




ELECTRIC PARALLEL GRIPPERS

2-Jaw Parallel Grippers | Dimensions and Technical Specifications

Model	Stroke mm [in]	Grip Force N [lbs]	Operating Environment	Special Features	Page #
DPE 400 	10-20 [0.39-0.78]	445-1334 [100-300]	IP 50 Clean Room Class 100, General Industrial	Adjustable Force, Discrete on/off open and close control. Onboard controls. DIRECTCONNECT.	6
DPE 200 	25 [0.98]	90 [20]	IP54 Clean Room Class 1000, General Industrial	Discrete on/off open and close control. Sealed design. Multiple sensor positions. Onboard controls. DIRECTCONNECT.	7
RPE 	4 [0.16]	5 [1.1]	IP54 Clean Room Class 10, ISO4 using Scavenge Port, General Industrial	Discrete on/off 50ms pulse open and close control. Small parts handling. High speed.	8

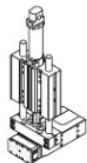
ELECTRIC PARALLEL GRIPPERS

2-Jaw Parallel Grippers | Dimensions and Technical Specifications

Modular DirectConnect Mounting Style Examples:

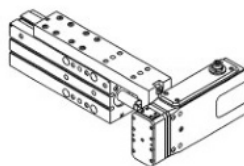
Products can be mounted in multiple positions. Refer to datasheet for complete info.

Slide to Gripper



DLT Base Slide to DPE-200 Electric Gripper

Slide to Gripper



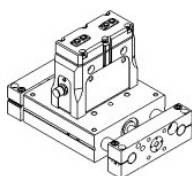
DLM Base Slide to DPE-200 Electric Gripper

Rotary to Gripper



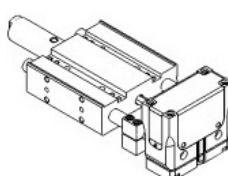
DRF Base Slide to DPE-200 Electric Gripper

Slide to Gripper



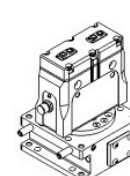
DLB Base Slide to DPE-400 Electric Gripper

Slide to Slide



DLT Thruster Slide to DPE-400 Electric Gripper

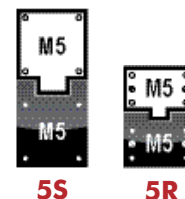
Slide to Gripper



DRF Rotary to DPE-400 Electric Gripper

DIRECTCONNECT™ Modular Compatibility Chart

DE-STA-CO's modular automation systems feature DirectConnect™ technology, allowing all components of the system—base slides, block thrusters, thruster slides, grippers, and mounting stanchions—to be mounted together quickly & easily without any adapter plates. Look for matching icons on product datasheets for mounting compatibility.



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	
Rotary Actuators	DRF-075,094	5R	
	DRF-106	5R	
	DRF-131	5R	10R

E-GRIPPER SERIES

Electric Parallel Grippers | Features and Benefits

Light Switch Simple, Plug-and-Play e-Grippers

The most durable and convenient electric grippers in the industry

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 special adapter plates.

Light Switch Operation

Electric grippers are easier than pneumatics with “out-of-the-box” operation. No tuning or programming. Uses discrete outputs to open and close gripper from PLC or controller and a 24VDC industry standard power supply.

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
1 lbf

DPE 200
25 lbf

DPE 400
300 lbf

Clean Room Rated:

DE-STA-CO’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 DE-STA-CO for a full range of clean room certified products at solutions@destaco.com

DE-STA-CO vs. Others

Features	DE-STA-CO Light Switch Operation	Competing Units
Direct Mechanical Drive ¹	<input checked="" type="checkbox"/>	
Integrated Motor Controls ²	<input checked="" type="checkbox"/>	
Zero Maintenance ³	<input checked="" type="checkbox"/>	
DirectConnect™ ⁴	<input checked="" type="checkbox"/>	
Programming Software ⁵		<input checked="" type="checkbox"/>
Clean Room Certified	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Zero Backlash/Side Play	<input checked="" type="checkbox"/>	

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

E-GRIPPER SERIES

Electric Parallel Grippers | Features and Benefits

DPE-400 Heavy Duty Electric Gripper

Adjustable High Grip Force

0 to 5VDC analog input allows for 50% grip force adjustability. The rugged aluminum anodized housing supports a high force density of 1334N (300lbf).

All-in-One Gripper Unit with Built-in Motor Controller

No external controllers or programming software required. All electronics are integrated for actuation control with reverse polarity protection.

Internal Sensing

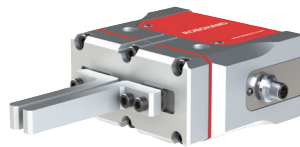
DPE-400 internal sensors detect when the motor is stalled generating feedback signals to mimic external sensors. Motor feedback signals may eliminate the need for external sensors.

DirectConnect™ Mounting

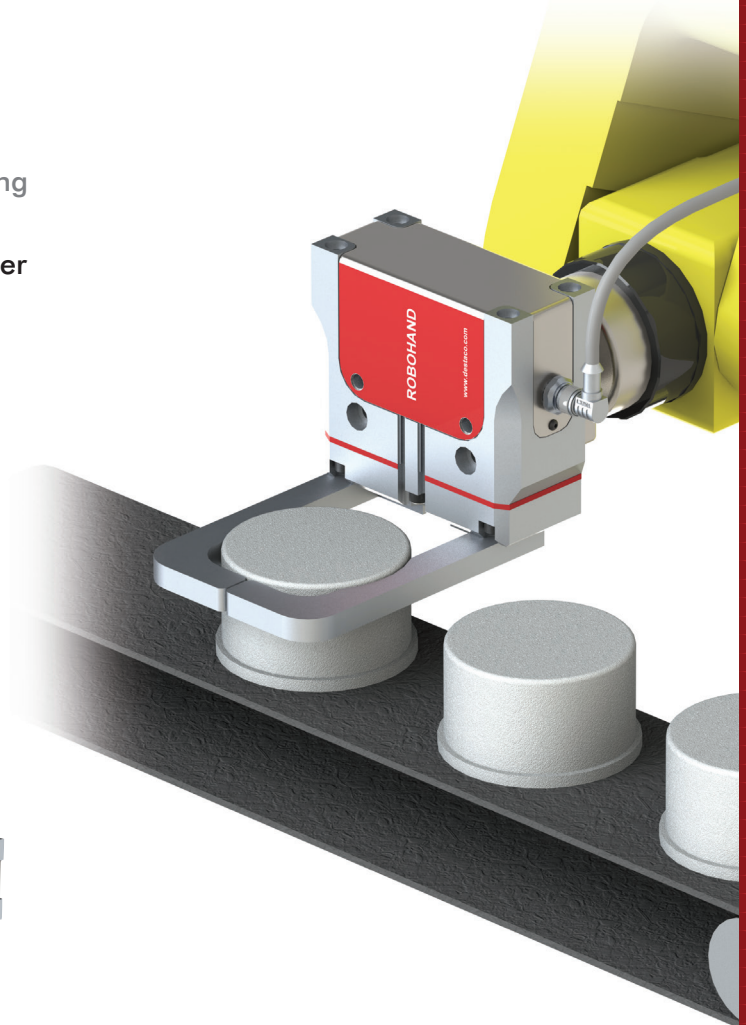
The DirectConnect™ feature allows direct mounting to other Robohand rotary and slide products. The mounting patterns eliminate the need for a custom designed adapter plate.



OD (Outside Gripping)



ID (Inside Gripping)



DPE-200 Medium Duty Electric Gripper

Long Stroke with Fast Actuation

Grip up to 120 parts per minute with a 25mm stroke and 250ms actuation time for fast parts handling

All-in-One Gripper Unit with Built-in Motor Controller

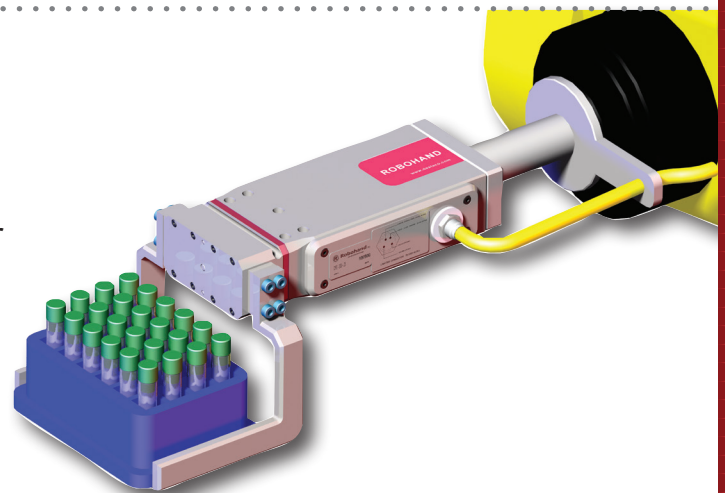
No external controllers or programming software required. All electronics are integrated for actuation control with reverse polarity protection.

Ultra High Reliability and Durability

DPE-200 has been tested to 20+ million cycles for durability with zero maintenance. Reliability is four times longer than pneumatic equivalents.

High Accuracy Operation

One-piece aircraft quality aluminum body and precision rack-and-pinion drive help to maintain product accuracy of +/- 0.05mm (0.002in).



E-GRIPPER SERIES

Electric Parallel Grippers | Features and Benefits, Technical Specifications

RPE-100 Light Duty Electric Gripper

Compact Design

This design allows several RPE-100 to be mounted closely together using a gang or flange mounting plate to pick up multiple parts simultaneously.

Fast Actuation

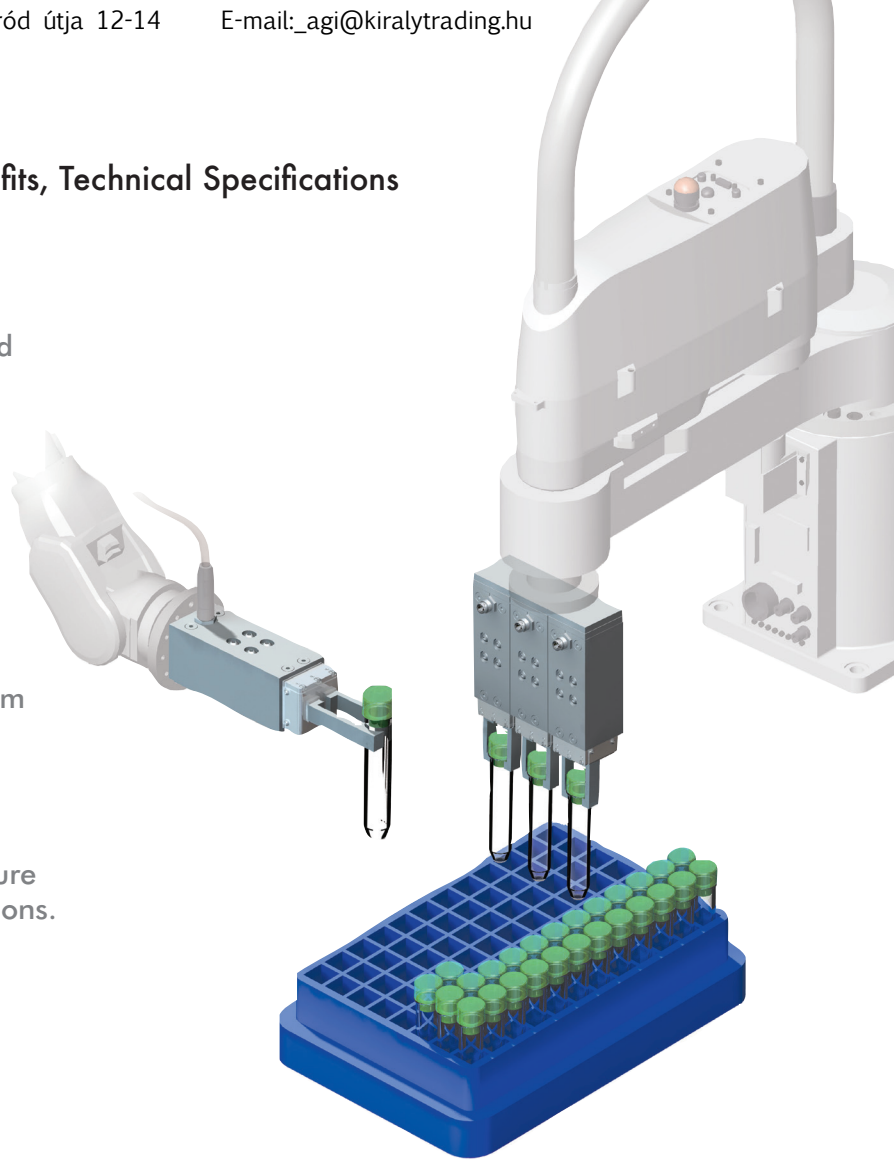
Short stroke with 100ms actuation time delivers ultra fast part handling.

Smooth Low Friction Motion

Dual V roller bearing design delivers smooth rolling motion performance, maintaining maximum finger rigidity while minimizing finger backlash and side play.

Fail Safe Operation

Solenoid driven gripper uses a spring closed feature to maintain full grip force in loss of power conditions.



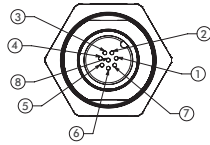
Compare the eGripper Series

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 Speed	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



DPE-400 SERIES

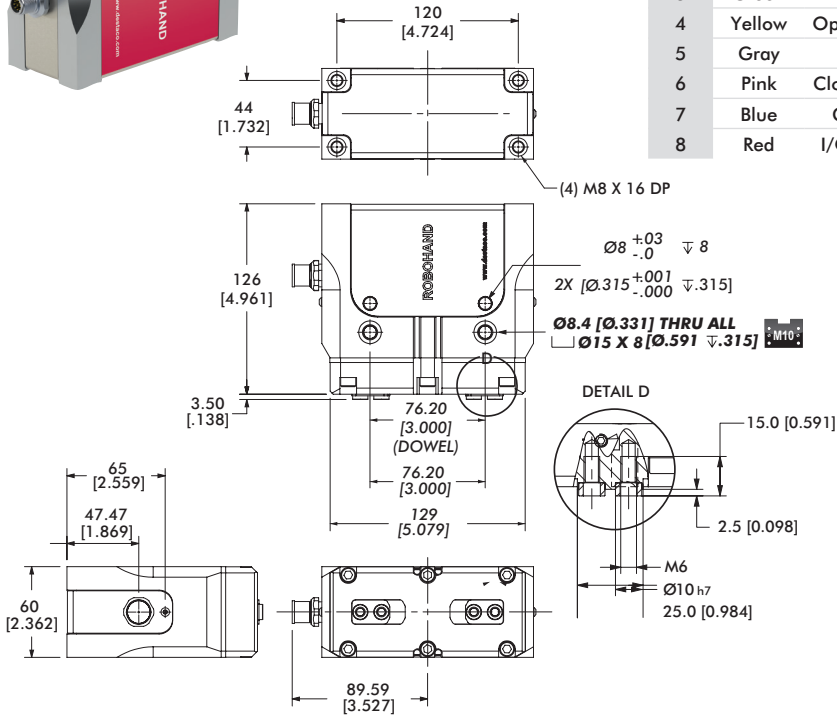
Electric Parallel Grippers | Dimensions and Technical Specifications



Electrical Interface: Pin Out

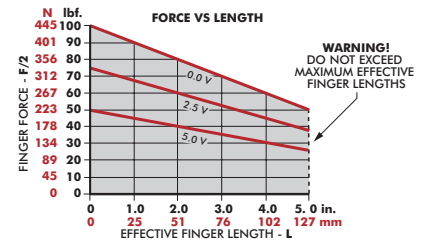
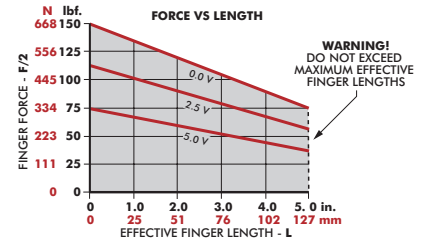
(Looking into the head of the connector on gripper)

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)



NOTE: REVERSE POLARITY PROTECTED

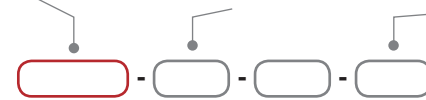
Voltage shown is applied to the FORCE pin, which accepts a 0-5V analog signal.



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

How To Order

Base Model	Stroke	Description	Internal Sensing	Description
DPE-400	10	10mm	P	PNP
	20	20mm	N	NPN



Gripping Mode Description

- OD** Applies Max force on Close
- ID** Applies Max force on Open



OD (Outside Diameter)



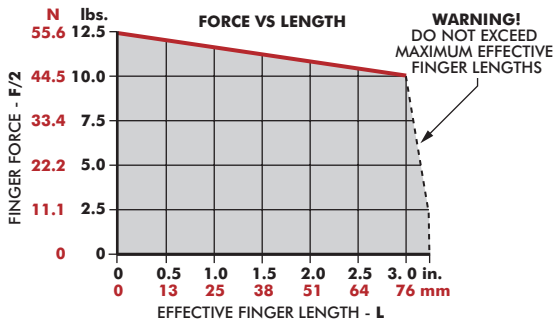
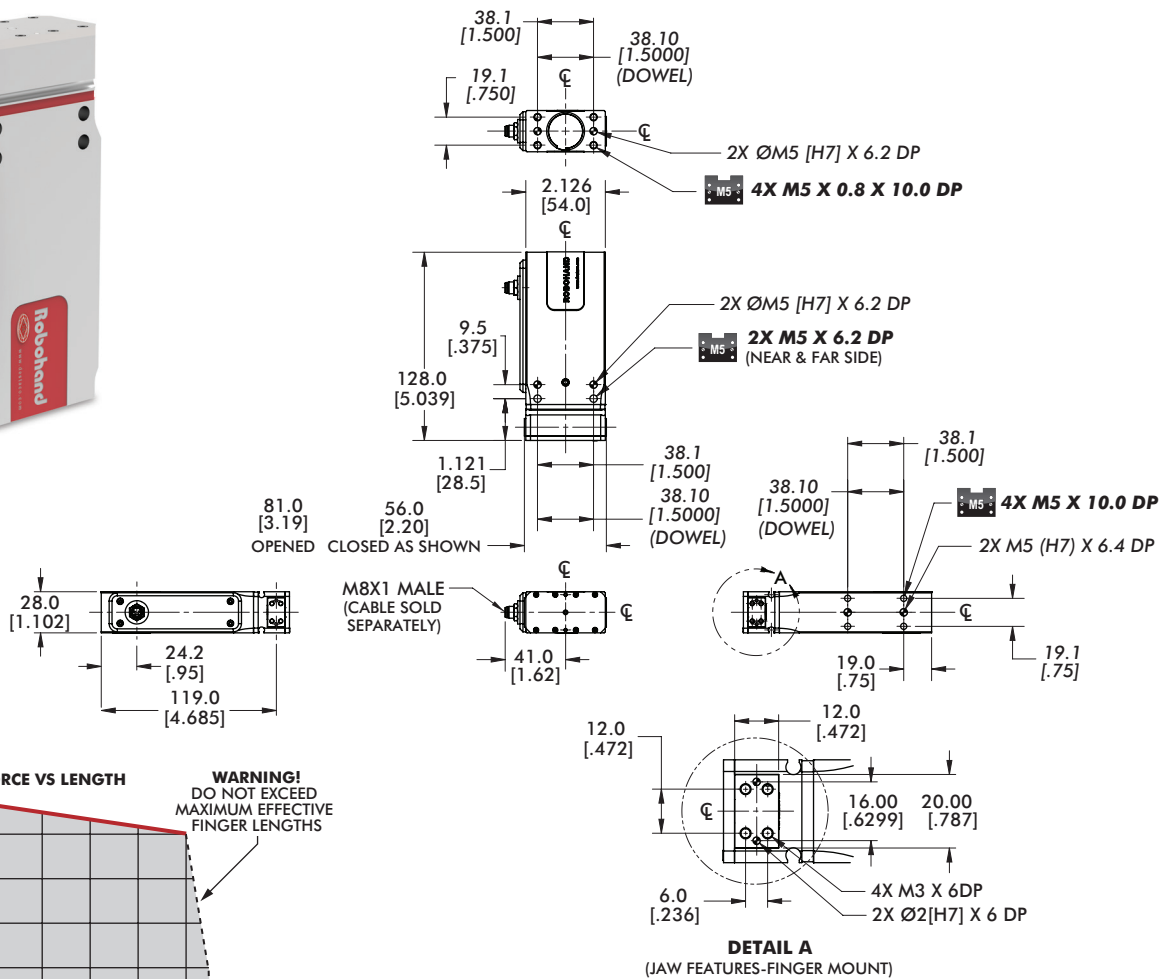
ID (Inside Diameter)

Order No.	Optional Power and Sensor Accessories
OHSP-017	PNP Magneto-Resistive Position Sensor
OHSN-017	NPN Magneto-Resistive Position Sensor
CABL-013	Quick Disconnect Sensor Cable, 5m long
CABL-052	8-wire Power and Signal Cable, 5m long with Straight M12 Connector
CABL-053	8-wire Power and Signal Cable, 5m long with 90° M12 Connector

DPE-200-25 SERIES

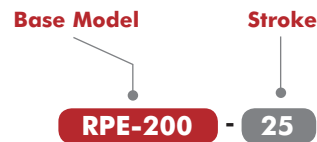


Electric Parallel Grippers | Dimensions and Technical Specifications



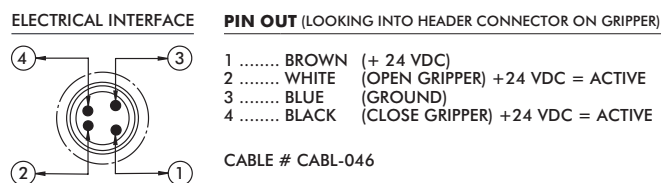
Specifications	DPE-200-25
Stroke	25mm [0.98 in]
Total Grip Force	111 N [25 lbf]
Repeatability	±0.025mm [0.001 in]
Accuracy	±0.051mm [0.002 in]
Actuation Time	250 ms
Temperature Range	5° ~ 60°C [41° ~ 140°F]
Power Requirement @ 100% duty cycle	4.2W
Voltage	24 VDC
Current - Peak	1.5 Amps Max
Current -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

How To Order



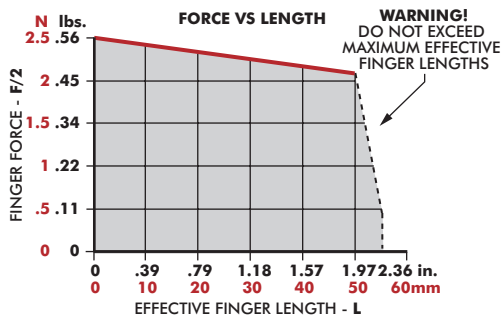
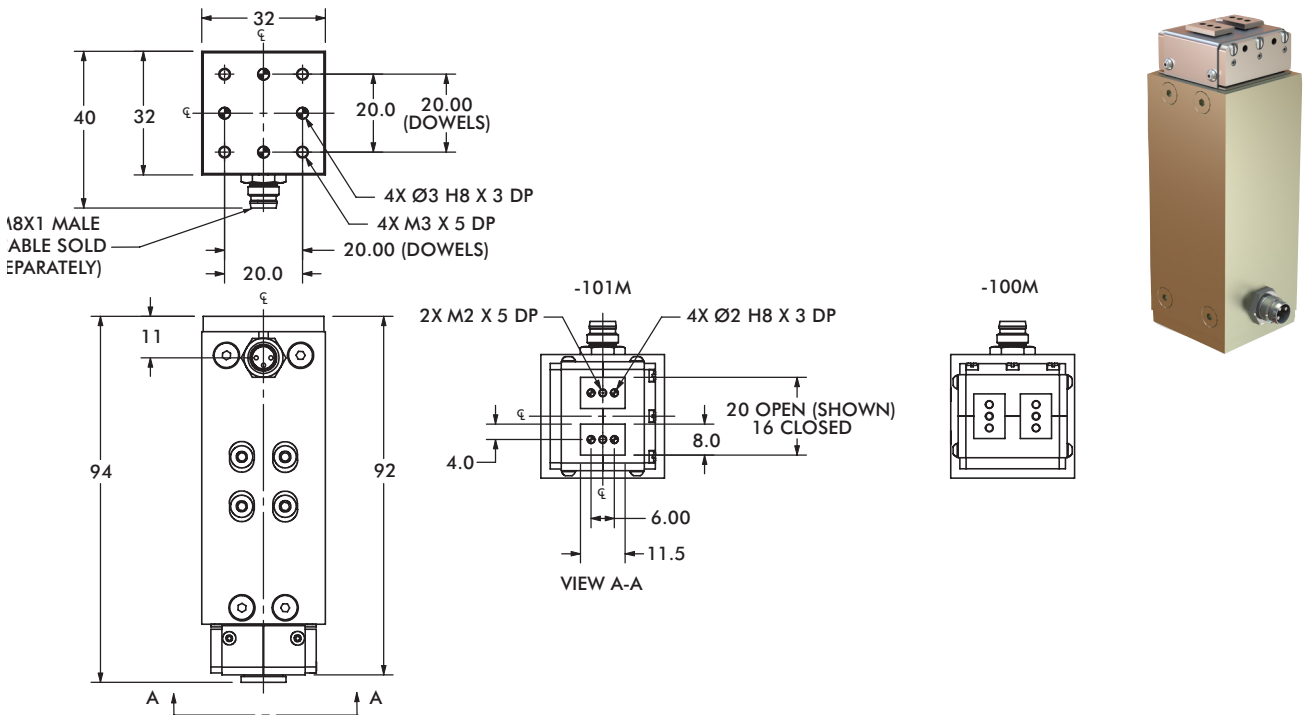
(Order separately)

Order No.	Optional Power and Sensor Accessories
OHSP-017	PNP Magneto-Resistive Position Sensor
OHSN-017	NPN Magneto-Resistive Position Sensor
CABL-013	Quick Disconnect Sensor Cable, 5m Long
CABL-046	4-wire Power and Signal Cable, 5m Long



RPE-100 SERIES

Electric Parallel Grippers | Dimensions and Technical Specifications



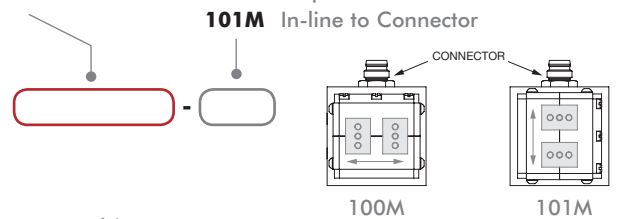
Specifications	RPE-100M/101M
Stroke	4mm [0.16 in]
Total Grip Force	5 N [1.1 lbf]
Repeatability	±0.025mm [0.001 in]
Accuracy	±0.051mm [0.002 in]
Actuation Time	100 ms
Temperature Range	5° ~ 50°C [40° ~ 120°F]
Power Requirement @ 100% duty cycle	40 W (Peak)
Voltage	24 VDC
Current - Peak	1.5 Amps Max
Current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

How To Order

Base Model
RPE

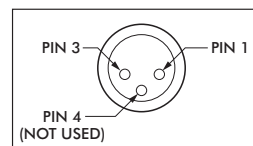
Gripping Orientation

- 100M** Perpendicular to Connector
- 101M** In-line to Connector

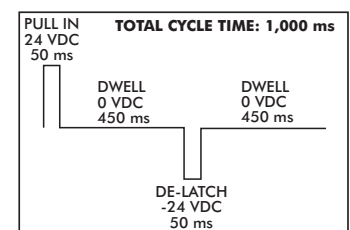


(Order separately)

Order No.	Optional Power and Sensor Accessories
OSMK-130	Inductive Sensor Mounting Kit (Mounts 1 sensor)
OISP-019	PNP Inductive Sensor with Quick Connect
OISN-019	NPN Inductive Sensor with Quick Connect
CABL-010	Quick Disconnect Sensor Cable, 2m long
CABL-013	Quick Disconnect Sensor Cable, 5m long



PIN ORIENTATION



TIMING DIAGRAM