Thumb screw adjust with locking nut for adjusting cylinder speed
- 1/8 NPT or G1/8 pipe threads

| | A | B | C | D | E | F |
|---------|--------|-----|------|------|------|------|
| DLB-20 | 2.03" | .10 | 2.1 | .577 | 3.60 | 1.25 |
| DLB-25 | 1.82" | .10 | 1.9 | .577 | 3.60 | 1.25 |
| DLB-20M | 51.6mm | 2.5 | 53.8 | 14.7 | 91.4 | 31.8 |
| DLB-25M | 46.2mm | 2.5 | 48.3 | 14.7 | 91.4 | 31.8 |





| Item | Qty | Name |
|------|-----|-----------------------------|
| 01 | 1 | Body |
| 02 | 2 | Guide Shaft |
| 03 | 2 | Air Tube |
| 04 | 2 | End Block |
| 05 | 2 | Adapter, Internally Powered |
| 06 | 1 | Piston |
| 07 | 2 | Cap, Rod End |
| 08 | 6 | Stop Button |
| 09 | 8 | Shock Pad, Urethane |
| 10 | 4 | Bushing |

NOTE: Contact the Robohand Sales Department for a complete spare parts list with order numbers and prices.

Assembly Procedure

- 1) Lubricate and install seals.
- 2) Install piston, air shafts, bearings, caps, and retainer rings into body.
- 3) Install guide shafts into bearings.
- 4) Insert air shafts to piston.
- 5) Slide bumpers onto shaft ends.
- 6) Slide end blocks onto shaft ends and tighten.
- 7) Attach air port adapter to end of each air shaft through center of each end block using spanner wrench.
- 8) Set air port adapters into places with set screw.

SK Seal Repair Kit Order #'s See Product Data Sheets



Seal Kit Items



Thread Locker



Krytox™ Lubricant



Lightweight Machine Oil



Teflon™ Based Grease

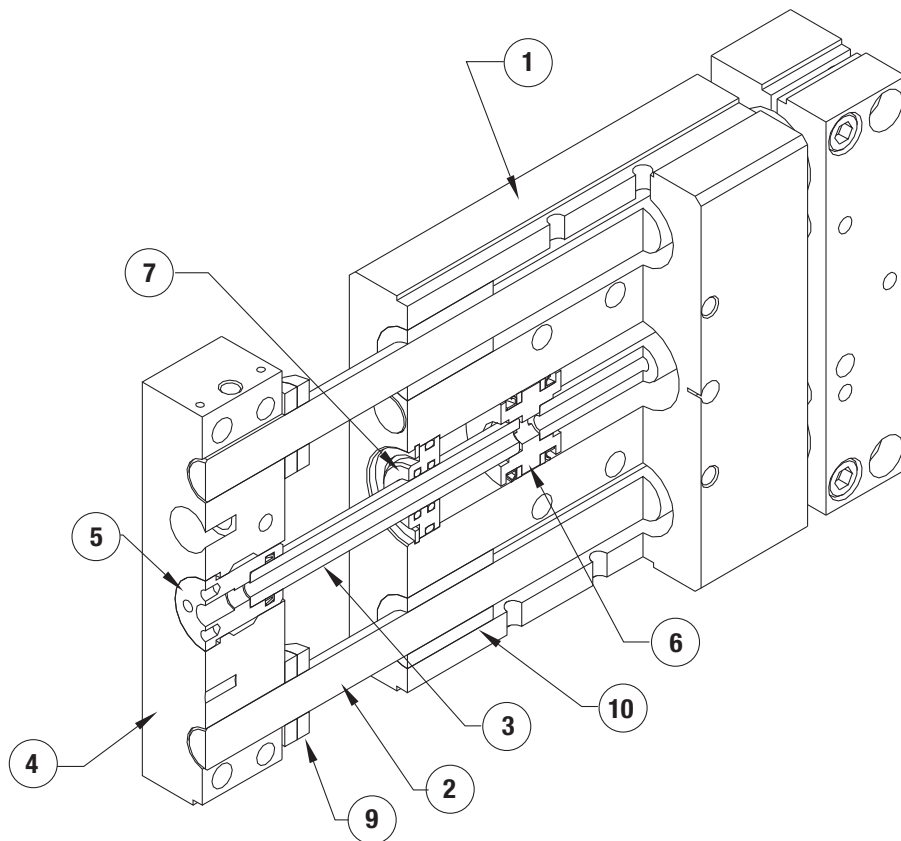


Super Bonder



Third Angle Projection

| Item | Qty | Name |
|------|-----|-----------------------------|
| 01 | 1 | Body |
| 02 | 2 | Guide Shaft |
| 03 | 2 | Air Tube |
| 04 | 2 | End Block |
| 05 | 2 | Adapter, Internally Powered |
| 06 | 1 | Piston |
| 07 | 2 | Cap, Rod End |
| 08 | 6 | Stop Button |
| 09 | 8 | Shock Pad, Urethane |
| 10 | 4 | Bushing |



NOTE: Contact the Robohand Sales Department for a complete spare parts list with order numbers and prices.

NOTE: For accessory mounting information see Product Data Sheets.

DLB-B & L
SERIES
MAINTENANCE

4.19

| | | | | | | |
|----------------------------------|--------------------------|------------------------------|------------------------------------|---------------------------------|-------------------------|-----------------------------------|
| <p>SK Seal Kit Items</p> | <p>Thread Locker</p> | <p>Krytox™ Lubricant</p> | <p>Lightweight Machine Oil</p> | <p>Teflon™ Based Grease</p> | <p>Super Bonder</p> | <p>Third Angle Projection</p> |
|----------------------------------|--------------------------|------------------------------|------------------------------------|---------------------------------|-------------------------|-----------------------------------|