

# DLB SERIES - INTERNAL AIR CYLINDER

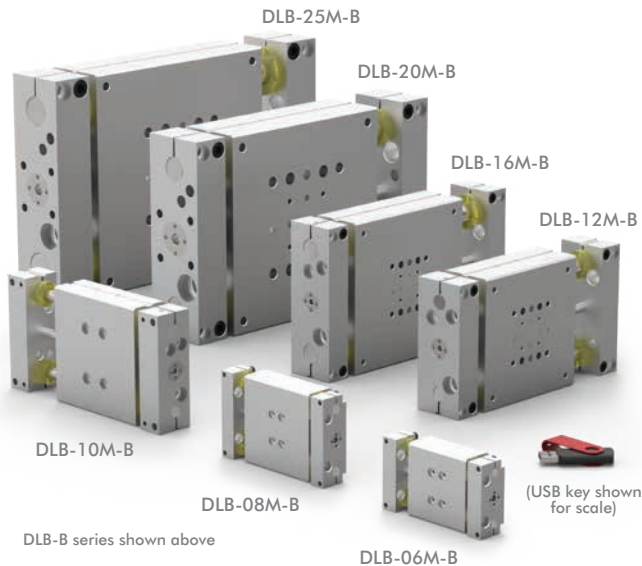
## Internal Air Cylinder Linear Base Slides | Features and Benefits | How To Order

### Features:

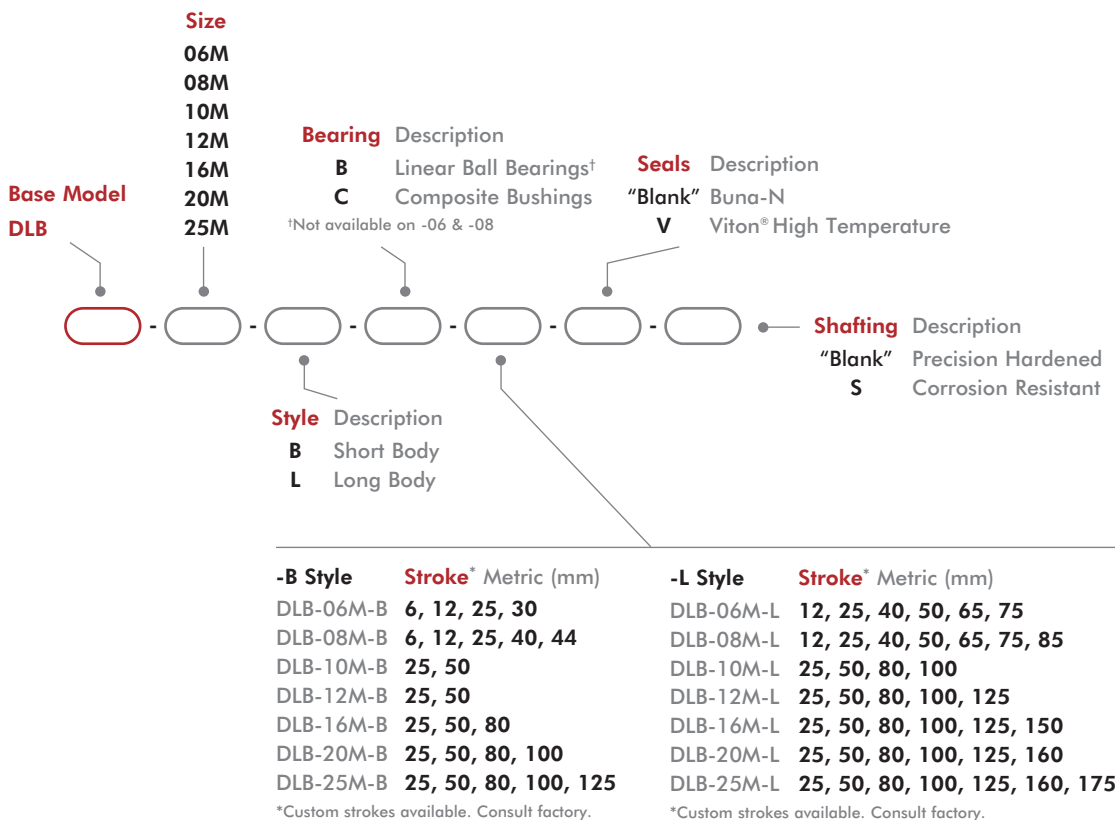
- Bearing system for smooth operation
- Rugged design produces very reliable long life operation
- Internal air cylinder for space-limited applications
- Telescopic airlines, shocks and hard stops available
- Viton® seals for high temp applications
- Corrosion resistant shafting for corrosive environments
- Inductive sensing for position detection
- Custom stroke lengths available.

### Applications:

- Machining and automation applications
- Harsh environment pick-and-place applications
- OEM machines



### How To Order



# DLB SERIES - INTERNAL AIR CYLINDER

## Internal Air Cylinder Linear Base Slides | Accessories and Technical Specifications

| Shock/Stop Accessories                      | Model Numbers      | Style | Part Number | Qty/Unit |
|---------------------------------------------|--------------------|-------|-------------|----------|
| Shock Absorber                              | 06, 08             | ALL   | SHOK-030    | 1-2      |
|                                             | 10                 |       | SHOK-028    |          |
|                                             | 12, 16,            |       | SHOK-010    |          |
|                                             | 20, -25            |       | SHOK-029    |          |
| Adjustable Hard Stop                        | 06, 08             | ALL   | DLT-0623    | 1-2      |
|                                             | 10, 12, 16, 20, 25 |       | DLT-1023    |          |
| Sensor Accessories                          | Model Numbers      | Style | Part Number | Qty/Unit |
| PNP Inductive Sensor with Quick Disconnect* | All Models         | ALL   | OISP-011    | 1-2      |
| NPN Inductive Sensor with Quick Disconnect* |                    |       | OISN-011    |          |
| Quick Disconnect 2 Meter Cable Length*      |                    |       | CABL-010    |          |
| Quick Disconnect 5 Meter Cable Length*      |                    |       | CABL-013    |          |
| Pneumatic Accessories                       | Model Numbers      | Style | Part Number | Qty/Unit |
| G1/8 Telescopic Airlines (up to 50mm)       | 10, 12, 16         | B     | OTAL-043    | 1-4      |
| G1/8 Telescopic Airlines (up to 80mm)       | 10, 12, 16         |       | OTAL-044    |          |
| G1/8 Telescopic Airlines (up to 100mm)      | 10, 12, 16         | L     | OTAL-051    |          |
| G1/8 Telescopic Airlines (up to 125mm)      | 10, 12, 16         |       | OTAL-052    |          |
| G1/8 Telescopic Airlines (up to 160mm)      | 10, 12, 16, 20, 25 | L     | OTAL-045    | 1-2      |
| G1/8 Telescopic Airlines (up to 300mm)      | 20, 25             |       | OTAL-046    |          |
| M5 Adjustable Flow Control                  | 06, 08, 10, 12, 16 | ALL   | VLVF-008    |          |
| G 1/8 Adjustable Flow Control               | 20, 25             |       | VLVF-005    |          |
| Cylinder Seal Kit (Buna-N)                  | 06, 08             |       | SLKT-109    | 1        |
|                                             | 10                 |       | SLKT-101    |          |
|                                             | 12, 16             |       | SLKT-103    |          |
|                                             | 20, 25             |       | SLKT-105    |          |
| Cylinder Seal Kit (Viton®)                  | 06, 08             | ALL   | SLKT-109V   | 1        |
|                                             | 10                 |       | SLKT-101V   |          |
|                                             | 12, 16             |       | SLKT-103V   |          |
|                                             | 20, 25             |       | SLKT-105V   |          |

\* Sensor and cable sold separately.

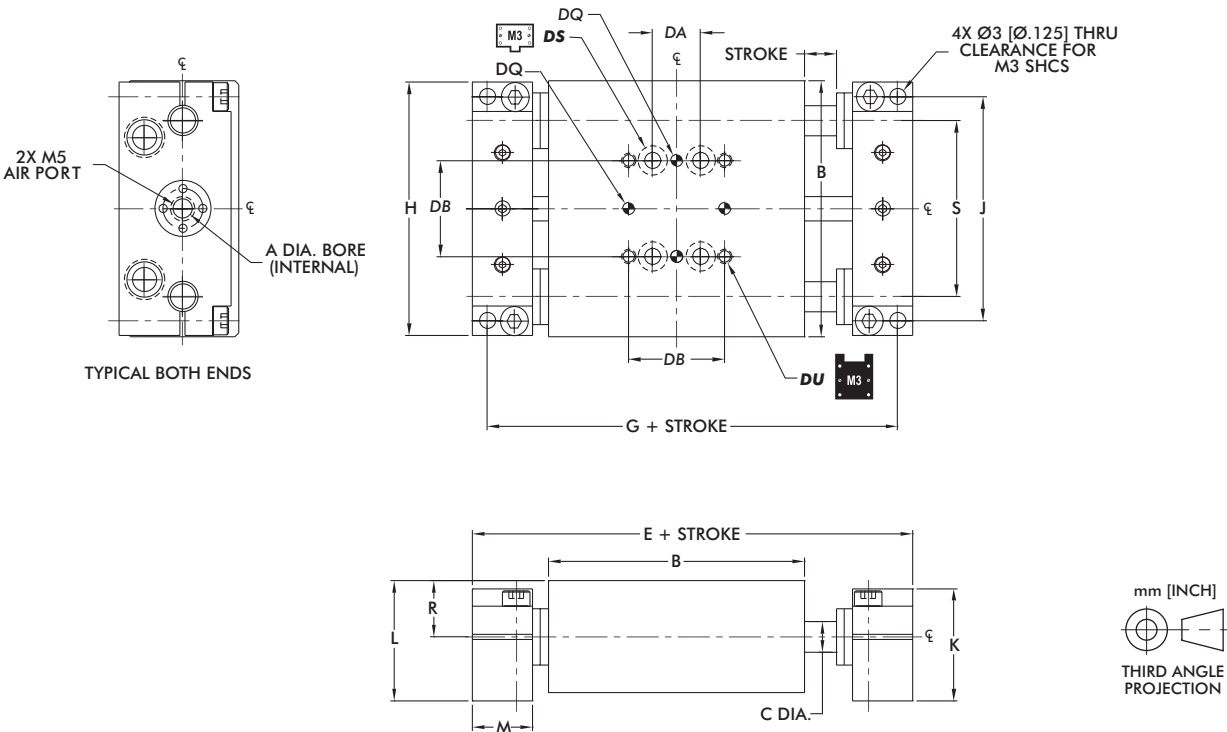
See page GR-LIN-35 for Accessory Mounting Technical Data.

## Specifications

| Specifications                  | Units         | 06            | 08          | 10          | 12          |
|---------------------------------|---------------|---------------|-------------|-------------|-------------|
| Max. Air Pressure               | bar [psi]     | 7 [100]       |             |             |             |
| Thrust Force @ 5.5 bar [80psi]  | N [lbs]       | 89 [20]       |             | 129 [29]    | 254 [57]    |
| Weight (basic unit) -B          | kg [lb]       | 0.20 [0.44]   | 0.36 [0.79] | 0.93 [2.08] | 1.7 [3.83]  |
| Weight (basic unit) -L          | kg [lb]       | 0.32 [0.71]   | 0.56 [1.24] | 1.50 [3.34] | 2.30 [5.13] |
| Additional Weight per Stroke -B | g/mm [lbs/in] | 0.53 [0.03]   | 0.88 [0.05] | 1.4 [0.08]  | 2.1 [0.12]  |
| Cylinder Bore Ø                 | mm [in]       | 14.29 [0.563] |             | 19 [0.75]   | 25 [1.00]   |
| Shaft Ø                         | mm [in]       | 6 [0.236]     | 8 [0.315]   | 9.5 [0.375] | 12 [0.472]  |

| Specifications                  | Units         | 16          | 20          | 25         |
|---------------------------------|---------------|-------------|-------------|------------|
| Max. Air Pressure               | bar [psi]     | 7 [100]     |             |            |
| Thrust Force @ 5.5 bar [80psi]  | N [lbs]       | 254 [57]    | 560 [126]   | 560 [126]  |
| Weight (basic unit) -B          | kg [lb]       | 2.4 [5.19]  | 5.9 [13.0]  | 8.2 [18.2] |
| Weight (basic unit) -L          | kg [lb]       | 3.30 [7.30] | 7.1 [15.6]  | 9.7 [21.4] |
| Additional Weight per Stroke -B | g/mm [lbs/in] | 3.3 [0.19]  | 5.54 [0.32] | 8.4 [0.47] |
| Cylinder Bore Ø                 | mm [in]       | 25 [1.00]   | 38 [1.5]    | 38 [1.5]   |
| Shaft Ø                         | mm [in]       | 16 [0.630]  | 20 [0.787]  | 25 [0.984] |

Internal Air Cylinder Linear Base Slides | Dimensions and Technical Specifications



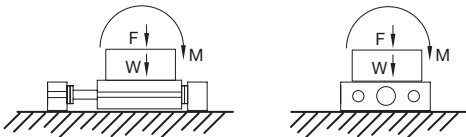
| DIRECTCONNECT™ Mounting Pattern Dimensions (all sizes) |                 |            |                     |           |
|--------------------------------------------------------|-----------------|------------|---------------------|-----------|
| DA                                                     | DB              | DQ         | DS                  | DU        |
| 9.5<br>[0.375]                                         | 19.1<br>[0.750] | 3H7 x 2 DP | CLR & C'BORE FOR M3 | M3 x 6 DP |

| Model   | Bore Ø        | Body Size       | Shaft Ø        | Basic Unit Dimensions |                 |                 |                 |                 |                 |                 |                  |                  |
|---------|---------------|-----------------|----------------|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|
|         | A             | B               | C              | E                     | G               | H               | J               | K               | L               | M               | R                | S                |
| DLB-06M | 14<br>[0.563] | 50.8<br>[2.000] | 6.0<br>[0.236] | 81.0<br>[3.19]        | 75.1<br>[2.956] | 50.3<br>[1.980] | 44.4<br>[1.750] | 22.2<br>[0.875] | 23.7<br>[0.936] | 11.9<br>[0.470] | 11.13<br>[0.438] | 34.93<br>[1.375] |
| DLB-08M |               | 63.5<br>[2.500] | 8.0<br>[0.315] | 93.7<br>[3.69]        | 87.8<br>[3.456] | 62.7<br>[2.470] | 57.1<br>[2.250] |                 |                 |                 |                  | 44.45<br>[1.750] |

Dimensions in mm [in]

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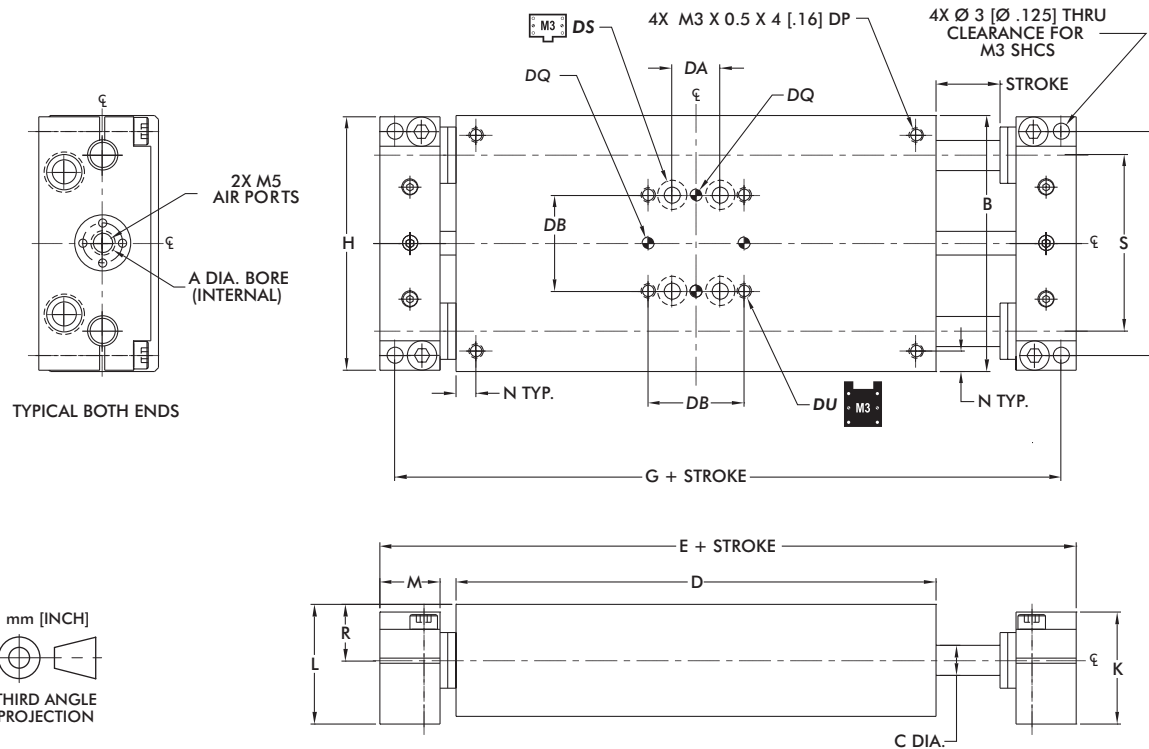
F=Externally applied force  
W=Weight of payload  
F+W=Total force  
M=Maximum moment



|                                                              | 06                 | 08                 |
|--------------------------------------------------------------|--------------------|--------------------|
| Maximum Payload (W) horizontal motion using Shock Absorbers  | 1.4 kg [3 lbs]     | 2.3 kg [5 lbs]     |
| Maximum Payload (W) vertical motion using Shock Absorbers    | 0.7 kg [1.5 lbs]   | 1.1 kg [2.5 lbs]   |
| Maximum Payload (W) horizontal motion using Urethane Bumpers | 0.5 kg [1 lbs]     | 0.5 kg [1 lbs]     |
| Maximum Total Applied Load + Payload (F+W)                   | 45 N [10 lbs]      | 53.4 N [12 lbs]    |
| Total Maximum Moment about any Axis (M)                      | 1.7 Nm [15 in-lbs] | 3.4 Nm [30 in-lbs] |

Shock Absorbers  
and Flow Controls are  
recommended for all  
applications

## Internal Air Cylinder Linear Base Slides | Dimensions and Technical Specifications



**DIRECTCONNECT™ Mounting Pattern Dimensions (all sizes)**

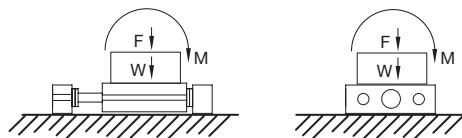
| DA             | DB              | DQ         | DS                  | DU        |
|----------------|-----------------|------------|---------------------|-----------|
| 9.5<br>[0.375] | 19.1<br>[0.750] | 3H7 x 2 DP | CLR & C'BORE FOR M3 | M3 x 6 DP |

| Model   | Bore Ø        | Body Size      | Shaft Ø        | Basic Unit Dimensions |                 |                  |                 |                 |                 |                 |                 |                 |                  |                  |
|---------|---------------|----------------|----------------|-----------------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|
|         | A             | B              | C              | D                     | E               | G                | H               | J               | K               | L               | M               | N               | R                | S                |
| DLB-06M | 14<br>[0.563] | 50.8<br>[2.00] | 6.0<br>[0.236] | 95.2<br>[3.75]        | 125.5<br>[4.94] | 119.6<br>[4.71]  | 50.3<br>[1.980] | 44.4<br>[1.750] | 22.2<br>[0.875] | 23.7<br>[0.936] | 11.9<br>[0.470] | 3.96<br>[0.156] | 11.13<br>[0.438] | 34.93<br>[1.375] |
| DLB-08M |               | 63.5<br>[2.50] | 8.0<br>[0.315] | 107.9<br>[4.25]       | 138.2<br>[5.44] | 132.2<br>[5.206] | 62.7<br>[2.470] | 57.1<br>[2.250] |                 |                 |                 |                 |                  | 44.45<br>[1.750] |

Dimensions in mm [in]

## Loading Information

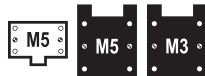
F=Externally applied force  
W=Weight of payload  
F+W=Total force  
M=Maximum moment



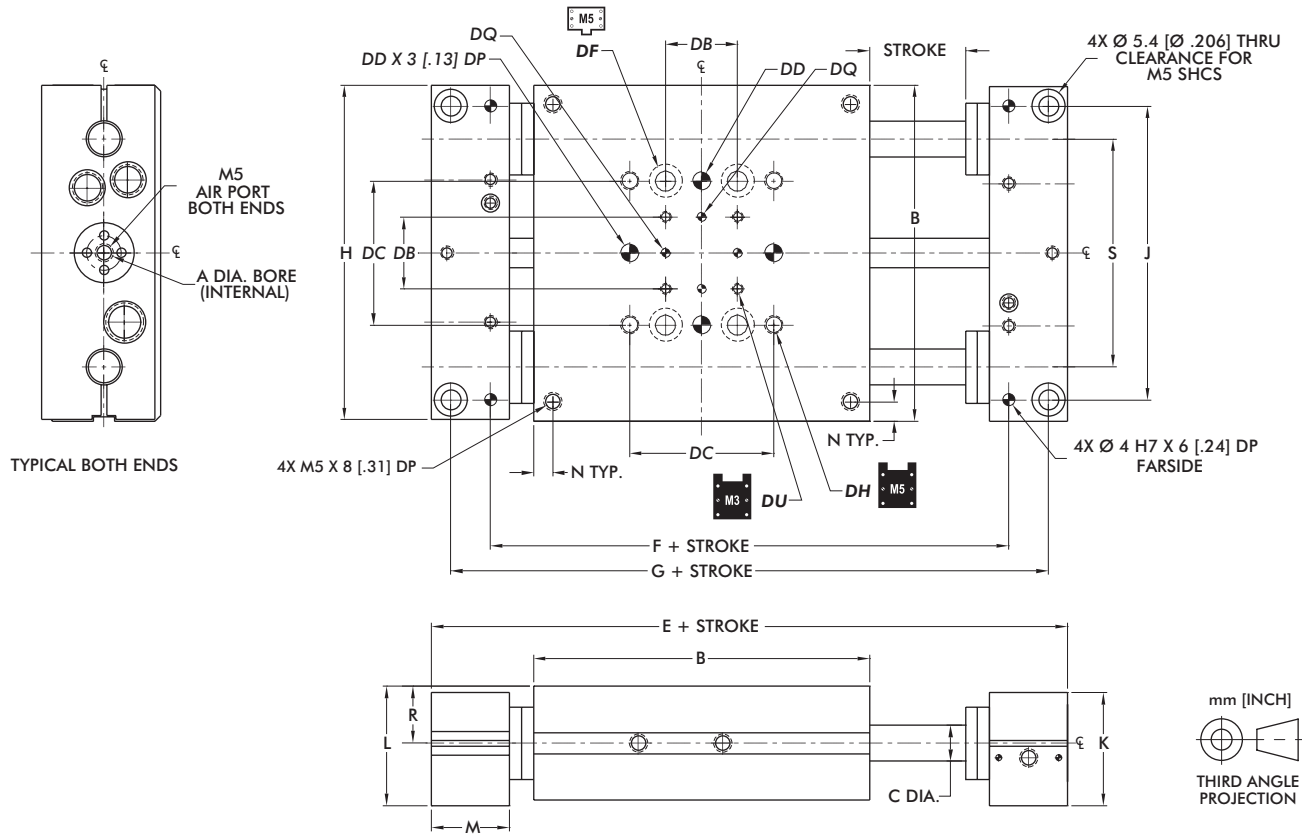
|                                                              | 06                 | 08                 |
|--------------------------------------------------------------|--------------------|--------------------|
| Maximum Payload (W) horizontal motion using Shock Absorbers  | 1.4 kg [3 lbs]     | 2.3 kg [5 lbs]     |
| Maximum Payload (W) vertical motion using Shock Absorbers    | 0.7 kg [1.5 lbs]   | 1.1 kg [2.5 lbs]   |
| Maximum Payload (W) horizontal motion using Urethane Bumpers | 0.5 kg [1 lbs]     | 0.5 kg [1 lbs]     |
| Maximum Total Applied Load + Payload (F+W)                   | 45 N [10 lbs]      | 53.4 N [12 lbs]    |
| Total Maximum Moment about any Axis (M)                      | 1.7 Nm [15 in-lbs] | 3.4 Nm [30 in-lbs] |

**Shock Absorbers  
and Flow Controls are  
recommended for all  
applications**

# DLB-10/12/16M-B



## Internal Air Cylinder Linear Base Slides | Dimensions and Technical Specifications



**DIRECTCONNECT™ Mounting Pattern Dimensions (all sizes)**

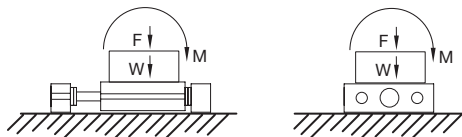
| DB              | DC              | DD            | DF               | DH         | DQ         | DU        |
|-----------------|-----------------|---------------|------------------|------------|------------|-----------|
| 19.1<br>[0.750] | 38.1<br>[1.500] | 5mm H7 x 6 DP | CLEARANCE FOR M5 | M5 x 8.5DP | 3H7 x 2 DP | M3 x 6 DP |

| Model   | Bore Ø       | Body Size       | Shaft Ø        | Basic Unit Dimensions |                    |                  |                  |                    |                 |                 |                 |                |                  |                  |
|---------|--------------|-----------------|----------------|-----------------------|--------------------|------------------|------------------|--------------------|-----------------|-----------------|-----------------|----------------|------------------|------------------|
|         | A            | B               | C              | E                     | F                  | G                | H                | J                  | K               | L               | M               | N              | R                | S                |
| DLB-10M | 19<br>[0.75] | 88.9<br>[3.50]  | 9.5<br>[0.375] | 143.0<br>[5.63]       | 111.70<br>[4.3975] | 132.8<br>[5.228] | 88.5<br>[3.485]  | 77.72<br>[3.0600]  | 29.9<br>[1.178] | 31.6<br>[1.245] |                 | N/A            | 15.09<br>[0.594] | 60.33<br>[2.375] |
| DLB-12M | 25<br>[1.00] | 101.6<br>[4.00] | 12<br>[0.472]  | 155.7<br>[6.13]       | 124.40<br>[4.8975] | 145.5<br>[5.728] | 101.2<br>[3.985] | 88.90<br>[3.5000]  | 41.0<br>[1.615] | 42.1<br>[1.657] | 20.7<br>[0.813] | 9.5<br>[0.375] | 20.65<br>[0.813] | 69.85<br>[2.750] |
| DLB-16M |              | 120.7<br>[4.75] | 16<br>[0.630]  | 174.8<br>[6.88]       | 143.45<br>[5.6475] | 164.5<br>[6.478] | 120.3<br>[4.735] | 107.95<br>[4.2500] |                 |                 |                 |                |                  |                  |

Dimensions in mm [in]

## Loading Information

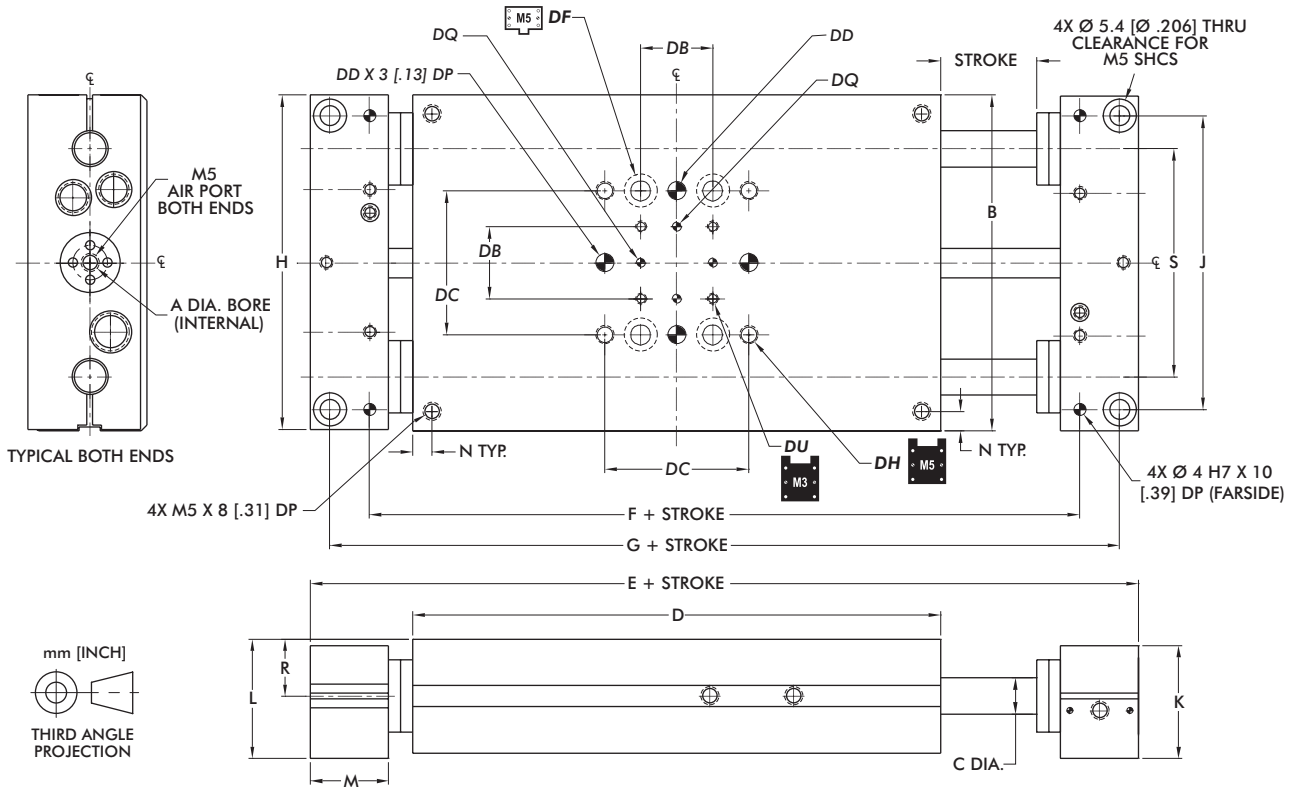
F=Externally applied force  
W=Weight of payload  
F+W=Total force  
M=Maximum moment



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

**Shock Absorbers and Flow Controls are recommended for all applications**

## Internal Air Cylinder Linear Base Slides | Dimensions and Technical Specifications



DIRECTCONNECT™ Mounting Pattern Dimensions (all sizes)

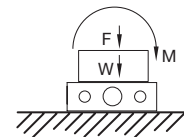
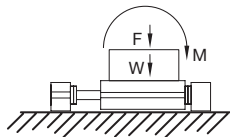
| DB              | DC              | DD            | DF               | DH         | DQ         | DU        |
|-----------------|-----------------|---------------|------------------|------------|------------|-----------|
| 19.1<br>[0.750] | 38.1<br>[1.500] | 5mm H7 x 6 DP | CLEARANCE FOR M5 | M5 x 8.5DP | 3H7 x 2 DP | M3 x 6 DP |

| Model   | Bore Ø       | Body Size       | Shaft Ø        | Basic Unit Dimensions |                 |                    |                  |                  |                    |                 |                 |                 |                |                  |                  |
|---------|--------------|-----------------|----------------|-----------------------|-----------------|--------------------|------------------|------------------|--------------------|-----------------|-----------------|-----------------|----------------|------------------|------------------|
|         | A            | B               | C              | D                     | E               | F                  | G                | H                | J                  | K               | L               | M               | N              | R                | S                |
| DLB-10M | 19<br>[0.75] | 88.9<br>[3.50]  | 9.5<br>[0.375] | 139.7<br>[5.50]       | 193.8<br>[7.63] | 162.50<br>[6.3975] | 183.6<br>[7.228] | 88.5<br>[3.485]  | 77.72<br>[3.0600]  | 29.9<br>[1.178] | 31.6<br>[1.245] | 20.7<br>[0.813] | N/A            | 15.09<br>[0.594] | 60.33<br>[2.375] |
| DLB-12M | 25<br>[1.00] | 101.6<br>[4.00] | 12<br>[0.472]  | 165.1<br>[6.50]       | 219.2<br>[8.63] | 187.90<br>[7.3975] | 209.0<br>[8.228] | 101.2<br>[3.985] | 88.90<br>[3.5000]  | 41.0<br>[1.615] | 42.1<br>[1.657] |                 | 9.5<br>[0.375] | 20.65<br>[0.813] | 69.85<br>[2.750] |
| DLB-16M |              | 120.7<br>[4.75] | 16<br>[0.630]  | 190.5<br>[7.50]       | 244.6<br>[9.63] | 213.30<br>[8.3975] | 234.4<br>[9.228] | 120.3<br>[4.735] | 107.95<br>[4.2500] |                 |                 |                 |                |                  |                  |

Dimensions in mm [in]

## Loading Information

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



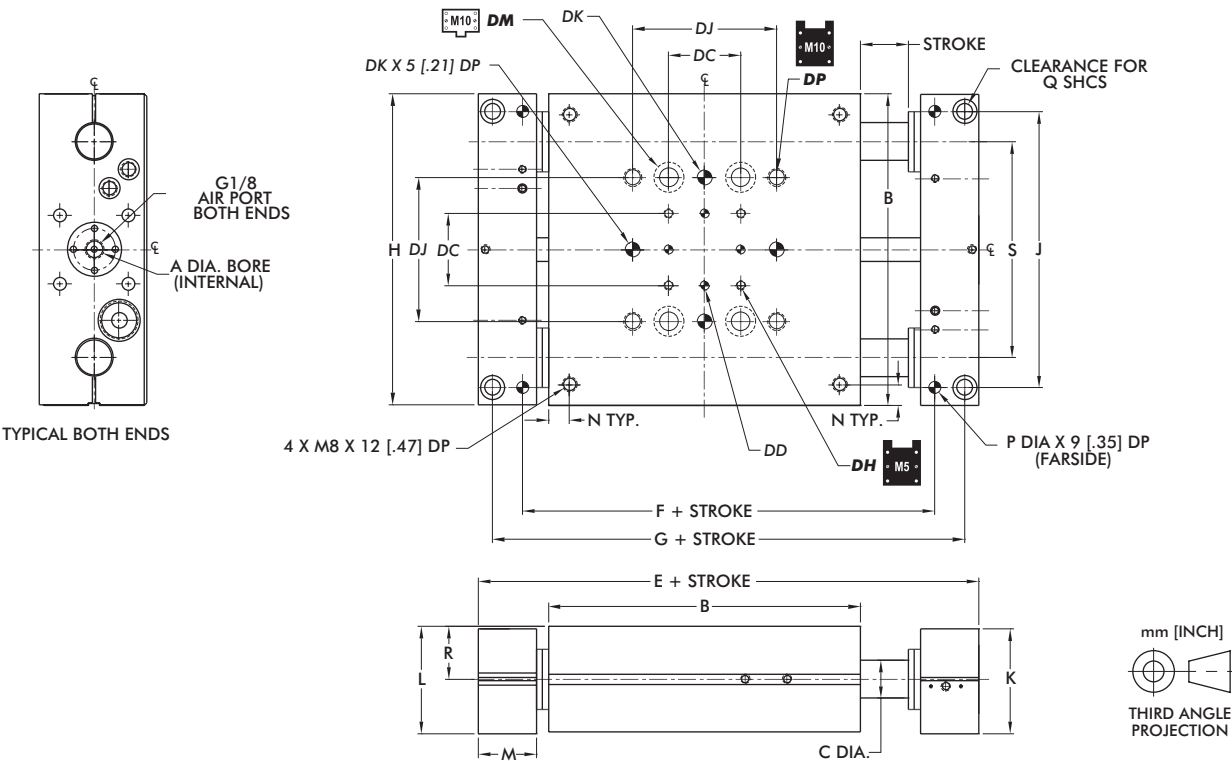
|                                                              | 10                 | 12                   | 16                   |
|--------------------------------------------------------------|--------------------|----------------------|----------------------|
| Maximum Payload (W) horizontal motion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

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applications

# DLB-20/25M-B



## Internal Air Cylinder Linear Base Slides | Dimensions and Technical Specifications



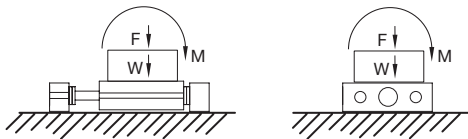
| DIRECTCONNECT™ Mounting Pattern Dimensions (all sizes) |                |             |                 |                  |                      |             |
|--------------------------------------------------------|----------------|-------------|-----------------|------------------|----------------------|-------------|
| DC                                                     | DD             | DH          | DJ              | DK               | DM                   | DP          |
| 38.1<br>[1.500]                                        | 5 mm H7 x 6 DP | M5 x 8.5 DP | 76.2<br>[3.000] | 8 mm H7 x 9.4 DP | CLR & C'BORE FOR M10 | M10 x 12 DP |

| Model   | Bore Ø       | Body Size       | Shaft Ø       | Basic Unit Dimensions |                    |                   |                  |                    |                 |                 |                 |                 |                  |     |                  |                   |
|---------|--------------|-----------------|---------------|-----------------------|--------------------|-------------------|------------------|--------------------|-----------------|-----------------|-----------------|-----------------|------------------|-----|------------------|-------------------|
|         | A            | B               | C             | E                     | F                  | G                 | H                | J                  | K               | L               | M               | N               | P                | Q   | R                | S                 |
| DLB-20M | 38<br>[1.50] | 165.1<br>[6.50] | 20<br>[0.787] | 239.3<br>[9.42]       | 192.66<br>[7.5850] | 224.4<br>[8.836]  | 164.6<br>[6.480] | 146.05<br>[5.7500] | 55.4<br>[2.180] | 56.8<br>[2.236] | [1.210]<br>30.7 | 11.1<br>[0.438] | 6.00<br>[0.2505] | M8  | 27.94<br>[1.100] | 114.30<br>[4.500] |
| DLB-25M |              | 190.5<br>[7.50] | 25<br>[0.984] | 275.3<br>[10.84]      | 221.79<br>[8.7320] | 256.7<br>[10.108] | 190.0<br>[7.480] | 171.45<br>[6.7500] |                 |                 | [1.420]<br>36.1 |                 | 8.00<br>[0.3130] | M10 |                  | 133.35<br>[5.250] |

Dimensions in mm [in]

## Loading Information

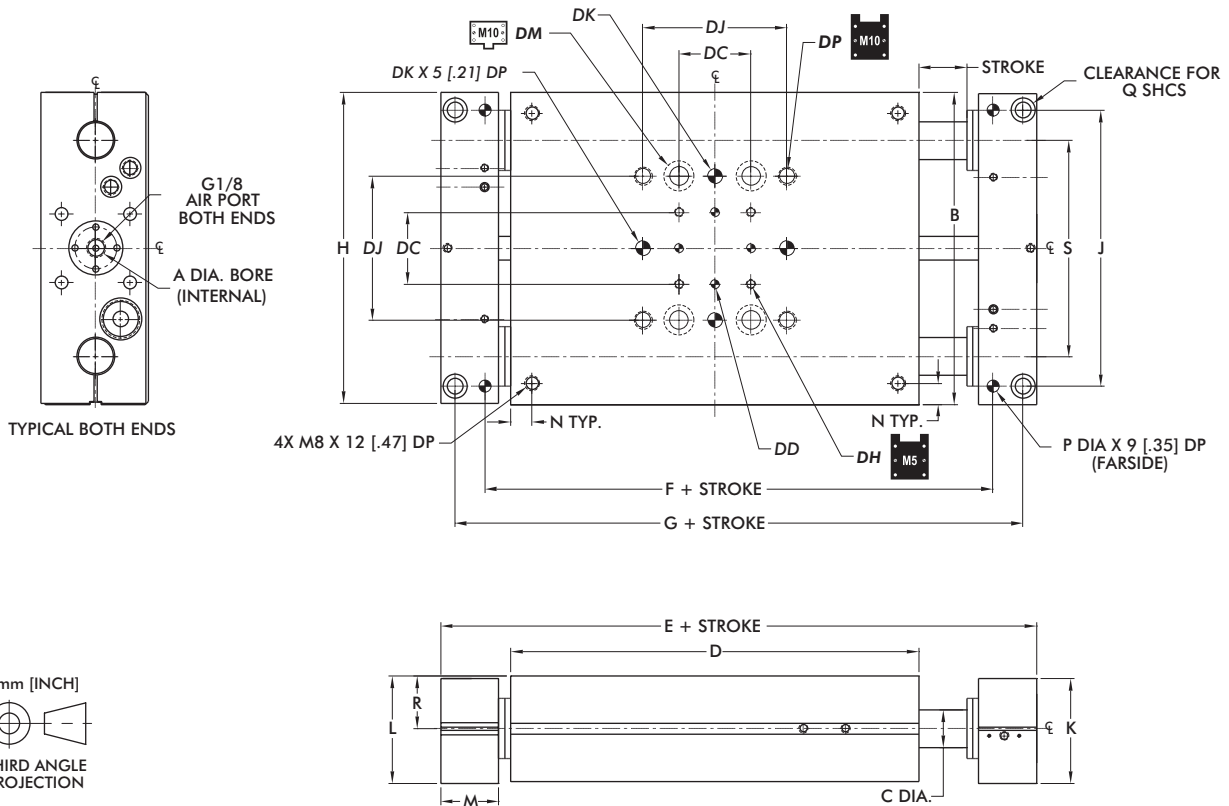
F=Externally applied force  
W=Weight of payload  
F+W=Total force  
M=Maximum moment



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

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and Flow Controls are  
recommended for all  
applications

## Internal Air Cylinder Linear Base Slides | Dimensions and Technical Specifications



DIRECTCONNECT™ Mounting Pattern Dimensions (all sizes)

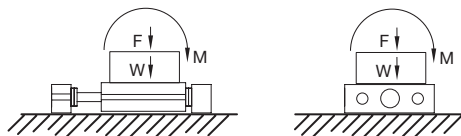
| DC              | DD             | DH          | DJ              | DK               | DM                   | DP          |
|-----------------|----------------|-------------|-----------------|------------------|----------------------|-------------|
| 38.1<br>[1.500] | 5 mm H7 x 6 DP | M5 x 8.5 DP | 76.2<br>[3.000] | 8 mm H7 x 9.4 DP | CLR & C'BORE FOR M10 | M10 x 12 DP |

| Model   | Bore Ø      | Body Size       | Shaft Ø       | Basic Unit Dimensions |                  |                     |                   |                  |                    |                 |                 |                 |                 |                  |     |                  |                   |
|---------|-------------|-----------------|---------------|-----------------------|------------------|---------------------|-------------------|------------------|--------------------|-----------------|-----------------|-----------------|-----------------|------------------|-----|------------------|-------------------|
|         | A           | B               | C             | D                     | E                | F                   | G                 | H                | J                  | K               | L               | M               | N               | P                | Q   | R                | S                 |
| DLB-20M | 38<br>[1.5] | 165.1<br>[6.50] | 20<br>[0.787] | 215.9<br>[8.50]       | 290.1<br>[11.42] | 243.46<br>[9.5850]  | 275.2<br>[10.836] | 164.6<br>[6.480] | 146.05<br>[5.7500] | 55.4<br>[2.180] | 56.8<br>[2.236] | 30.7<br>[1.210] | 11.1<br>[0.438] | 6.00<br>[0.2505] | M8  | 27.94<br>[1.100] | 114.30<br>[4.500] |
| DLB-25M |             | 190.5<br>[7.50] | 25<br>[0.984] | 241.3<br>[9.50]       | 326.1<br>[12.84] | 272.59<br>[10.7320] | 307.5<br>[12.108] | 190.0<br>[7.480] | 171.45<br>[6.7500] | 55.4<br>[2.180] |                 | 36.1<br>[1.420] |                 | 8.00<br>[0.3130] | M10 |                  | 133.35<br>[5.250] |

Dimensions in mm [in]

## Loading Information

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



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

Shock Absorbers  
and Flow Controls are  
recommended for all  
applications