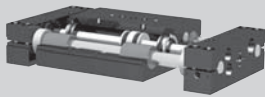


Linear Motion Slides



DLB

DIRECTCONNECT

Internally Powered Series

DESIGN ADVANTAGES -B

- Built-in Repairable Cylinder
- Compact for Extremely Small Spaces
- Shortest Strokes
- Very Rigid

See Page **4.8**

DESIGN ADVANTAGES -L

- Built-in Repairable Cylinder
- Longer Strokes in Compact Space Saving Package
- Very Rigid



DLB

DIRECTCONNECT

Externally Powered Series

DESIGN ADVANTAGES -T

- Disposable Air Cylinder with Sensor Magnet
- Low Cost
- Long Strokes
- Carefree Maintenance

See Page **4.20**

DESIGN ADVANTAGES -A

- Disposable Air Cylinder with Adjustable Air Cushions and Sensor Magnet
- Inexpensive Alternative to Shock Absorbers for Light Payloads

DESIGN ADVANTAGES -N

- NFPA or VDMA Style Cylinders with Adjustable Air Cushions and Sensor Magnet
- Inexpensive Alternative to Shock Absorbers for Light Payloads

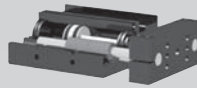
DESIGN ADVANTAGES -R

- Position Control in Event of Loss of Air Pressure
- Safety Locking Feature
- VDMA Style Locking Cylinder with Adjustable Air Cushions and Sensor Magnet
- Exhaust Air (from Locking Mechanism) may be Plumbed Away for Contaminant Free Operation

DESIGN ADVANTAGES -U

- Customer Supplies Cylinder. NFPA or VDMA Mounting Kits Available
- Least Expensive
- Design Flexibility

Preferred Market: ● Global



DLT

DIRECTCONNECT

Internally Powered Series

DESIGN ADVANTAGES -B, -E

- Built-in Repairable Cylinder
- Compact for Extremely Small Spaces
- Can Be Used as a Lift Table (-B)
- Greater Shaft Support (-E)
- Shortest Strokes • Lightest Weight

See Page **4.32**

DESIGN ADVANTAGES -L

- Built-in Repairable Cylinder • Longer Strokes
- Compact Design for Small Spaces



DLT

DIRECTCONNECT

Externally Powered Series

DESIGN ADVANTAGES -T

- Disposable Air Cylinder with Sensor Magnet
- Low Cost
- Long Strokes
- Carefree Maintenance

See Page **4.56**

DESIGN ADVANTAGES -A

- Disposable Air Cylinder with Adjustable Air Cushions and Sensor Magnet
- Inexpensive Alternative to Shock Absorbers for Light Payloads

DESIGN ADVANTAGES -N

- NFPA or VDMA Style Cylinders with Adjustable Air Cushions and Sensor Magnet
- Adjustable Air Cushions Replace Shock Absorbers for Light Payloads

DESIGN ADVANTAGES -R

- Position Control in Event of Loss of Air Pressure
- Safety Locking Feature
- VDMA Style Locking Cylinder with Adjustable Air Cushions and Sensor Magnet
- Exhaust Air (from Locking Mechanism) may be Plumbed Away for Contaminant Free Operation

DESIGN ADVANTAGES -U

- Customer Supplies Cylinder. NFPA or VDMA Mounting Kits Available
- Least Expensive
- Design Flexibility

Preferred Market: ● Global



DLM

DIRECTCONNECT

Mini Ball Rail Slide Series

DESIGN ADVANTAGES

- Multiple Air Port Positions
- Manifold Air Porting
- Retract and extend stroke adjustments for precise positioning with infinite stroke adjustability
- Double Bearing Option for greater load and moment capacity
- Multiple DIRECTCONNECT Mounting Locations
- Thru Mounting on tool plate and body

See Page **4.70**

Preferred Market: ● Global

Destaco-Robohand Slide Product Selector

Model #	Type of Slide	Maximum Thrust Force Range	Maximum Stroke	Maximum Payload	Operating Pressure	Cylinder Type	Bearings	Internal (Repairable)	External (Replaceable)	External (ISO)	External (NFA)	External (VDMA)	External (VDMA) Locking	Customer Supplied	Preloaded Ball Bushing	Composite Bushings	Roller Bearings	Bronze Bushings	Inductive Sensors	Magneto Resistive Sensors	Shock Absorbers w/Stops	Bumpers and Collars	Independent End Stops	Air Cushioned Cylinder	Telescopic Airlines
BASE SLIDE - INTERNALLY POWERED - SHORT BODY																									
DLB-10-B	•	0 - 25 lbs. [0 - 111N]	2 - 4 in. [50.8 - 102mm]	0 - 10 lbs. [0 - 5kg]	20 - 100 psi [1.5 - 7 bar]																				
DLB-12-B	•	25 - 50 lbs. [111 - 223N]	4 - 6 in. [102 - 152mm]	10 - 25 lbs. [5 - 11kg]	40 - 100 psi [3 - 7 bar]																				
DLB-16-B	•	50 - 100 lbs. [223 - 445N]	6 - 8 in. [152 - 203mm]	25 - 50 lbs. [11 - 23kg]																					
DLB-20-B	•	100 - 150 lbs. [445 - 678N]	8 - 10 in. [203 - 254mm]	50 - 100 lbs. [23 - 45kg]																					
DLB-25-B	•	150 - 200 lbs. [678 - 890N]	10 - 12 in. [254 - 305mm]	100 - 150 lbs. [45 - 68kg]																					
		200 - 300 lbs. [890 - 1335N]	12 - 14 in. [305 - 356mm]	150 lbs. + [68 + kg]																					
		300+ lbs. [1335+ N]	14 - 16 in. [356 - 406mm]																						
			16 - 18 in. [406 - 457mm]																						
			18 - 20 in. [457 - 508mm]																						
			20 - 22 in. [508 - 558mm]																						
			22 - 24 in. [558 - 610mm]																						
			24 in. + [610+ mm]																						
BASE SLIDE - INTERNALLY POWERED - LONG BODY																									
DLB-10-L	•	0 - 25 lbs. [0 - 111N]	2 - 4 in. [50.8 - 102mm]	0 - 10 lbs. [0 - 5kg]	20 - 100 psi [1.5 - 7 bar]																				
DLB-12-L	•	25 - 50 lbs. [111 - 223N]	4 - 6 in. [102 - 152mm]	10 - 25 lbs. [5 - 11kg]	40 - 100 psi [3 - 7 bar]																				
DLB-16-L	•	50 - 100 lbs. [223 - 445N]	6 - 8 in. [152 - 203mm]	25 - 50 lbs. [11 - 23kg]																					
DLB-20-L	•	100 - 150 lbs. [445 - 678N]	8 - 10 in. [203 - 254mm]	50 - 100 lbs. [23 - 45kg]																					
DLB-25-L	•	150 - 200 lbs. [678 - 890N]	10 - 12 in. [254 - 305mm]	100 - 150 lbs. [45 - 68kg]																					
BASE SLIDE-EXTERNALLY POWERED																									
DLB-10-T, A, N, U	•	0 - 25 lbs. [0 - 111N]	2 - 4 in. [50.8 - 102mm]	0 - 10 lbs. [0 - 5kg]	20 - 100 psi [1.5 - 7 bar]			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DLB-12-T, A, N, U	•	25 - 50 lbs. [111 - 223N]	4 - 6 in. [102 - 152mm]	10 - 25 lbs. [5 - 11kg]	40 - 100 psi [3 - 7 bar]			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DLB-16-T, A, N, U	•	50 - 100 lbs. [223 - 445N]	6 - 8 in. [152 - 203mm]	25 - 50 lbs. [11 - 23kg]				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DLB-20-T, A, N, R, U	•	100 - 150 lbs. [445 - 678N]	8 - 10 in. [203 - 254mm]	50 - 100 lbs. [23 - 45kg]				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DLB-25-T, A, N, R, U	•	150 - 200 lbs. [678 - 890N]	10 - 12 in. [254 - 305mm]	100 - 150 lbs. [45 - 68kg]				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
THRUSTER SLIDE - INTERNALLY POWERED - SHORT BODY																									
DLT-06-B, E	•	0 - 25 lbs. [0 - 111N]	2 - 4 in. [50.8 - 102mm]	0 - 10 lbs. [0 - 5kg]	20 - 100 psi [1.5 - 7 bar]																				
DLT-08-B, E	•	25 - 50 lbs. [111 - 223N]	4 - 6 in. [102 - 152mm]	10 - 25 lbs. [5 - 11kg]	40 - 100 psi [3 - 7 bar]																				
DLT-10-B, E	•	50 - 100 lbs. [223 - 445N]	6 - 8 in. [152 - 203mm]	25 - 50 lbs. [11 - 23kg]																					
DLT-12-B, E	•	100 - 150 lbs. [445 - 678N]	8 - 10 in. [203 - 254mm]	50 - 100 lbs. [23 - 45kg]																					
DLT-16-B, E	•	150 - 200 lbs. [678 - 890N]	10 - 12 in. [254 - 305mm]	100 - 150 lbs. [45 - 68kg]																					
DLT-20-B, E	•	200 - 300 lbs. [890 - 1335N]	12 - 14 in. [305 - 356mm]	150 lbs. + [68 + kg]																					
DLT-25-B, E	•	300+ lbs. [1335+ N]	14 - 16 in. [356 - 406mm]																						
THRUSTER SLIDE - INTERNALLY POWERED -LONG BODY																									
DLT-06-L	•	0 - 25 lbs. [0 - 111N]	2 - 4 in. [50.8 - 102mm]	0 - 10 lbs. [0 - 5kg]	20 - 100 psi [1.5 - 7 bar]																				
DLT-08-L	•	25 - 50 lbs. [111 - 223N]	4 - 6 in. [102 - 152mm]	10 - 25 lbs. [5 - 11kg]	40 - 100 psi [3 - 7 bar]																				
DLT-10-L	•	50 - 100 lbs. [223 - 445N]	6 - 8 in. [152 - 203mm]	25 - 50 lbs. [11 - 23kg]																					
DLT-12-L	•	100 - 150 lbs. [445 - 678N]	8 - 10 in. [203 - 254mm]	50 - 100 lbs. [23 - 45kg]																					
DLT-16-L	•	150 - 200 lbs. [678 - 890N]	10 - 12 in. [254 - 305mm]	100 - 150 lbs. [45 - 68kg]																					
DLT-20-L	•	200 - 300 lbs. [890 - 1335N]	12 - 14 in. [305 - 356mm]	150 lbs. + [68 + kg]																					
DLT-25-L	•	300+ lbs. [1335+ N]	14 - 16 in. [356 - 406mm]																						
THRUSTER SLIDE -EXTERNALLY POWERED																									
DLT-06-T, U	•	0 - 25 lbs. [0 - 111N]	2 - 4 in. [50.8 - 102mm]	0 - 10 lbs. [0 - 5kg]	20 - 100 psi [1.5 - 7 bar]			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DLT-08-T, U	•	25 - 50 lbs. [111 - 223N]	4 - 6 in. [102 - 152mm]	10 - 25 lbs. [5 - 11kg]	40 - 100 psi [3 - 7 bar]			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DLT-10-T, A, N, U	•	50 - 100 lbs. [223 - 445N]	6 - 8 in. [152 - 203mm]	25 - 50 lbs. [11 - 23kg]				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DLT-12-T, A, N, U	•	100 - 150 lbs. [445 - 678N]	8 - 10 in. [203 - 254mm]	50 - 100 lbs. [23 - 45kg]				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DLT-16-T, A, N, U	•	150 - 200 lbs. [678 - 890N]	10 - 12 in. [254 - 305mm]	100 - 150 lbs. [45 - 68kg]				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DLT-20-T, A, N, R, U	•	200 - 300 lbs. [890 - 1335N]	12 - 14 in. [305 - 356mm]	150 lbs. + [68 + kg]				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DLT-25-T, A, N, R, U	•	300+ lbs. [1335+ N]	14 - 16 in. [356 - 406mm]					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	

DIRECTCONNECT
LINEAR MOTION
ACTUATORS

4.2

Destaco-Robohand Slide Product Selector

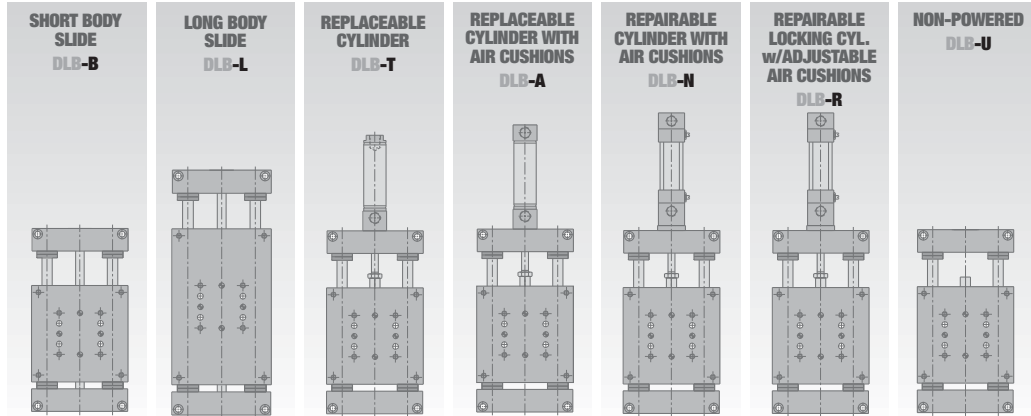
Model #	Type of Slide			Maximum Thrust Force Range	Maximum Stroke	Maximum Payload	Operating Pressure	Cylinder Type	Bearings	Inductive Sensors	Shock Absorbers w/Stops	
	Base Slide	Thru-Slide	Lift/Block-Thru-Slide									
MINI BALL RAIL SLIDE												
DLM-07M-12	•	•	•	0 - 25 lbs. [0 - 111N]	2 - 4 in. [50.8 - 102mm]	0 - 10 lbs. [0 - 5kg]	20 - 100 psi [1.5 - 7 bar]	External (ISO)	Preloaded Ball Bushing	Inductive Sensors	Shock Absorbers w/Stops	
DLM-07M-25	•	•	•	25 - 50 lbs. [111 - 223N]	4 - 6 in. [102 - 152mm]	10 - 25 lbs. [5 - 11kg]	40 - 100 psi [3 - 7 bar]	External (ISO)	Composite Bushings	Magneto Resistive Sensors	Bumpers and Collars	
DLM-07M-38	•	•	•	50 - 100 lbs. [223 - 445N]	6 - 8 in. [152 - 203mm]	25 - 50 lbs. [11 - 23kg]		External (NPPA)	Roller Bearings		Independent End Stops	
DLM-07M-50	•	•	•	100 - 150 lbs. [445 - 678N]	8 - 10 in. [203 - 254mm]	50 - 100 lbs. [23 - 45kg]		External (VDMA)	Bronze Bushings		Air Cushioned Cylinder	
DLM-09M-25	•	•	•	150 - 200 lbs. [678 - 890N]	10 - 12 in. [254 - 305mm]	100 - 150 lbs. [45 - 68kg]		External (VDMA) Locking Customer Supplied				
DLM-09M-50	•	•	•	200 - 300 lbs. [890 - 1335N]	12 - 14 in. [305 - 356mm]	150 lbs. + [68 + kg]						
DLM-09M-75	•	•	•	300+ lbs. [1335+ N]	14 - 16 in. [356 - 406mm]							
DLM-09M-100	•	•	•		16 - 18 in. [406 - 457mm]							
DLM-12M-25	•	•	•		18 - 20 in. [457 - 508mm]							
DLM-12M-50	•	•	•		20 - 22 in. [508 - 558mm]							
DLM-12M-75	•	•	•		22 - 24 in. [558 - 610mm]							
DLM-12M-100	•	•	•		24 in. + [610+ mm]						Telescopic A/lines	

DIRECTCONNECT™

A full line of individual Base Slides,

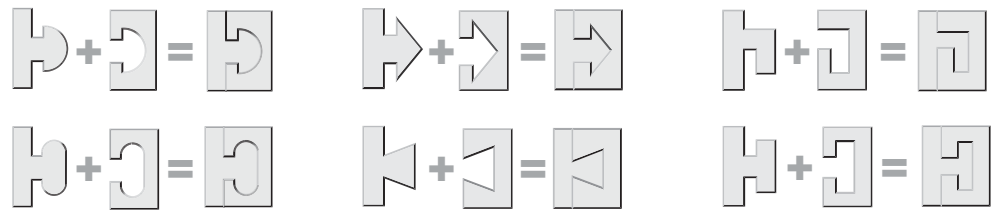
1.

15 different styles of Base Slides, Thrusters, and Block Slides. Each style is available in 7 sizes; both Imperial and Metric!



quickly & easily mount together

Single icons represent various 4 screw, 2 dowel mounting patterns. Mated icons represent a **DIRECTCONNECT**

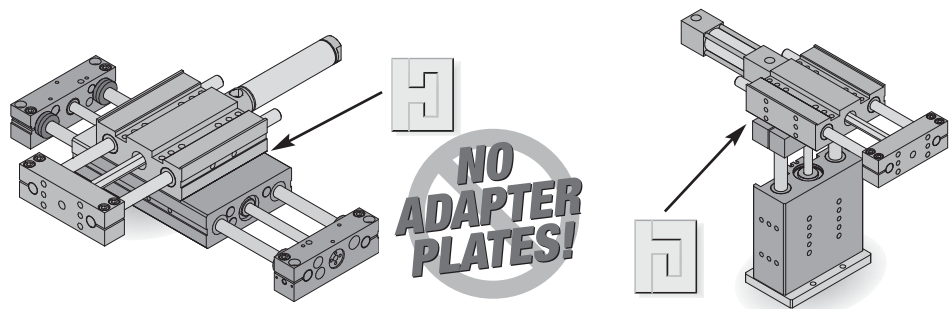


DIRECTCONNECT mounting selection is achieved by matching mating icons

3.

Combine 2, 3, or more units together to create an unlimited variety of Pick and Place units to suit your application needs!

create an almost unlimited array

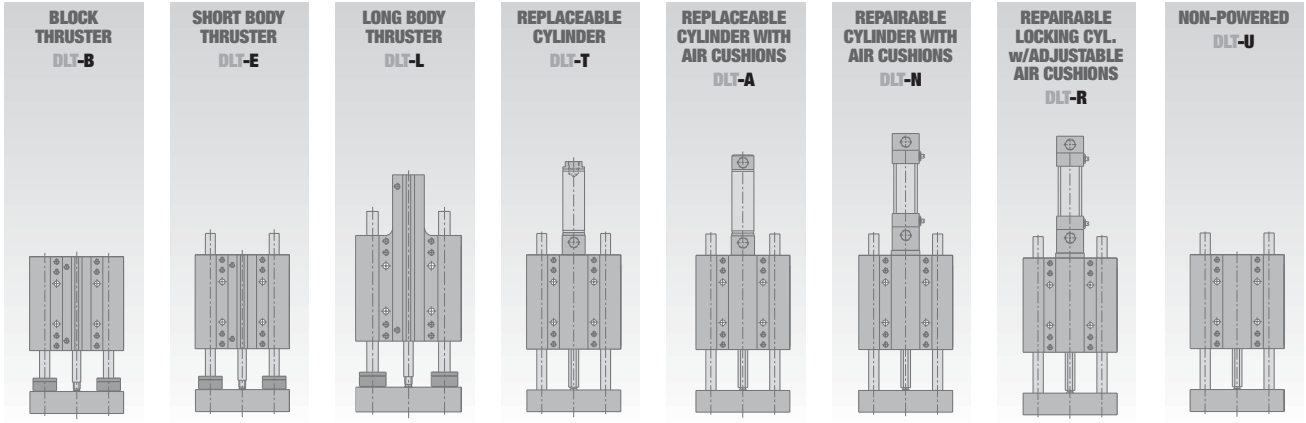


DIRECTCONNECT
between Base Slides & Thrusters

DIRECTCONNECT
between various styles

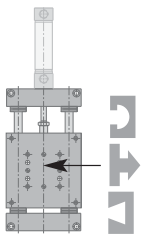
IS AS EASY AS 1-2-3!

Block Thrusters, and Thruster Slides that...

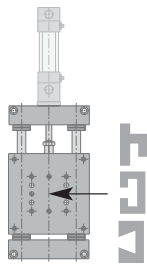


WITHOUT ADAPTER PLATES to...

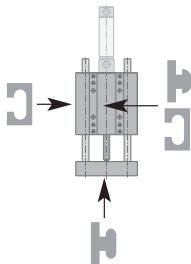
DLB -10
-12
-16



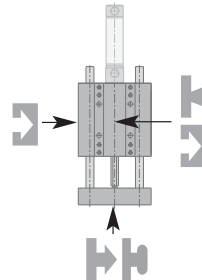
DLB -20
-25



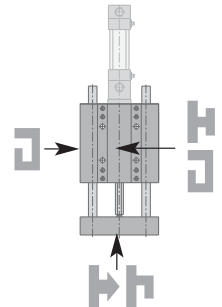
DLT -06
-08



DLT -10
-12
-16

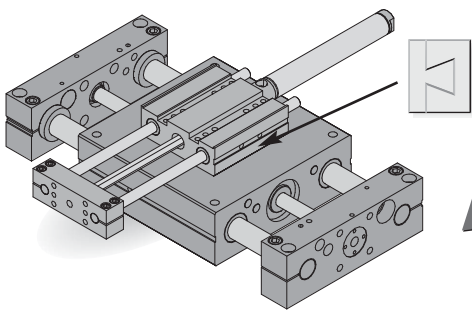


DLT -20
-25

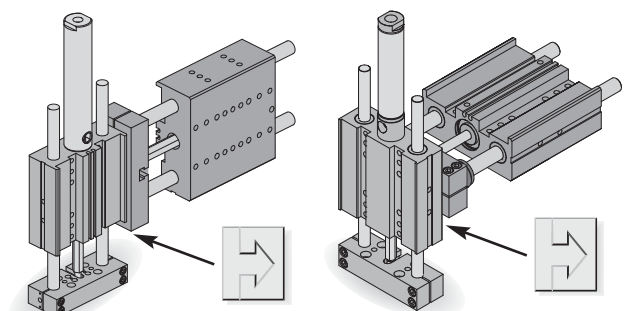


DIRECTCONNECT mounting patterns are common and standard on all styles and sizes

of multi-axis Pick and Place devices!



NO ADAPTER PLATES!



DIRECTCONNECT
between different sizes

DIRECTCONNECT
in multiple orientations

DIRECTCONNECT
LINEAR MOTION
ACTUATORS

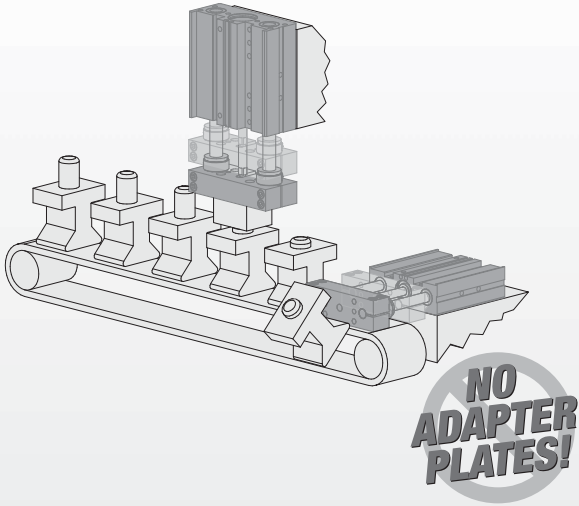
4.5

DIRECTCONNECT

DIRECTCONNECT™

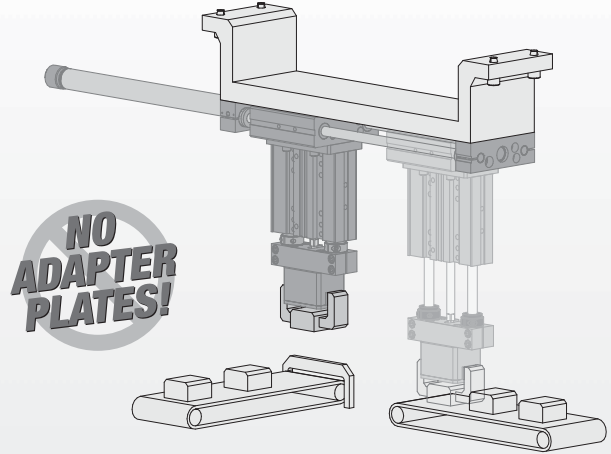
Modular Automation Applications

The following applications represent only some of the unlimited variety of automation solutions made possible with DIRECTCONNECT. Configurations shown include individual components used in single axis applications as well as combinations of units connected **WITHOUT ADAPTER PLATES** to create multi-axis modular automation devices.

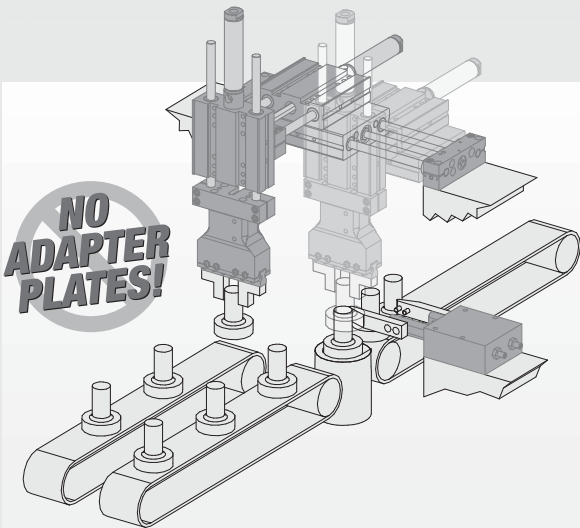


Individual Block Thrusters used independently to perform press and eject operations.

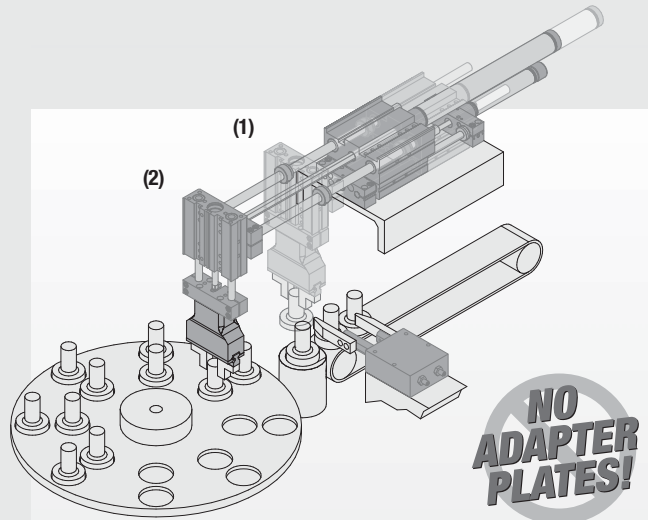
The Block Thruster's compact design is ideal in applications where space is limited.



An overhead gantry created using an inverted Base Slide and Block Thruster with the Base Flange option. The externally powered Base Slide can provide long strokes while the Block Thruster offers a low profile package.



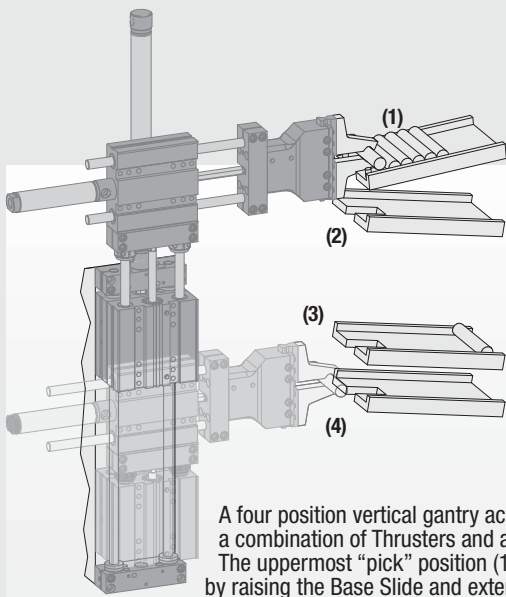
A three axis pick and place created using a Base Slide and two Thrusters. The system allows a single escapement station to feed two conveyor lines. All positions are precisely located with Hard Stops or Shocks. This set-up also allows for a "reject" position.



Mounting a Thruster to a Base Slide on the same axis is used to achieve a three or four position box motion pick and place.

Retracting both Thruster and Base Slide puts the system at a home "pick" position (1). Extending both the horizontal Base Slide and Thruster allows the part to be placed in the inner turntable nest (2). The Slide returns to the "pick" position and the horizontal Thruster is extended allowing the part to be placed in the outer turntable nest. All three positions are precisely located with hard stops or shocks.

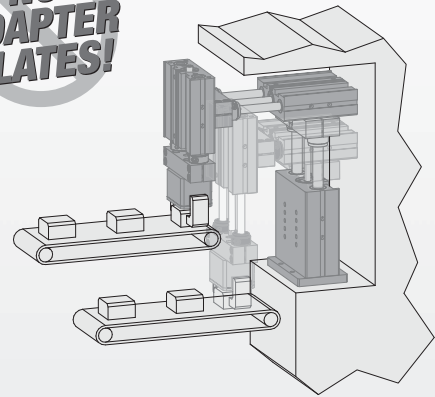
A fourth "reject" position could be simply added by extending the Base Slide while the Thruster is retracted.



**NO
ADAPTER
PLATES!**

A four position vertical gantry achieved with a combination of Thrusters and a Base Slide. The uppermost “pick” position (1) is reached by raising the Base Slide and extending the vertical Block Thruster upward. A part picked from here could be placed in one of the three remaining positions. Position (2) is achieved by keeping the Base Slide in the raised position while retracting the vertical Thruster. Position (3) is attained by lowering the Base Slide while extending the vertical Thruster. Position (4) is obtained by retracting the vertical Thruster. All positions can be precisely located by using Hard Stops for accurate location of picking and placing.

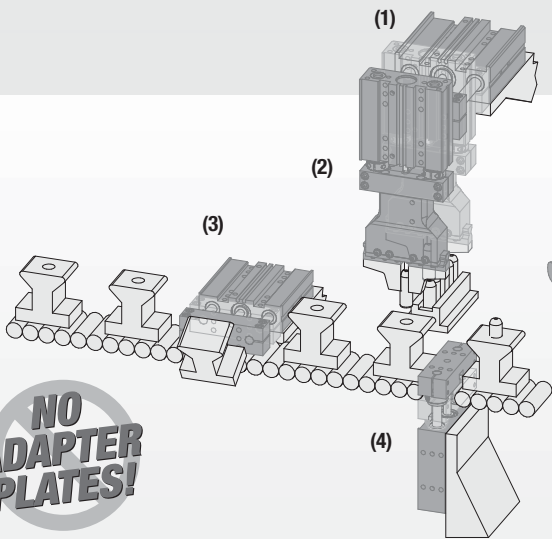
**NO
ADAPTER
PLATES!**



A more elaborate box motion pick and place using Block Thrusters to achieve part transfer between multi-level conveyors. Due to space limitations the application of Block Thrusters is a good choice.

DIRECTCONNECT
LINEAR MOTION
ACTUATORS

4.7



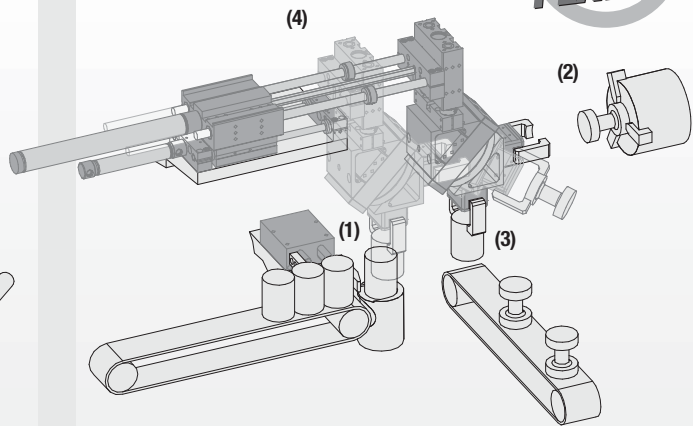
**NO
ADAPTER
PLATES!**

A combination of Thrusters used independently and together for various functions.

A simple box motion pick and place utilizing a larger horizontal Thruster (1) for increased rigidity and smaller vertical Thruster (2) where deflection is not as much of a concern.

An individual Block Thruster (3) used to eject defective (hole missing) parts and another Block Thruster (4) used as a conveyor stop. All units are compact and mount easily into a small area.

**NO
ADAPTER
PLATES!**



Machine load/unload application utilizes 3 or 4 positions in the horizontal axis for picking the billet (1), inserting/removing the finished part from the lathe (2) and placing the finished part on the conveyor (3). A fourth position could be utilized for a “reject” position.

This pick and place device uses a Base Slide and a Thruster mounted in the same axis. The Thruster is a longer stroke version with its actual usable stroke reduced using adjustable collars (4). Vertical motion for the pick and place is accomplished using a Block Thruster.

A right angle rotary is used to make the axis change between the billet and the machine axis. All components are standard, off-the-shelf, and quickly & easily designed and assembled.

DIRECTCONNECT™