




# ELECTRIC PARALLEL GRIPPERS

## Electric Parallel Grippers | Product Overview

Model		Stroke mm [in]	Grip Force N [lbs]	Operating Environment	Special Features	Page GR-CRP-#
DPE 400		10-20 [0.39-0.78]	445-1334 [100-300]	IP 50 Clean Room Class 100, ISO 5, General Industrial	Adjustable Force, Discrete on/off open and close control. Onboard controls. <b>DIRECTCONNECT</b>	5
DPE 200		25 [0.98]	111 [25]	IP54 Clean Room Class 1000, ISO 6 General Industrial	Discrete on/off open and close control. Sealed design. Multiple sensor positions. Onboard controls. <b>DIRECTCONNECT</b>	7
RPE		4 [0.16]	5 [1.1]	IP54 Clean Room Class 10, ISO 4 using Scavenge Port, General Industrial	Discrete on/off 50ms pulse open and close control. Small parts handling. High speed.	9

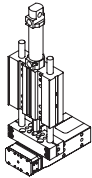
# ELECTRIC PARALLEL GRIPPERS

## Electric Parallel Grippers | DIRECTCONNECT™ Modular Connectivity Chart

### Modular DIRECTCONNECT Mounting Style Examples:

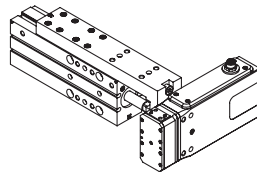
Products can be mounted in multiple positions. Refer to datasheet for complete info.

#### Slide to Gripper



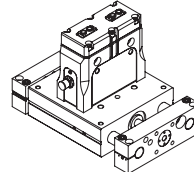
DLT Thruster Slide to  
DPE-200 Electric Gripper

#### Slide to Gripper



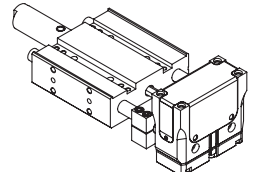
DLM Thruster Slide to  
DPE-200 Electric Gripper

#### Slide to Gripper



DLB Base Slide to  
DPE-400 Electric Gripper

#### Slide to Gripper



DLT Thruster Slide to  
DPE-400 Electric Gripper

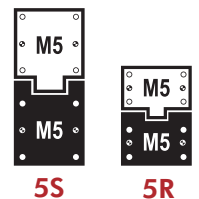
# DIRECTCONNECT™

## Mounting Compatibility Chart

DESTACO's DIRECTCONNECT™ technology, allows all components of the system—grippers and slides—to be mounted together directly. Look for matching icons on product datasheets for mounting compatibility.

**Note:** The numbers in the cell represent the metric screw size and basic mounting pattern.

S=Square, R=Rectangle. ie; 5S = M5 Screw with square mounting pattern.



Catalog Models		2 Jaw Electric Parallel Grippers	
		DPE-200	DPE-400
Base Slides	DLB-06,08		
	DLB-10,12,16	5R	
	DLB-20,25		10R
Thruster Slides	DLT-06,08		
	DLT-10,12,16	5R	
	DLT-20,25	5R	10R
	DLM-07		
	DLM-9,12	5R	

# E-GRIPPER SERIES

Electric Parallel Grippers | Features and Benefits

## Plug-and-Play e-Grippers

### Quick Installation

Unit installs quickly using one cable for both power and operation. DIRECTCONNECT™ feature on DPE units allows mounting to rotaries and slides without adapter plates.

### Light Switch Operation

No tuning or programming required. Grippers use discrete PLC outputs to control open and close operation. Grippers are powered by 24VDC.

### Zero Maintenance

Zero maintenance required for standard environments. Units are internally lubricated and sealed. No air lines, valves, tubing, filters or compressor to interfere with high reliable operations.

### 100% Duty Cycle Operation for Durability

DPE Series supports continuous open/close command signal operation. Tight mechanical tolerances minimize wear leading to high life cycle operations.



RPE 100  
5N [1 lbf]

DPE 200  
111N [25 lbf]

DPE 400  
1334 N [300 lbf]

## DESTACO vs. Others

Features	DESTACO Light Switch Operation	Competing Units
Direct Mechanical Drive <sup>1</sup>	✓	
Integrated Motor Controls <sup>2</sup>	✓	
Zero Maintenance <sup>3</sup>	✓	
DIRECTCONNECT™ <sup>4</sup>	✓	
Programming Software <sup>5</sup>		✓
Clean Room Certified	✓	✓
Zero Backlash/Side Play	✓	

- 1 DESTACO uses a direct mechanical linkage to drive the jaws and eliminate finger play, as opposed to a belt drive design.
- 2 Integrated electronics decreases cabling and space requirements, while increasing overall system integrity.
- 3 Competing units recommend lubrication maintenance intervals.
- 4 DIRECTCONNECT™ allows units to be mounted to rotaries or slides without adapter plates .
- 5 Light Switch operation products require no software.

# E-GRIPPER SERIES

Electric Parallel Grippers | Compare the eGripper Series

Features	DPE-400	DPE-200	RPE-100
Grip Force Range	445-1334N [100-300 lbf]	111N [25 lbf]	5N [1.1 lbf]
Stroke Range	10mm [0.39 in] or 20mm [0.78 in]	25mm [0.98 in]	4mm [0.16 in]
Actuation (open/close)	800 ms	250 ms	100 ms
Accuracy	±0.05mm [0.002 in]	±0.05mm [0.002 in]	±0.05mm [0.002 in]
Jaw Drive Mechanism	Lead Screw/Wedge	Rack-and-Pinion	Solenoid Plunger
Adjustable Grip Force	<input checked="" type="checkbox"/>		
100% Duty Cycle	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
DIRECTCONNECT™ Feature	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
FailSafe Operation			<input checked="" type="checkbox"/>
Internal Sensing	<input checked="" type="checkbox"/>		
IP Rating	IP50	IP54	IP54

## Clean Room Rated:

DESTACO's electric products are ideal for food, medical and clean room applications. Electric products are internally lubricated and sealed, per the chart below:

Clean Room Rating	DPE-400	DPE-200	RPE-100
	100	1000	100
Lubricant	Magnalube	Krytox	Krytox

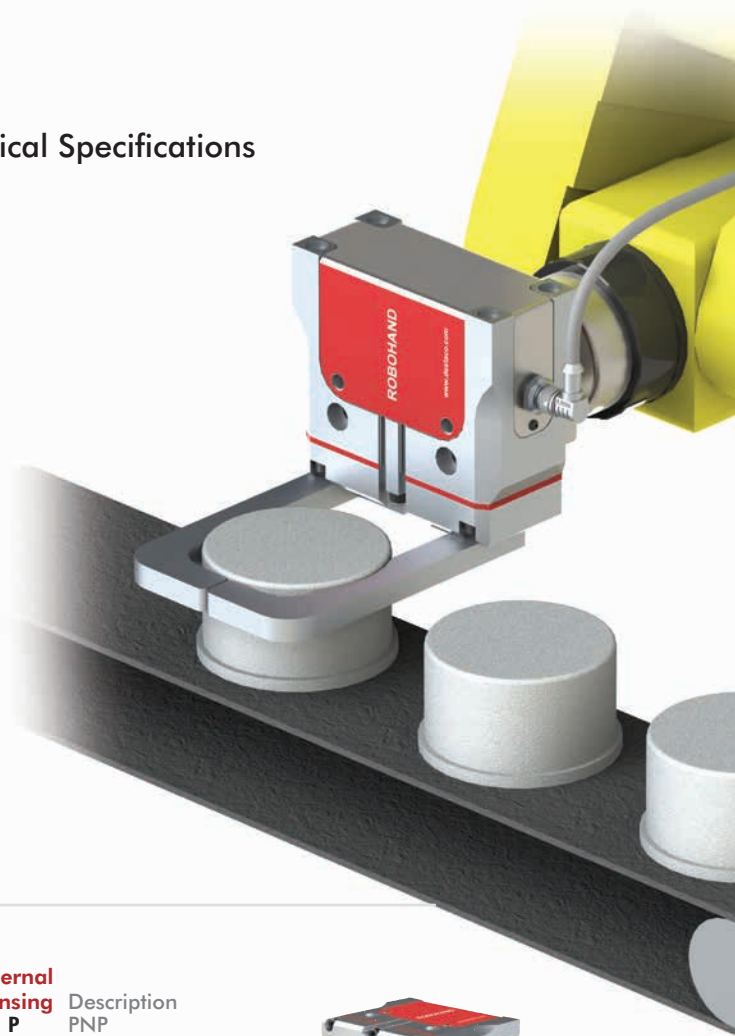
Contact DESTACO for a full range of clean room certified products at [solutions@destaco.com](mailto:solutions@destaco.com)

# DPE-400 HEAVY-DUTY

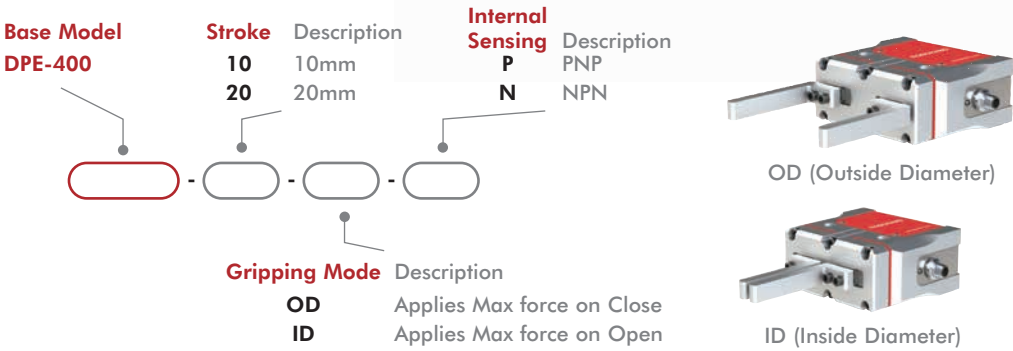
## Electric Parallel Grippers | Features and Benefits | Technical Specifications

### Features:

- Two stroke ranges from 0 to 10mm and 0 to 20mm
- Grip Force adjust-ability from 100% to 50% controlled from the 0 to 5VDC analog input
- Fully integrated electronics, no programming or software  
Operates from PLC discrete open/close commands
- Reverse polarity protection to protect from application mis-wiring
- DIRECTCONNECT™ mounting to rotaries and slides without requiring adapter plates
- Open and close sensing via built-in motor feedback signal
- Clean room 100 rated



### How To Order



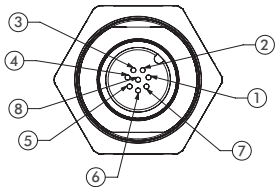
### Accessories

Power and Sensor Accessories	Part Number
PNP Magneto-Resistive Position Sensor	OHSP-017
NPN Magneto-Resistive Position Sensor	OHSN-017
Quick Disconnect Sensor Cable, 5m long	CABL-013
8-wire Power and Signal Cable, 5m long with Straight M12 Connector	CABL-052
8-wire Power and Signal Cable, 5m long with 90° M12 Connector	CABL-053

\*Sensor and cable sold separately.

### Electrical Interface: Pin Out

(Looking into the head of the connector on gripper)

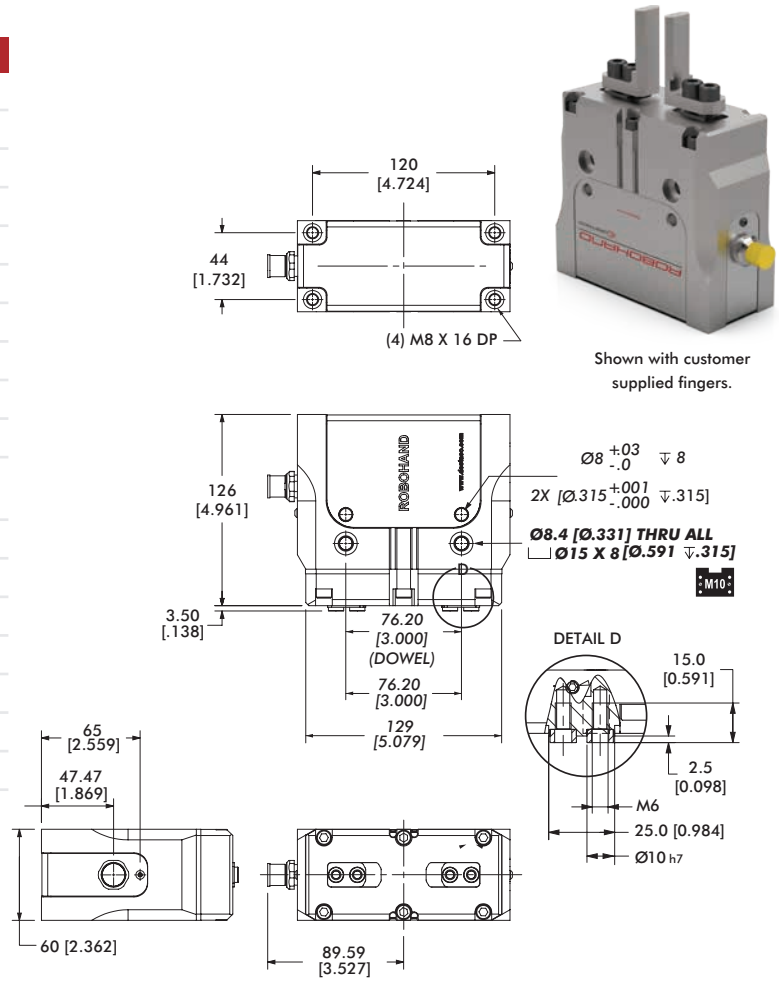
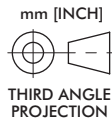


Voltage shown is applied to the FORCE pin, which accepts a 0-5V analog signal.

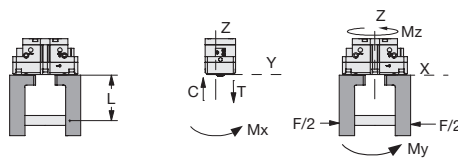
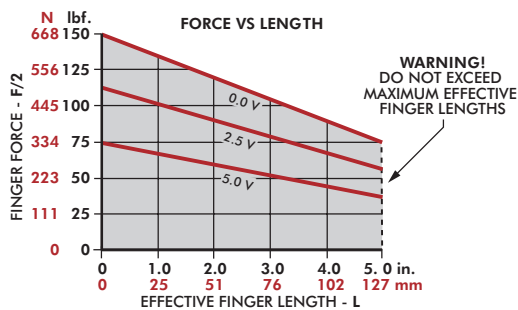
Pin #	Color	Signal	Description	Current
1	White	Force	0-5 VDC (Analog)	5mA
2	Brown	+24V	Motor Power	2A (max), 0.4 A (avg)
3	Green	Open	24 VDC Active (Inputs)	10mA
4	Yellow	Open Sense	NPN/PNP (Outputs)	300mA (max)
5	Gray	Close	24 VDC Active (Inputs)	10mA
6	Pink	Close Sense	NPN/PNP (Outputs)	300mA (max)
7	Blue	Ground	Motor Ground	2A (max),
8	Red	I/O Power	24 VDC (PNP Outputs Only)	300mA (max)

## Electric Parallel Grippers | Dimensions and Technical Specifications

Specifications	Units	DPE-400
Total Rated Grip Force:		
DPE-400-10	N [lbf]	667-1334 [150-300]
DPE-400-20	N [lbf]	445-890 [100-200]
Total Stroke:		
DPE-400-10	mm [in]	10 [0.39]
DPE-400-20	mm [in]	20 [0.78]
Repeatability	mm [in]	±0.025 [0.001]
Accuracy	mm [in]	±0.05 [0.002]
Actuation Time	ms	800
Temperature Range	°C [°F]	0~55° [32°~131°]
Power Requirements @ 100% Duty Cycle	watts	10
Voltage	VDC	24
DC Current (Peak)	amps	2 (max)
DC Current: (Continuous)	amps	0.4
Ingress Protection Class (IP)		IP50
Clean Room		100 (MagnaLube)
Weight	kg [lbs]	2.52 [5.56]
Maximum Finger Length	mm [in]	125 [4.92]
Durability	cycles	3 Million

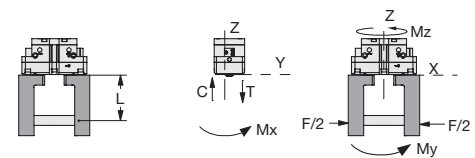
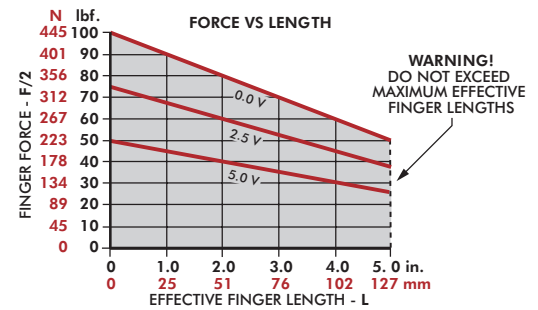


## Loading Information



DPE-400-10	Static	Dynamic
Maximum Tensile T	1564 N [352 lbs]	259 N [58 lbs]
Maximum Compressive C	2070 N [465 lbs]	259 N [58 lbs]
Maximum Moment $M_x$	76 Nm [673 in-lbs]	10 Nm [89 in-lbs]
Maximum Moment $M_y$	106 Nm [938 in-lbs]	14 Nm [124 in-lbs]
Maximum Moment $M_z$	70 Nm [620 in-lbs]	14 Nm [124 in-lbs]

\*Capacities are per set of jaws and are not simultaneous



DPE-400-20	Static	Dynamic
Maximum Tensile T	1394 N [313 lbs]	168 N [38 lbs]
Maximum Compressive C	1845 N [415 lbs]	168 N [38 lbs]
Maximum Moment $M_x$	68 Nm [602 in-lbs]	6 Nm [53 in-lbs]
Maximum Moment $M_y$	84 Nm [743 in-lbs]	8 Nm [71 in-lbs]
Maximum Moment $M_z$	56 Nm [496 in-lbs]	8 Nm [71 in-lbs]

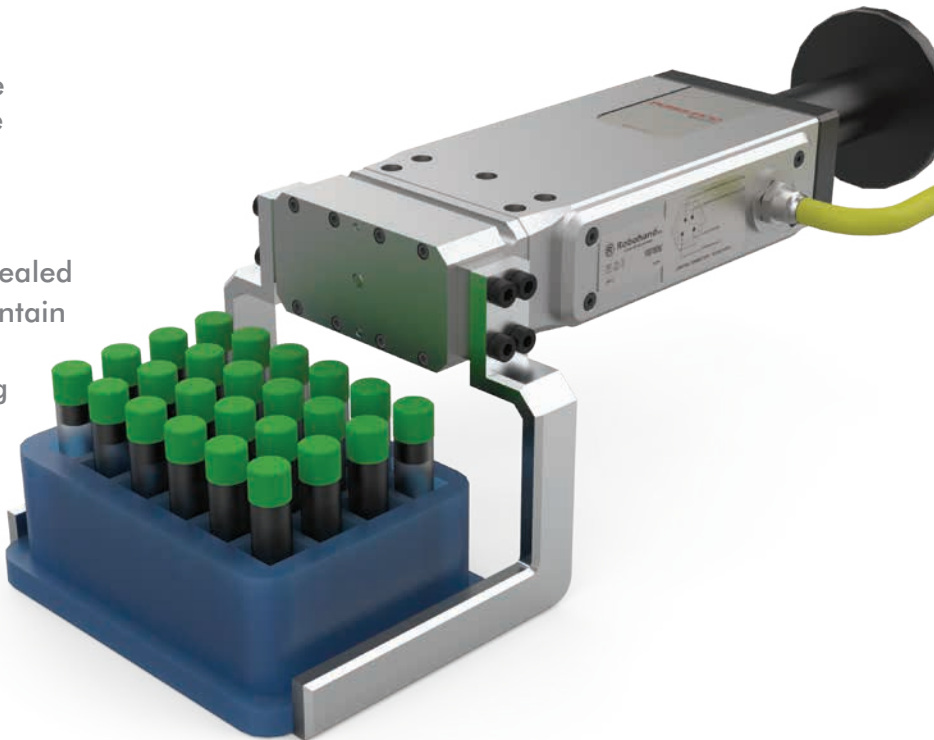
\*Capacities are per set of jaws and are not simultaneous

# DPE-200 MEDIUM-DUTY

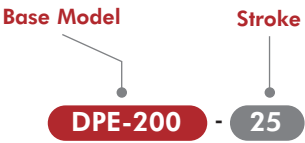
Electric Parallel Grippers | Features and Benefits | How To Order

### Features:

- Ideal for semiconductor and life sciences laboratory applications
- Fast parts handling with grip speeds capable of 120 parts per minute with a 25mm stroke and 250ms actuation time
- High reliability up to four times longer than pneumatic equivalents
- Maintenance free internally lubricated and sealed
- Precision rack-and-pinion drive helps to maintain grip accuracy of +/- 0.05mm (0.002in)
- Fully integrated electronics, no programming or software. Operates from PLC discrete open/close commands
- Reverse polarity protection to protect from application mis-wiring
- DIRECTCONNECT™ mounting to rotaries and slides without requiring adapter plates
- Clean room 1000 rated



### How To Order



### Accessories

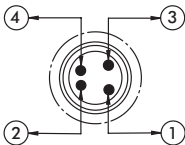
Power and Sensor Accessories	Part Number
PNP Magneto-Resistive Position Sensor	OHSP-017
NPN Magneto-Resistive Position Sensor	OHSN-017
Quick Disconnect Sensor Cable, 5m Long	CABL-013
4-wire Power and Signal Cable, 5m Long	CABL-046

\*Sensor and cable sold separately.

### Electrical Interface: Pin Out

(Looking into the head of the connector on gripper)

#### ELECTRICAL INTERFACE



#### PIN OUT (LOOKING INTO HEADER CONNECTOR ON GRIPPER)

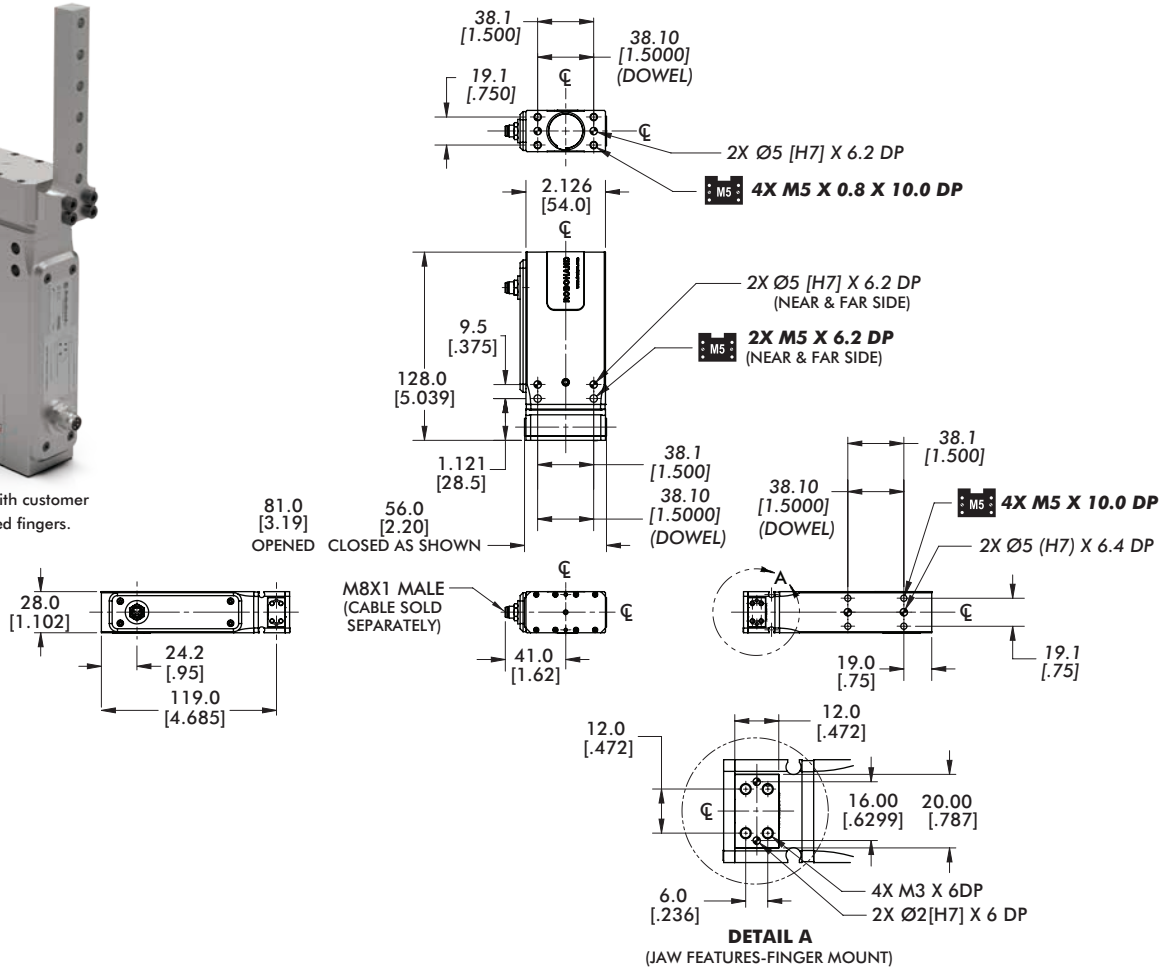
- 1 ..... BROWN (+ 24 VDC)
- 2 ..... WHITE (OPEN GRIPPER) +24 VDC = ACTIVE
- 3 ..... BLUE (GROUND)
- 4 ..... BLACK (CLOSE GRIPPER) +24 VDC = ACTIVE

CABLE # CABL-046

## Electric Parallel Grippers | Dimensions and Technical Specifications



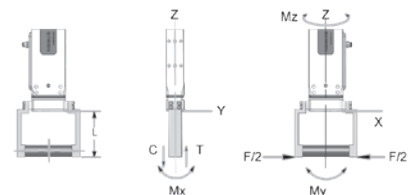
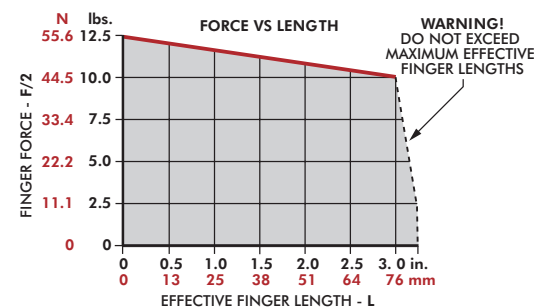
Shown with customer supplied fingers.



## Specifications

Specifications	Units	DPE-200-25
Total Grip Force	N [lbf]	111 [25]
Stroke	mm [in]	25 [0.98]
Repeatability	mm [in]	±0.025 [0.001]
Accuracy	mm [in]	±0.051 [0.002]
Actuation Time	ms	250
Temperature Range	°C [°F]	5°~60° [41°~140°]
Power Requirement @ 100% duty cycle	W	4.2
Voltage	VDC	24
Current - Peak	amps	1.5 (max)
Current - Continuous	amps	0.175
Ingress Protection Class (IP)		IP54
Clean Room		1000 (Krytox)
Weight	kg [lbs]	0.53 [1.16]
Max Finger Length	mm [in]	76.2 [3.00]
Durability	cycles	20 Million

## Loading Information



DPE-200-25	Static
Maximum Tensile T	10 N [75 lbs]
Maximum Compressive C	10 N [75 lbs]
Maximum Moment M <sub>x</sub>	14 Nm [120 in-lbs]
Maximum Moment M <sub>y</sub>	17 Nm [150 in-lbs]
Maximum Moment M <sub>z</sub>	14 Nm [120 in-lbs]

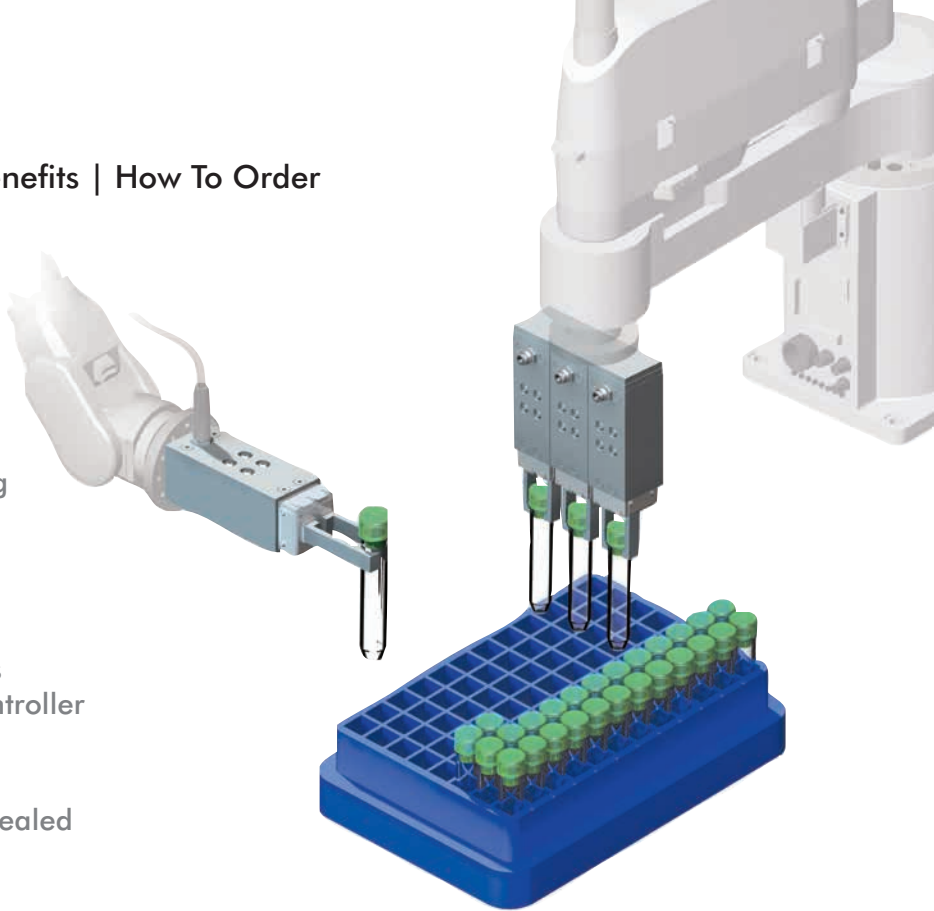
\*Capacities are per set of jaws and are not simultaneous

# RPE-100 LIGHT-DUTY

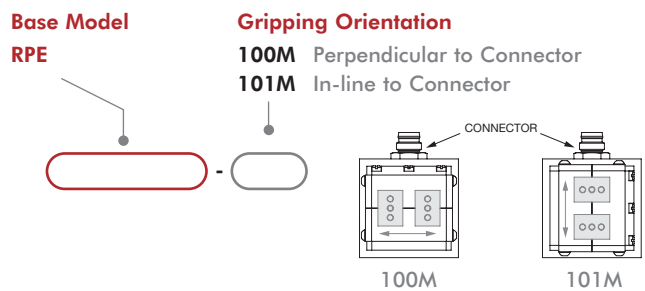
Electric Parallel Grippers | Features and Benefits | How To Order

### Features:

- Ideal for semiconductor and life sciences laboratory applications
- Compact design allows several units mounted closely together to grip multiple parts simultaneously
- Fully integrated electronics, no programming or software. Operates from PLC discrete open/close commands
- Fail-safe operation with spring closed maintains full grip force upon power loss
- No programming required. Gripper actuates using a 50ms discrete pulse from PLC or controller
- Minimized finger backlash and side play with low friction Dual-V bearing system
- Maintenance free internally lubricated and sealed
- Clean room 100 rated IP54



### How To Order



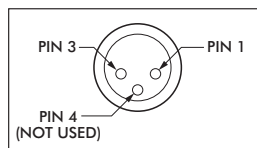
### Accessories

Sensor Accessories	Part Number
Inductive Sensor Mounting Kit (Mounts 1 sensor)	OSMK-130
PNP Inductive Sensor with Quick Connect	OISP-019
NPN Inductive Sensor with Quick Connect	OISN-019
Quick Disconnect Sensor Cable, 2m long	CABL-010
Quick Disconnect Sensor Cable, 5m long	CABL-013

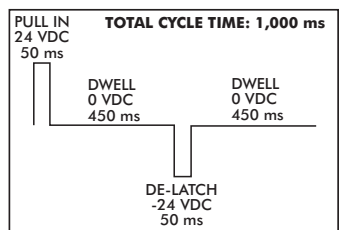
\* Sensor and cable sold separately.

### Electrical Interface: Pin Out

(Looking into the head of the connector on gripper)



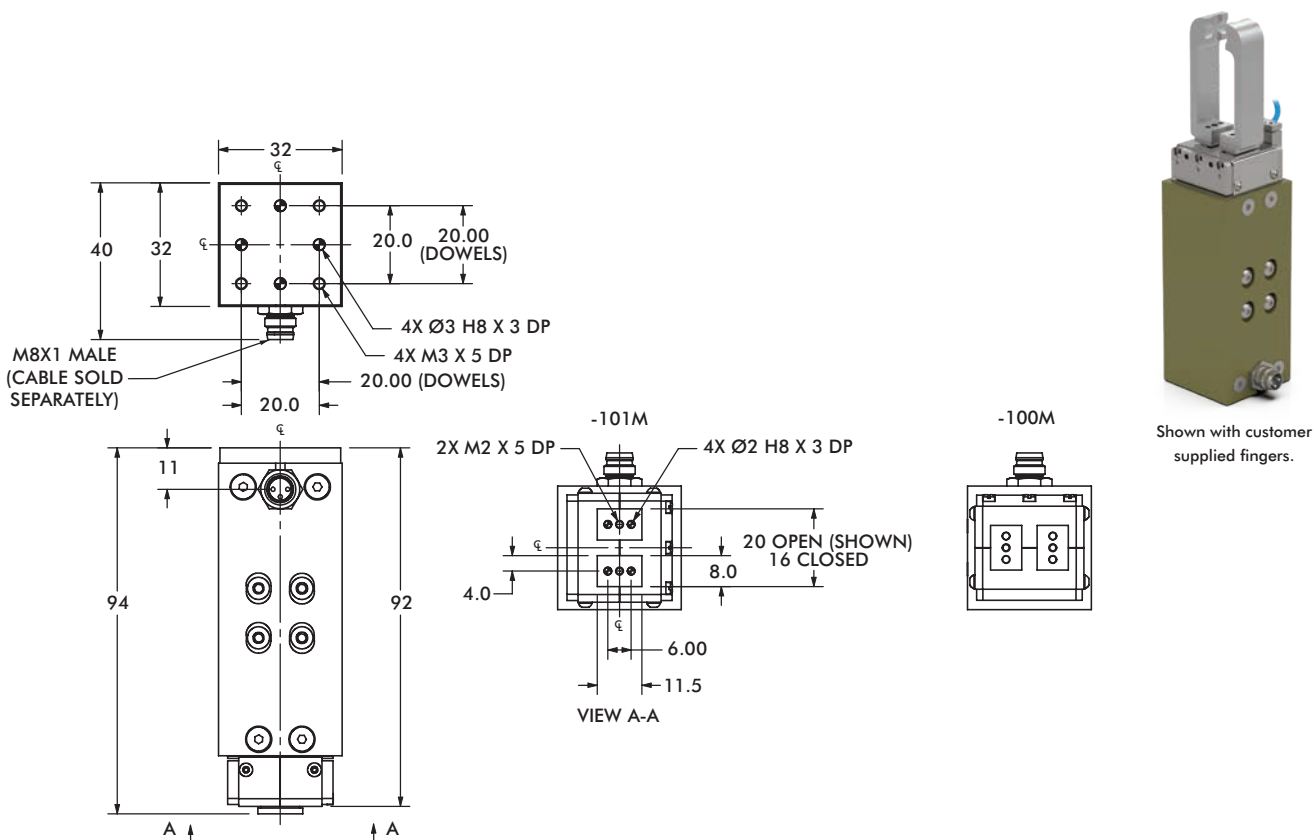
PIN ORIENTATION



TIMING DIAGRAM

# RPE-100 LIGHT-DUTY

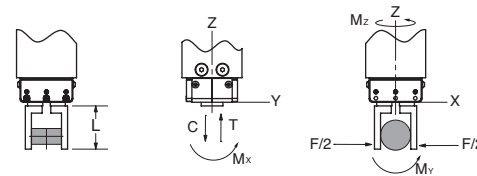
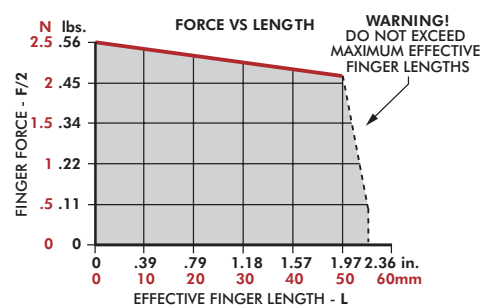
## Electric Parallel Grippers | Dimensions and Technical Specifications



### Specifications

Specifications	Units	RPE-100M/101M
Total Grip Force	N [lbf]	5 [1.1]
Stroke	mm [in]	4 [0.16]
Repeatability	mm [in]	±0.025 [0.001]
Accuracy	mm [in]	±0.051 [0.002]
Actuation Time	ms	100
Temperature Range	°C [°F]	5°~50° [40°~120°]
Power Requirement @ 100% duty cycle	W	40 (Peak)
Voltage	VDC	24
Current - Peak	amps	1.5 (max)
Current - Continuous	amps	0.175
Ingress Protection Class (IP)		IP54
Clean Room		100 (Krytox)
Weight	kg [lbs]	0.23 [0.50]
Max Finger Length	mm [in]	50 [1.90]
Durability	cycles	5 Million

### Loading Information



RPE-100, RPE-101	Static	Dynamic
Maximum Tensile T	59 N [13 lbs]	20 N [4.5 lbs]
Maximum Compressive C	59 N [13 lbs]	20 N [4.5 lbs]
Maximum Moment $M_x$	0.75 Nm [2.7 lbf-in]	0.3 Nm [6.6 lbf-in]
Maximum Moment $M_y$	1.2 Nm [10.6 lbf-in]	0.4 Nm [3.5 lbf-in]
Maximum Moment $M_z$	0.75 Nm [6.6 lbf-in]	1.1 Nm [9.7 lbf-in]

\*Capacities are per set of jaws and are not simultaneous