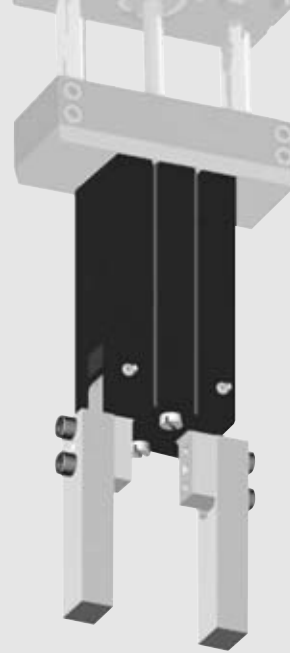


# Angular Grippers - 180° Spring Assist Series

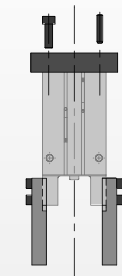
- 180° angular gripper:**  
The full jaw opening (180°) means that the part can be direct fed, avoiding any release movement by the robot or by the actuator.
- Multiple mounting locations:**  
DIRECTCONNECT™ mounting on back of body (sizes 12-25). Standard mounting on top.
- Fail safe operation:**  
The force supplied from the internal spring can be used to maintain gripping force if the gripper loses air pressure.
- Compact gripper:**  
This gripper is designed for use in confined spaces.
- Multipurpose gripper:**  
Several accessories (adjustable stop, magneto resistive or inductive sensors) allow this gripper to be used in a number of applications.
- Harsh environments:**  
Shielded design repels chips and other particulate from internal drive mechanism.



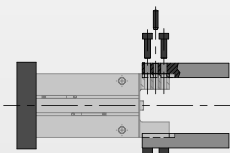
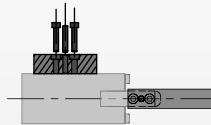
## Mounting Information:

### Grippers can be mounted & operated in any orientation

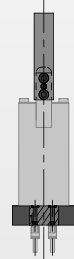
Gripper is located from the top with 2 dowel pins and assembled with 2 screws.



DIRECTCONNECT mounting pattern: Gripper is located with 2 dowel pins and assembled with 4 screws. Alternative pattern: Gripper is located with 2 dowel pins and assembled with 2 screws.



Fingers are centered over the jaws, located with 1 dowel pin and assembled with 2 screws.



The gripper is protected from falling debris when it is mounted and operated upside down.

Gripper can be operated utilizing top manifold air ports.

## Technical Specifications:

### Pneumatic Specifications

Pressure Operating Range  
Cylinder Type

**Imperial**  
60-100 psi

**Metric**  
4-7 bar

**Double Acting Spring Assist or Single Acting Spring Return**

**Internally Lubricated Buna-N 4-way, 2-position**

Dynamic Seals  
Valve Required to Operate

### Air Quality Requirements

Air Filtration  
Air Lubrication  
Air Humidity

**40 Micron or Better Not Necessary\*  
Low Moisture Content (dry)**

### Temperature Operating Range

Buna-N Seals (Standard)  
Viton® Seals (Optional)

**-30°~180° F  
-20°~300° F**

**-35°~80° C  
-30°~150° C**

### Maintenance Specifications†

Expected Life  
Normal Application  
w/ Preventative Maintenance  
Field Repairable  
Seal Repair Kits Available

**5 million cycles  
10+ million cycles\*  
Yes  
Yes**

\*Addition of lubrication will greatly increase service life

† See Maintenance Section

## Product Features

### Gripper Attachment

Gripper mounting from side or bottom

### Viton Seals

Viton seals for high temperatures (-20°F to +300°F / -30°~150° C) are optional

### Quality Components

Made from aluminum alloy anodized with Teflon™ impregnation. The gripper's main components are made of heat treated steel.

### Inductive Sensor Mounting Kit

Accessory (SD) in order to control jaw position: comes with 2 holders for tubular sensors and 2 adjustable flags (except size -12)

### Magneto Resistive Sensor Mounting Kit

The gripper comes with adjustable slots for the 2 magnetic sensors (to control jaw position)

### Adjustable Stop

Accessory (BR) in order to adjust the opening of jaws, between 0° to 180°

### Shielded Plate and Wiper Covers

Gripper body is shielded to repel chips and other particulate from internal drive mechanism

### DIRECTCONNECT Mounting Patterns

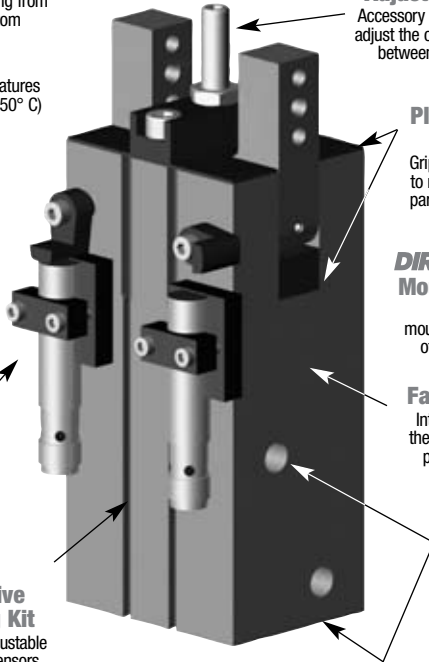
DIRECTCONNECT™ mounting surface on back of body (sizes 12-25)

### Fail Safe Spring

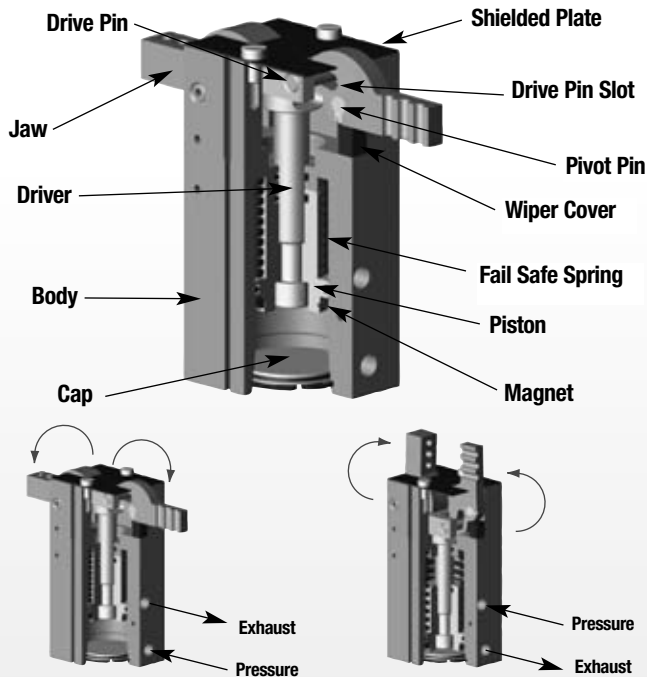
Internal spring allows the gripper to hold onto part with loss of air pressure

### Multiple Air Ports

Side or top air ports (top ports require 0-ring)



## Operating Principle



- A double acting piston, with a ring magnet for magneto resistive sensing, is connected to a fork driver on which 2 drive pins are fixed.
- Jaw rotation is synchronized with the drive pin-jaw assembly.
- Sliding in these slots, drive pins convert vertical motion of the piston into rotating opposite synchronous motion of both jaws.
- Each jaw has a useful rotation stroke of 90°, between the 90° open position and the 0° gripping position, plus a gripping over-stroke of approximately 1.5° before reaching the fully gripped position. Jaws have to be designed for a 0° gripping position (parallel jaws)
- The fail safe spring allow the gripper to retain the component should the air supply fail or for the gripper to be used in single acting mode.

## Style -DCT-RE Angular Gripper

Size -12M



Style: DCT-12M-RE  
Stroke: 90° each finger  
Grip Force: 9 lbs 40 N  
Weight: 0.26 lbs 0.12 Kg



See Page **2.46**

## Style -DCT-RE Angular Gripper

Size -16M



Style: DCT-16M-RE  
Stroke: 90° each finger  
Grip Force: 19 lbs 87 N  
Weight: 0.44 lbs 0.20 Kg



See Page **2.47**

## Style -DCT-RE Angular Gripper

Size -20M



Style: DCT-20M-RE  
Stroke: 90° each finger  
Grip Force: 32 lbs 141 N  
Weight: 0.73 lbs 0.33 Kg



See Page **2.48**

## Style -DCT-RE Angular Gripper

Size -25M



Style: DCT-25M-RE  
Stroke: 90° each finger  
Grip Force: 45 lbs 199 Nm  
Weight: 1.26 lbs 0.57 Kg



See Page **2.49**

## Style -CT-RE Angular Gripper

Size -32M



Style: CT-32M-RE  
Stroke: 90° each finger  
Grip Force: 79 lbs 353 N  
Weight: 1.83 lbs 0.83 Kg

See Page **2.50**

## Style -CT-RE Angular Gripper

Size -40M



Style: CT-40M-RE  
Stroke: 90° each finger  
Grip Force: 133 lbs 592 N  
Weight: 3.06 lbs 1.39 Kg

See Page **2.51**

## Style -CT-RE Angular Gripper

Size -50M



Style: CT-50M-RE  
Stroke: 90° each finger  
Grip Force: 201 in-lbs 893 N  
Weight: 4.87 lbs 2.21 Kg

See Page **2.52**

DCT-RE/CT-RE SERIES

2.45



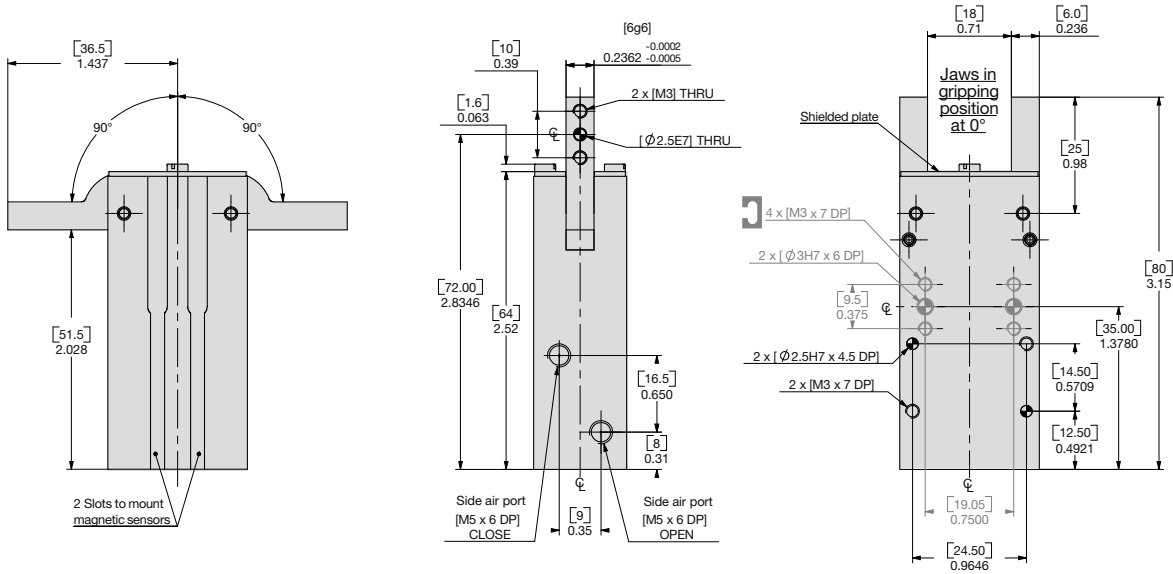
DIRECTCONNECT™

# ANGULAR GRIPPER DCT-12M-RE 180° SERIES



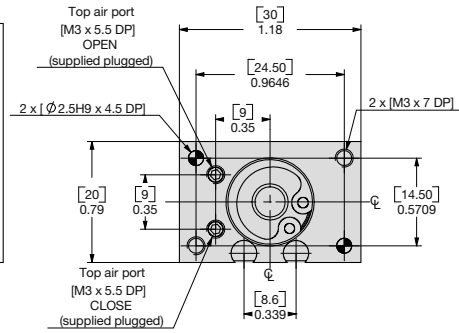
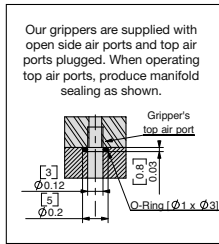
DCT-RE SERIES

2.46



### Specifications

		DCT-12M-RE	
Total Rated Grip Force, <b>F</b> @ 100 psi [7 bar]	<b>L</b> = 1 in. [25mm] @ 0°	9 lbs.	40 N
Stroke		90° of stroke for each finger	
Weight		0.26 lbs.	0.12 Kg
Pressure Range		60-100 psi	4-7 Bar
Cylinder Bore $\varnothing$		0.472 in.	12 mm
Displacement		0.117 in <sup>3</sup>	1.92 cm <sup>3</sup>
Temperature Range			
Standard Seals		-30°~180° F	-35°~80° C
Viton® Seals		-20°~300° F	-30°~150° C
Actuation (open/close)		0.08 / 0.05 sec.	
Accuracy		±0.0028 in.	±0.07 mm
Repeatability		±0.002 in.	±0.05 mm
Valve required to actuate single acting		3-way, 2-position	
Valve required to actuate double acting		4-way, 2-position	



NOTE: DIRECTCONNECT™ DIMENSIONS ARE SHOWN IN BLUE

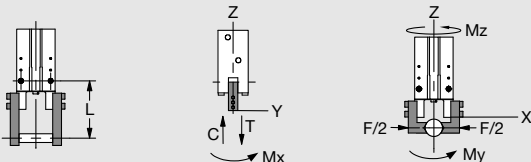
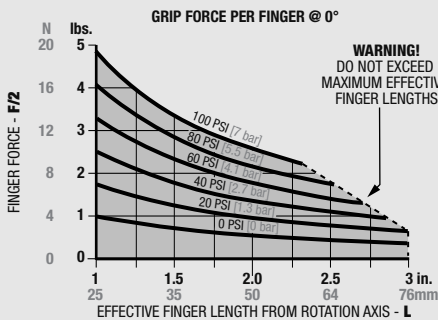
### UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Symbol	Imperial in.	Metric [mm]
Dimensions are symmetrical about centerline	0.00 ± .01	0.1 ± .25
Third Angle Projection	0.000 ± .005	0.0 ± .13
All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or ±.013mm	0.0000 ± .0005	0.00 ± .013
Metric Threads		
Course Pitch		

NOTE: Jaws have to be designed for a 0° gripping position (parallel jaws). Jaws will close 1.5° past parallel. To limit shocks at the end of an opening or closing stroke, it is highly recommended to design jaws with minimal inertia (as light and short as possible). Flow Controls make it possible to reduce the rotation speed and are highly recommended.

### Loading Information

### How to Order: (Order Accessories separately from Basic Model)



Loading Capacity <sup>†</sup>	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	11 lbs.	47 N	2 lbs.	9.4 N
Maximum Compressive <b>C</b>	11 lbs.	47 N	2 lbs.	9.4 N
Maximum Moment <b>M<sub>x</sub></b>	10 in.-lbs.	1.1 Nm	3 in.-lbs.	1.1 Nm
Maximum Moment <b>M<sub>y</sub></b>	10 in.-lbs.	1.1 Nm	3 in.-lbs.	1.1 Nm
Maximum Moment <b>M<sub>z</sub></b>	10 in.-lbs.	1.1 Nm	3 in.-lbs.	1.1 Nm

<sup>†</sup>Capacities are per set of jaws and are not simultaneous

BASIC MODEL VITON® SEALS

**DCT-12M-RE-V**

SIZE SPRING

NOTE: DCT-12-RE can be used as an exact replacement for CT-12-RE

#### SENSOR ACCESSORIES\*

PNP Magneto Resistive Sensor Short Barrel w/Qk Disc*	<b>OHSP-017</b>	<b>1 or 2</b>
NPN Magneto Resistive Sensor Short Barrel w/Qk Disc*	<b>OHSN-017</b>	<b>1 or 2</b>
Quick Disconnect 2 Meter Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
Quick Disconnect 5 Meter Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>

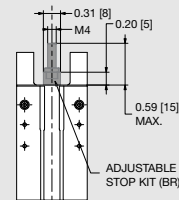
#### PNEUMATIC ACCESSORIES

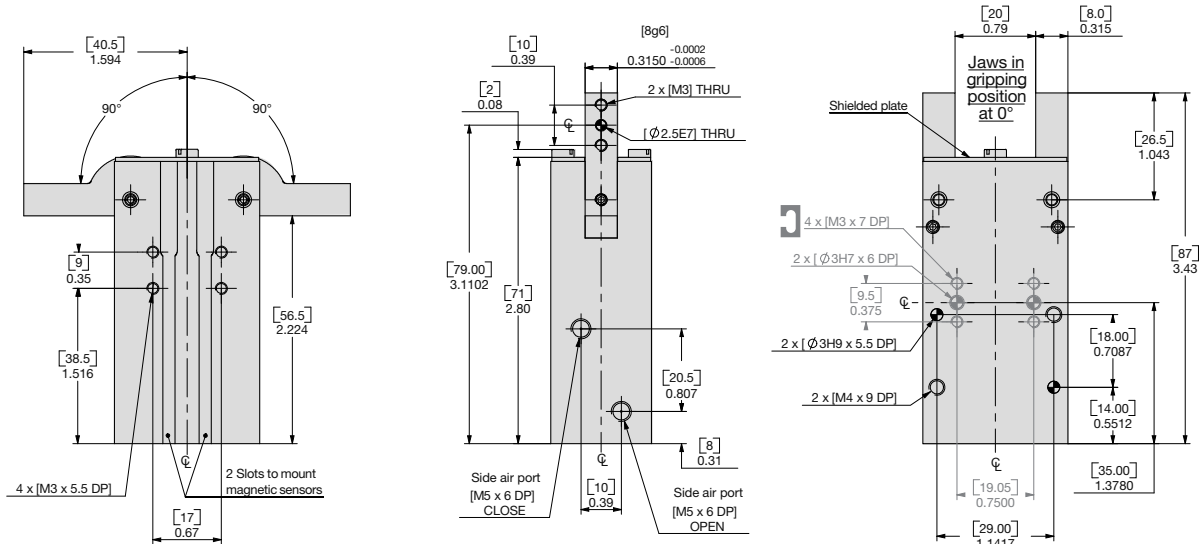
Adj. Flow Control M5 Elbow - 6mm OD Push-in (Metric)	<b>VLVF-008</b>	<b>1 or 2</b>
Buna-N Seal Repair Kit	<b>SLKT-159</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-159V</b>	<b>1</b>

#### MOUNTING ACCESSORIES

Adjustment Stop Kit (1 Shielded Plate + 1 Stop)	<b>KP-DCT12-BR</b>	<b>1</b>
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\*Sensor and cable sold separately.

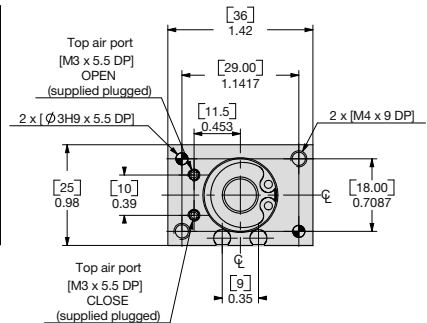
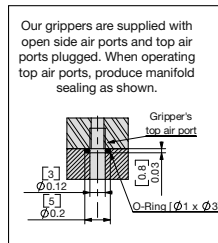




### Specifications

### DCT-16M-RE

Total Rated Grip Force, <b>F</b> @ 100 psi [7 bar] <b>L</b> = 1 in. [25mm] @ 0°	19 lbs.	87 N
Stroke	90° of stroke for each finger	
Weight	0.44 lbs.	0.20 Kg
Pressure Range	60-100 psi	4-7 Bar
Cylinder Bore Ø	0.630 in.	16 mm
Displacement	0.251 in <sup>3</sup>	4.12 cm <sup>3</sup>
Temperature Range		
Standard Seals	-30°~180° F	-35°~80° C
Viton® Seals	-20°~300° F	-30°~150° C
Actuation (open/close)	0.15 / 0.12 sec.	
Accuracy	±0.0028 in.	±0.07 mm
Repeatability	±0.002 in.	±0.05 mm.
Valve required to actuate single acting....	3-way, 2-position	
Valve required to actuate double acting....	4-way, 2-position	



NOTE: DIRECTCONNECT™ DIMENSIONS ARE SHOWN IN BLUE

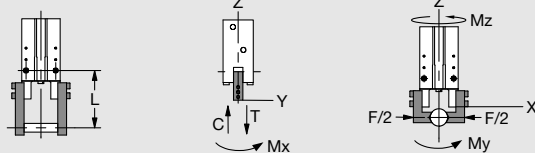
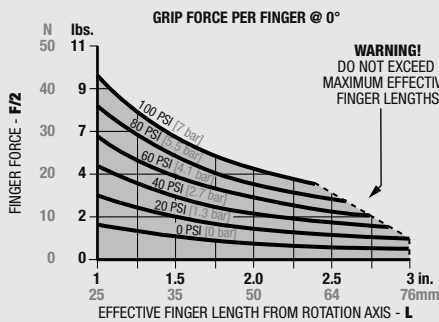
### UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Dimensions are symmetrical about centerline	Third Angle Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or ±.013mm	Metric Threads Course Pitch	<b>Imperial in.</b> 0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	<b>Metric [mm]</b> [0.] = ±.25 [0.0] = ±.13 [0.00] = ±.013
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NOTE: Jaws have to be designed for a 0° gripping position (parallel jaws). Jaws will close 1.5° past parallel. To limit shocks at the end of an opening or closing stroke, it is highly recommended to design jaws with minimal inertia (as light and short as possible). Flow Controls make it possible to reduce the rotation speed and are highly recommended.

## Loading Information

## How to Order: (Order Accessories separately from Basic Model)



Loading Capacity <sup>†</sup>	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	20 lbs.	90 N	4 lbs.	18 N
Maximum Compressive <b>C</b>	20 lbs.	90 N	4 lbs.	18 N
Maximum Moment <b>M<sub>x</sub></b>	26 in.-lbs.	2.9 Nm	6 in.-lbs.	0.7 Nm
Maximum Moment <b>M<sub>y</sub></b>	26 in.-lbs.	2.9 Nm	6 in.-lbs.	0.7 Nm
Maximum Moment <b>M<sub>z</sub></b>	26 in.-lbs.	2.9 Nm	6 in.-lbs.	0.7 Nm

<sup>†</sup>Capacities are per set of jaws and are not simultaneous

### BASIC MODEL VITON® SEALS

**DCT-16M-RE-V**  
SIZE SPRING

NOTE: DCT-16-RE can be used as an exact replacement for CT-16-RE

### SENSOR ACCESSORIES\*

PNP Magneto Resistive Sensor Short Barrel w/Qk Disc*	<b>OHSP-017</b>	<b>1 or 2</b>
NPN Magneto Resistive Sensor Short Barrel w/Qk Disc*	<b>OHSN-017</b>	<b>1 or 2</b>
Inductive Sensor Mounting Kit (mounts 2 sensors)	<b>SDCT16-20</b>	<b>1</b>
4mm PNP Inductive Sensor with Quick Disconnect*	<b>OISP-014</b>	<b>1 or 2</b>
4mm NPN Inductive Sensor with Quick Disconnect*	<b>OISN-014</b>	<b>1 or 2</b>
Quick Disconnect 2 Meter Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
Quick Disconnect 5 Meter Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>

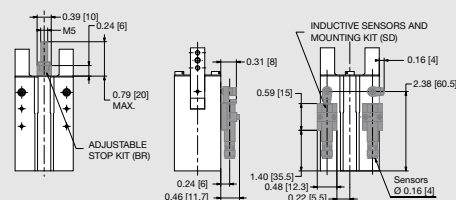
### PNEUMATIC ACCESSORIES

Adj. Flow Control M5 Elbow - 6mm OD Push-in (Metric)	<b>VLVF-008</b>	<b>1 or 2</b>
Buna-N Seal Repair Kit	<b>SLKT-160</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-160V</b>	<b>1</b>

### MOUNTING ACCESSORIES

Adjustment Stop Kit (1 Shielded Plate + 1 Stop)	<b>KP-DCT16-BR</b>	<b>1</b>
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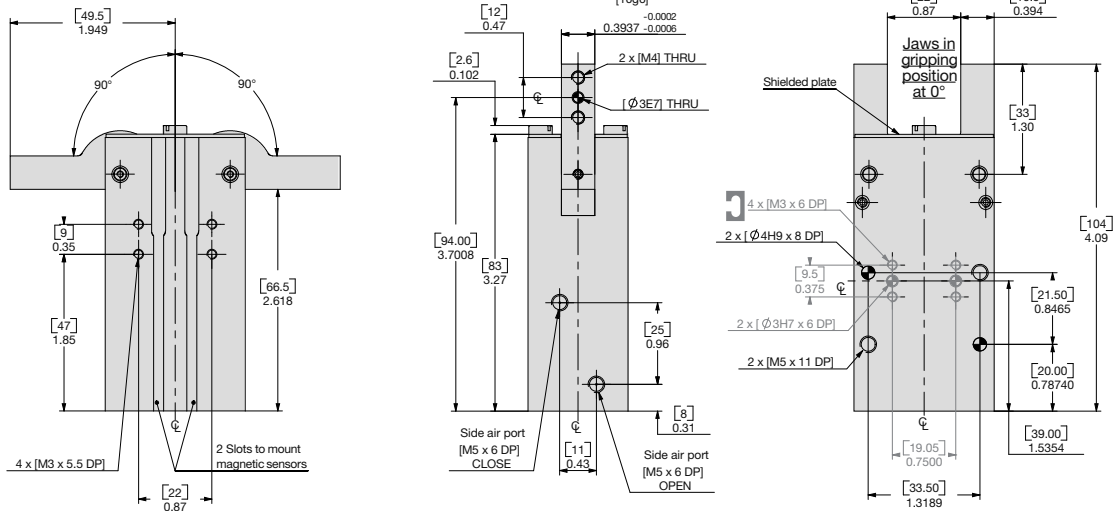
\*Sensor and cable sold separately.



# ANGULAR GRIPPER DCT-20M-RE 180° SERIES

DCT-RE SERIES

2.48

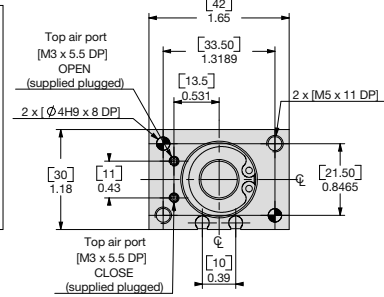
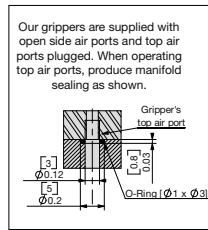


### Specifications

### DCT-20M-RE

**Total Rated Grip Force, F @ 100 psi [7 bar]**  
**L = 1.25 in. [32mm] @ 0°**

Stroke	90° of stroke for each finger
Weight	0.73 lbs. 0.33 Kg
Pressure Range	60-100 psi 4-7 Bar
Cylinder Bore Ø	0.787 in. 20 mm
Displacement	0.483 in <sup>3</sup> 7.92 cm <sup>3</sup>
Temperature Range	
Standard Seals	-30°~180° F -35°~80° C
Viton® Seals	-20°~300° F -30°~150° C
Actuation (open/close)	0.20 / 0.14 sec.
Accuracy	±0.003 in. ±0.08 mm
Repeatability	±0.002 in. ±0.05 mm
Valve required to actuate single acting	3-way, 2-position
Valve required to actuate double acting	4-way, 2-position



NOTE: DIRECTCONNECT™ DIMENSIONS ARE SHOWN IN BLUE

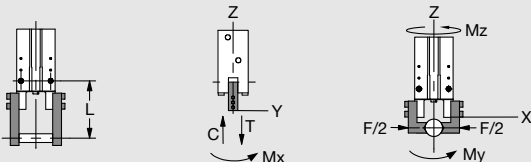
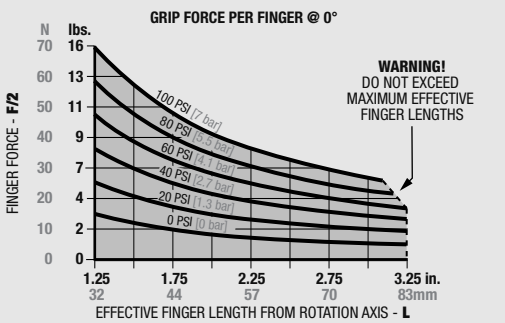
### UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

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

**NOTE:** Jaws have to be designed for a 0° gripping position (parallel jaws). Jaws will close 1.5° past parallel. To limit shocks at the end of an opening or closing stroke, it is highly recommended to design jaws with minimal inertia (as light and short as possible).  
 Flow Controls make it possible to reduce the rotation speed and are highly recommended.

## Loading Information

## How to Order: (Order Accessories separately from Basic Model)



Loading Capacity <sup>†</sup>	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	34 lbs.	150 N	7 lbs.	30 N
Maximum Compressive <b>C</b>	34 lbs.	150 N	7 lbs.	30 N
Maximum Moment <b>M<sub>x</sub></b>	53 in.-lbs.	6 Nm	13 in.-lbs.	1.5 Nm
Maximum Moment <b>M<sub>y</sub></b>	53 in.-lbs.	6 Nm	13 in.-lbs.	1.5 Nm
Maximum Moment <b>M<sub>z</sub></b>	53 in.-lbs.	6 Nm	13 in.-lbs.	1.5 Nm

<sup>†</sup>Capacities are per set of jaws and are not simultaneous

### BASIC MODEL VITON® SEALS

**DCT-20M-RE-V**

SIZE SPRING

**NOTE:** DCT-20-RE can be used as an exact replacement for CT-20-RE

### SENSOR ACCESSORIES\*

PNP Magneto Resistive Sensor Short Barrel w/Qk Disc*	<b>OHSP-017</b>	<b>1 or 2</b>
NPN Magneto Resistive Sensor Short Barrel w/Qk Disc*	<b>OHSN-017</b>	<b>1 or 2</b>
Inductive Sensor Mounting Kit (mounts 2 sensors)	<b>SDCT16-20</b>	<b>1</b>
4mm PNP Inductive Sensor with Quick Disconnect*	<b>OISP-014</b>	<b>1 or 2</b>
4mm NPN Inductive Sensor with Quick Disconnect*	<b>OISN-014</b>	<b>1 or 2</b>
Quick Disconnect 2 Meter Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
Quick Disconnect 5 Meter Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>

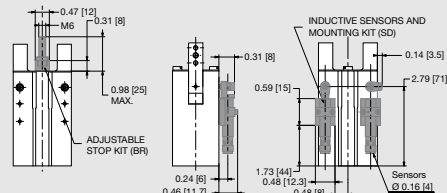
### PNEUMATIC ACCESSORIES

Adj. Flow Control M5 Elbow - 6mm OD Push-in (Metric)	<b>VLVF-008</b>	<b>1 or 2</b>
Buna-N Seal Repair Kit	<b>SLKT-161</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-161V</b>	<b>1</b>

### MOUNTING ACCESSORIES

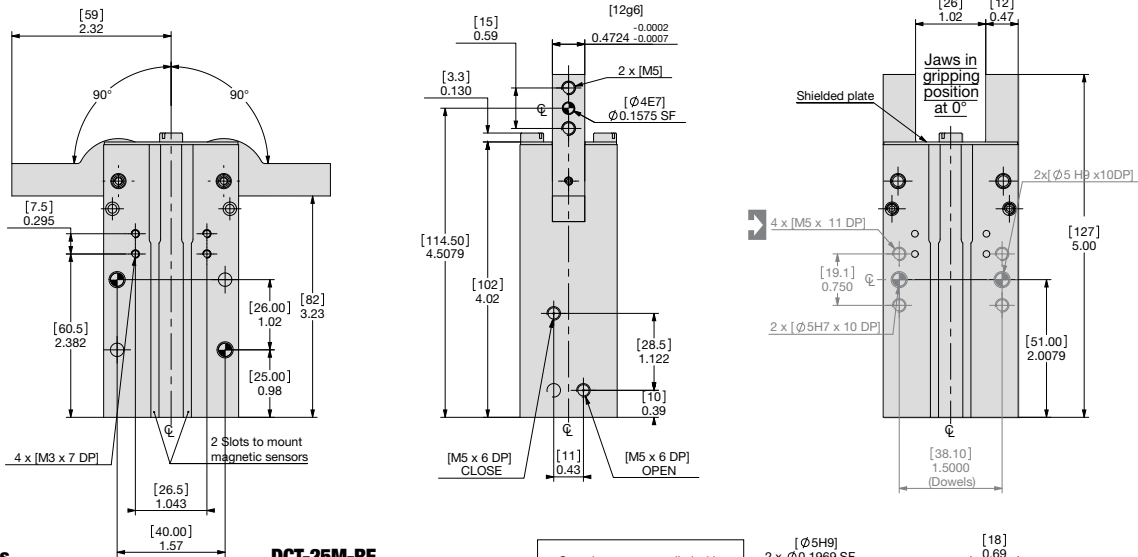
Adjustment Stop Kit (1 Shielded Plate + 1 Stop)	<b>KP-DCT20-BR</b>	<b>1</b>
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\*Sensor and cable sold separately.





# ANGULAR GRIPPER DCT-25M-RE 180° SERIES

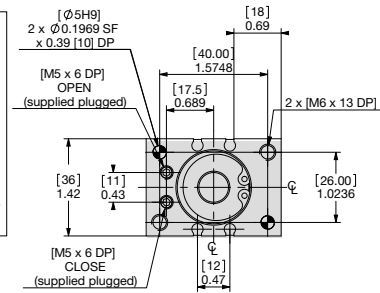
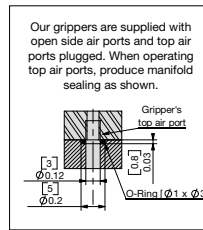


### Specifications

**Total Rated Grip Force,  $F @ 100 \text{ psi}$  [7 bar]**  
 **$L = 1.75 \text{ in.}$  [44mm] @  $0^\circ$**

Stroke	45 lbs.	199 N
Weight	1.26 lbs.	0.57 Kg
Pressure Range	60-100 psi	4-7 Bar
Cylinder Bore $\varnothing$	0.984 in.	25 mm
Displacement	0.909 in <sup>3</sup>	14.9 cm <sup>3</sup>
Temperature Range		
Standard Seals	-30°~180° F	-35°~80° C
Viton® Seals	-20°~300° F	-30°~150° C
Actuation (open/close)	0.25 / 0.19 sec.	
Accuracy	±0.003 in.	±0.08 mm
Repeatability	±0.002 in.	±0.05 mm.
Valve required to actuate single acting	3-way, 2-position	
Valve required to actuate double acting	4-way, 2-position	

### DCT-25M-RE



NOTE: DIRECTCONNECT™ DIMENSIONS ARE SHOWN IN BLUE

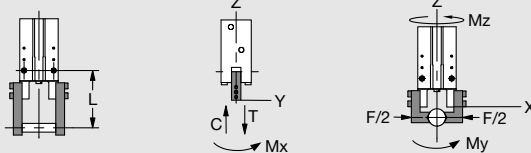
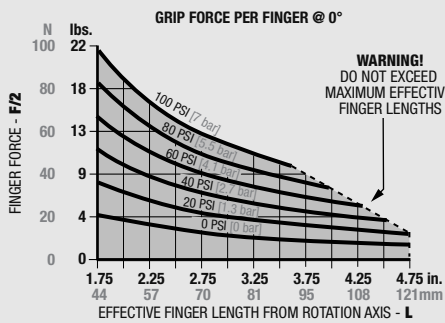
### UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Dimensions are symmetrical about centerline	Third Angle Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or ±.013mm	Metric Threads Course Pitch	<b>Imperial in.</b> 0.00 ± .01 0.000 ± .005 0.0000 ± .0005	<b>Metric [mm]</b> [0.] = ±.25 [0.0] = ±.13 [0.00] = ±.013
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NOTE: Jaws have to be designed for a  $0^\circ$  gripping position (parallel jaws). Jaws will close  $1.5^\circ$  past parallel. To limit shocks at the end of an opening or closing stroke, it is highly recommended to design jaws with minimal inertia (as light and short as possible). Flow Controls make it possible to reduce the rotation speed and are highly recommended.

## Loading Information

## How to Order: (Order Accessories separately from Basic Model)



### Loading Capacity†

	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	46 lbs.	205 N	9 lbs.	41 N
Maximum Compressive <b>C</b>	46 lbs.	205 N	9 lbs.	41 N
Maximum Moment <b>M<sub>x</sub></b>	89 in.-lbs.	10 Nm	22 in.-lbs.	2.5 Nm
Maximum Moment <b>M<sub>y</sub></b>	89 in.-lbs.	10 Nm	22 in.-lbs.	2.5 Nm
Maximum Moment <b>M<sub>z</sub></b>	89 in.-lbs.	10 Nm	22 in.-lbs.	2.5 Nm

†Capacities are per set of jaws and are not simultaneous

BASIC MODEL    VITON® SEALS

**DCT-25M-RE-V**

SIZE    SPRING

### SENSOR ACCESSORIES\*

PNP Magneto Resistive Sensor Short Barrel w/Qk Disc*	<b>OHSP-017</b>	<b>1 or 2</b>
NPN Magneto Resistive Sensor Short Barrel w/Qk Disc*	<b>OHSN-017</b>	<b>1 or 2</b>
Inductive Sensor Mounting Kit (mounts 2 sensors)	<b>SDCT25-32</b>	<b>1</b>
M8 PNP Inductive Sensor with Quick Disconnect*	<b>OISP-011</b>	<b>1 or 2</b>
M8 NPN Inductive Sensor with Quick Disconnect*	<b>OISN-011</b>	<b>1 or 2</b>
Quick Disconnect 2 Meter Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
Quick Disconnect 5 Meter Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>

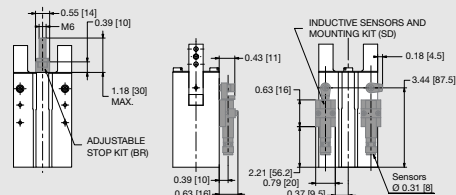
### PNEUMATIC ACCESSORIES

M5 Adjustable Flow Control	<b>VLVF-008</b>	<b>1 or 2</b>
Buna-N Seal Repair Kit	<b>SLKT-162</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-162V</b>	<b>1</b>

### MOUNTING ACCESSORIES

Adjustment Stop Kit (1 Shielded Plate + 1 Stop)	<b>KP-DCT25-BR</b>	<b>1</b>
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\*Sensor and cable sold separately.



Please see back cover for DE-STA-CO Global Locations. [www.destaco.com](http://www.destaco.com)

[www.comoso.com](http://www.comoso.com)

DCT-RE SERIES

2.49

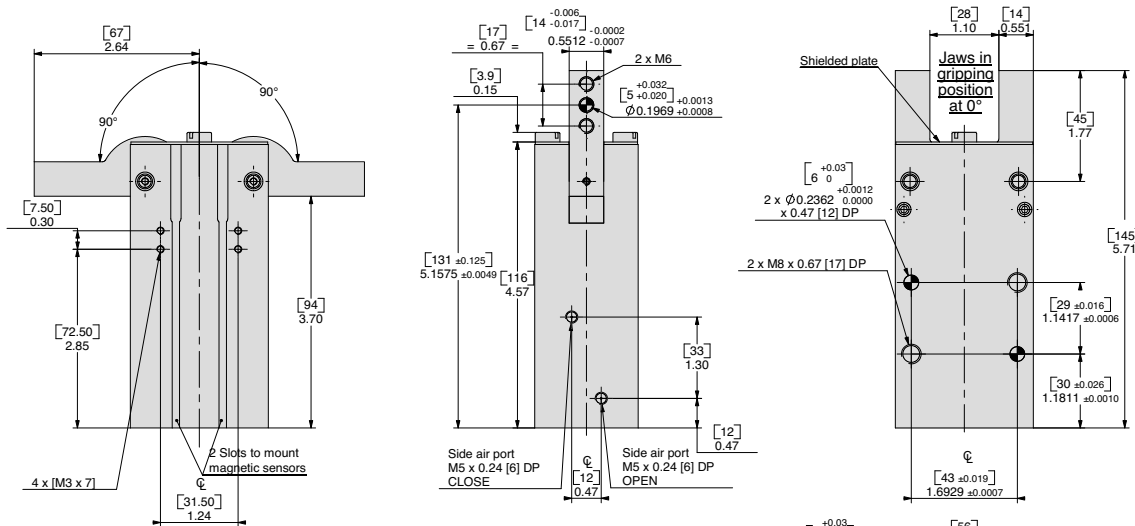


DIRECTCONNECT™

# ANGULAR GRIPPER CT-32M-RE 180° SERIES

CT-RE SERIES

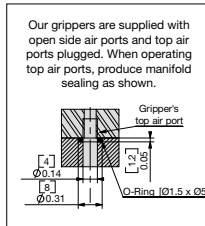
2.50



## Specifications

## CT-32M-RE

Total Rated Grip Force, <b>F</b> @ 100 psi [7 bar]	79 lbs.	353 N
<b>L</b> = 1.75 in. [44mm] @ 0°	90° of stroke for each finger	
Stroke	1.83 lbs.	0.83 Kg
Weight	60-100 psi	4-7 Bar
Pressure Range	1.260 in.	32 mm
Cylinder Bore Ø	1.745 in.	28.6 cm <sup>3</sup>
Displacement	Temperature Range	
Standard Seals	-30°~180° F	-35°~80° C
Viton® Seals	-20°~300° F	-30°~150° C
Actuation (open/close)	0.35 / 0.26 sec.	
Accuracy	±0.003 in.	±0.08 mm
Repeatability	±0.002 in.	±0.05 mm
Valve required to actuate single acting	3-way, 2-position	
Valve required to actuate double acting	4-way, 2-position	



Our grippers are supplied with open side air ports and top air ports plugged. When operating top air ports, produce manifold sealing as shown.

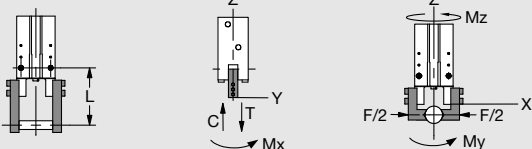
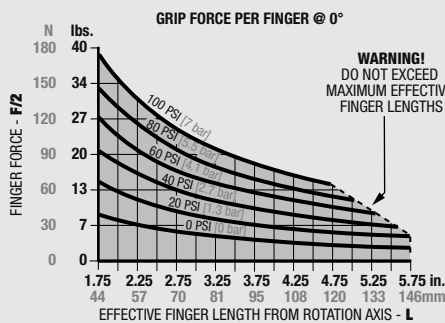
## UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Dimensions are symmetrical about centerline	Third Angle Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or ±.013mm	Metric Threads Course Pitch	<b>Imperial in.</b> 0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	<b>Metric [mm]</b> [0.] = [±.25] [0.0] = [±.13] [0.00] = [±.013]
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**NOTE:** Jaws have to be designed for a 0° gripping position (parallel jaws). Jaws will close 1.5° past parallel. To limit shocks at the end of an opening or closing stroke, it is highly recommended to design jaws with minimal inertia (as light and short as possible). Flow Controls make it possible to reduce the rotation speed and are highly recommended.

## Loading Information

## How to Order: (Order Accessories separately from Basic Model)



## Loading Capacity†

	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	65 lbs.	288 N	13 lbs.	57.6 N
Maximum Compressive <b>C</b>	65 lbs.	288 N	13 lbs.	57.6 N
Maximum Moment <b>M<sub>x</sub></b>	142 in.-lbs.	16 Nm	35 in.-lbs.	4 Nm
Maximum Moment <b>M<sub>y</sub></b>	142 in.-lbs.	16 Nm	35 in.-lbs.	4 Nm
Maximum Moment <b>M<sub>z</sub></b>	142 in.-lbs.	16 Nm	35 in.-lbs.	4 Nm

†Capacities are per set of jaws and are not simultaneous

## BASIC MODEL VITON® SEALS

**CT-32M-RE-V**  
SIZE SPRING

## SENSOR ACCESSORIES\*

PNP Magneto Resistive Sensor Short Barrel w/Qk Disc*	<b>OHSP-017</b>	<b>1 or 2</b>
NPN Magneto Resistive Sensor Short Barrel w/Qk Disc*	<b>OHSN-017</b>	<b>1 or 2</b>
Inductive Sensor Mounting Kit (mounts 2 sensors)	<b>SDCT25-32</b>	<b>1</b>
M8 PNP Inductive Sensor with Quick Disconnect*	<b>OISP-011</b>	<b>1 or 2</b>
M8 NPN Inductive Sensor with Quick Disconnect*	<b>OISN-011</b>	<b>1 or 2</b>
Quick Disconnect 2 Meter Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
Quick Disconnect 5 Meter Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>

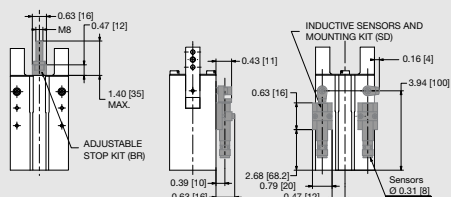
## PNEUMATIC ACCESSORIES

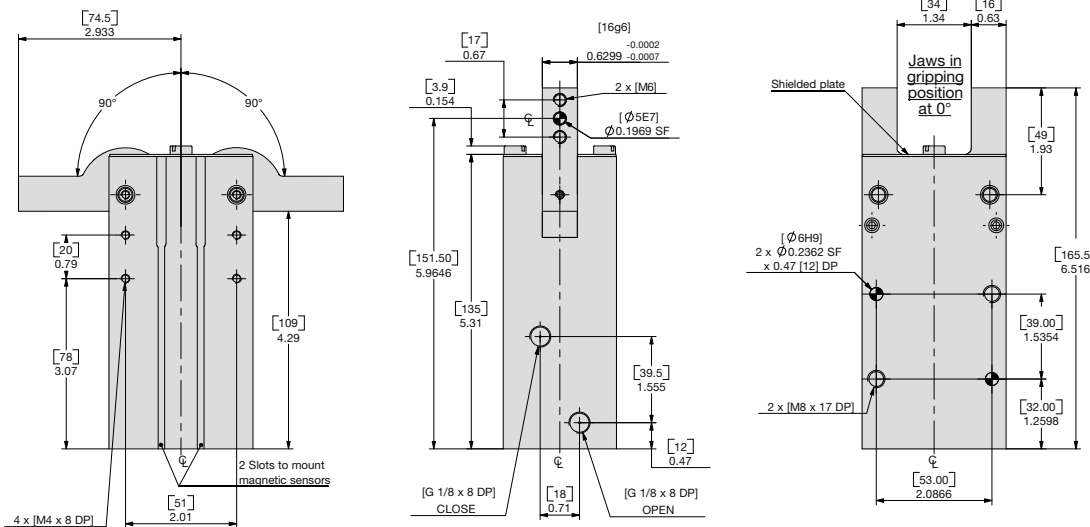
Adj. Flow Control M5 Elbow - 6mm OD Push-in (Metric)	<b>VLVF-008</b>	<b>1 or 2</b>
Buna-N Seal Repair Kit	<b>SLKT-163</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-163V</b>	<b>1</b>

## MOUNTING ACCESSORIES

Adjustment Stop Kit (1 Shielded Plate + 1 Stop)	<b>KP-CT32-BR</b>	<b>1</b>
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\*Sensor and cable sold separately.





### Specifications

### CT-40M-RE

**Total Rated Grip Force,  $F$  @ 100 psi [7 bar]**  
 **$L = 2$  in. [51mm] @ 0°** ..... 133 lbs.      592 N

Stroke ..... 90° of stroke for each finger

Weight ..... 3.06 lbs.      1.39 Kg

Pressure Range ..... 60-100 psi      4-7 Bar

Cylinder Bore  $\varnothing$  ..... 1.575 in.      40 mm

Displacement ..... 3.173 in<sup>3</sup>      52 cm<sup>3</sup>

Temperature Range  
 Standard Seals ..... -30°~180° F      -35°~80° C  
 Viton® Seals ..... -20°~300° F      -30°~150° C

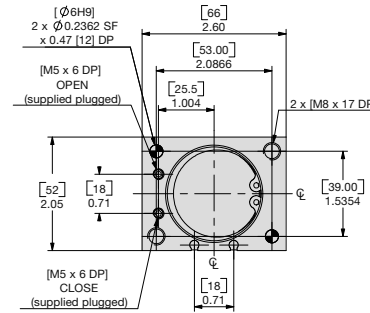
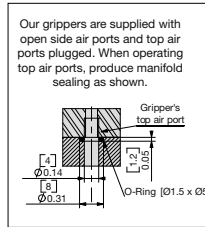
Actuation (open/close) ..... 0.47 / 0.38 sec.

Accuracy ..... ±0.0036 in.      ±0.09 mm

Repeatability ..... ±0.002 in.      ±0.05 mm.

Valve required to actuate single acting .... 3-way, 2-position

Valve required to actuate double acting .... 4-way, 2-position



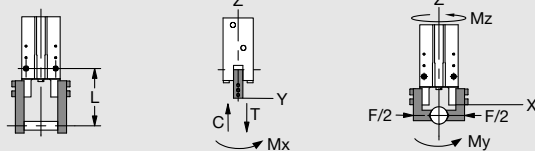
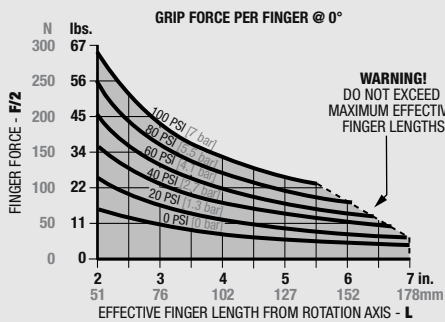
### UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

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

**NOTE:** Jaws have to be designed for a 0° gripping position (parallel jaws). Jaws will close 1.5° past parallel. To limit shocks at the end of an opening or closing stroke, it is highly recommended to design jaws with minimal inertia (as light and short as possible).  
 Flow Controls make it possible to reduce the rotation speed and are highly recommended.

## Loading Information

## How to Order: (Order Accessories separately from Basic Model)



Loading Capacity <sup>†</sup>	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	94 lbs.	420 N	19 lbs.	84 N
Maximum Compressive <b>C</b>	94 lbs.	420 N	19 lbs.	84 N
Maximum Moment <b>M<sub>x</sub></b>	195 in.-lbs.	22 Nm	49 in.-lbs.	5.5 Nm
Maximum Moment <b>M<sub>y</sub></b>	195 in.-lbs.	22 Nm	49 in.-lbs.	5.5 Nm
Maximum Moment <b>M<sub>z</sub></b>	195 in.-lbs.	22 Nm	49 in.-lbs.	5.5 Nm

<sup>†</sup>Capacities are per set of jaws and are not simultaneous

### BASIC MODEL      VITON® SEALS

**CT-40M-RE-V**

SIZE      SPRING

### SENSOR ACCESSORIES\*

PNP Magneto Resistive Sensor Short Barrel M8 w/Qk Disc*	<b>OHSP-017</b>	<b>1 or 2</b>
NPN Magneto Resistive Sensor Short Barrel M8 w/Qk Disc*	<b>OHSN-017</b>	<b>1 or 2</b>
Inductive Sensor Mounting Kit (mounts 2 sensors)	<b>SDCT40-63</b>	<b>1</b>
M12 PNP Inductive Sensor with M12 Quick Disconnect*	<b>OISP-017</b>	<b>1 or 2</b>
M12 NPN Inductive Sensor with M12 Quick Disconnect*	<b>OISN-017</b>	<b>1 or 2</b>
M8 Quick Disconnect 2 Meter Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
M8 Quick Disconnect 5 Meter Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>
M12 Quick Disconnect 2 Meter Cable Length*	<b>CABL-014</b>	<b>1 or 2</b>
M12 Quick Disconnect 5 Meter Cable Length*	<b>CABL-018</b>	<b>1 or 2</b>

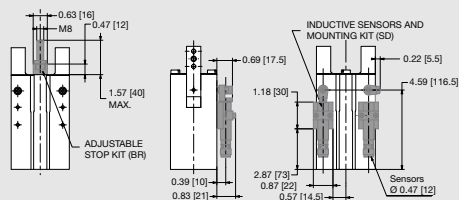
### PNEUMATIC ACCESSORIES

Adj. Flow Control G1/8 Elbow - 6mm OD Push-in (Metric)	<b>VLVF-005</b>	<b>1 or 2</b>
Buna-N Seal Repair Kit	<b>SLKT-164</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-164V</b>	<b>1</b>

### MOUNTING ACCESSORIES

Adjustment Stop Kit (1 Shielded Plate + 1 Stop)	<b>KP-CT40-BR</b>	<b>1</b>
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\*Sensor and cable sold separately.

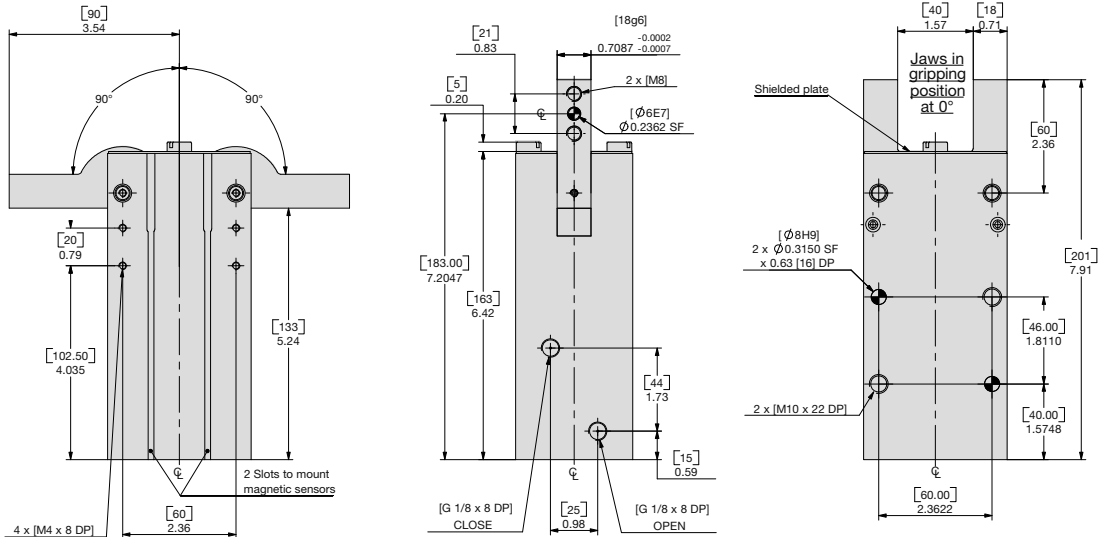




# ANGULAR GRIPPER CT-50M-RE 180° SERIES

CT-RE SERIES

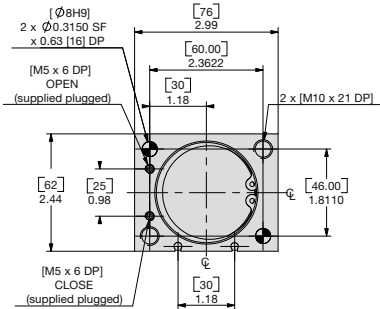
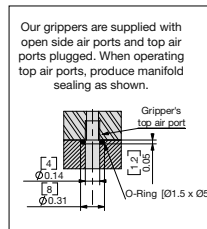
2.52



### Specifications

### CT-50M-RE

Total Rated Grip Force, <b>F</b> @ 100 psi [7 bar] <b>L</b> = 2.5 in. [64mm] @ 0°	201 lbs.	893 N
Stroke	90° of stroke for each finger	
Weight	4.87 lbs.	2.21 Kg
Pressure Range	60-100 psi	4-7 Bar
Cylinder Bore Ø	1.968 in.	50 mm
Displacement	5.614 in <sup>3</sup>	92 cm <sup>3</sup>
Temperature Range		
Standard Seals	-30°~180° F	-35°~80° C
Viton® Seals	-20°~300° F	-30°~150° C
Actuation (open/close)	0.54 / 0.42 sec.	
Accuracy	±0.0036 in.	±0.09 mm
Repeatability	±0.002 in.	±0.05 mm.
Valve required to actuate single acting	3-way, 2-position	
Valve required to actuate double acting	4-way, 2-position	



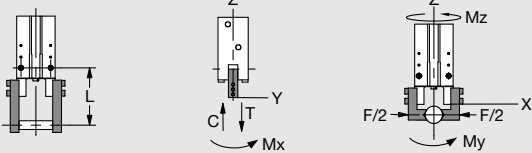
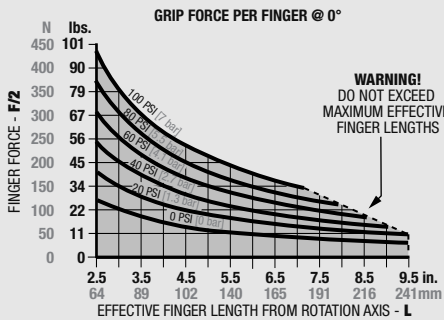
### UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Dimensions are symmetrical about centerline	Third Angle Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or ±.013mm	Metric Threads Course Pitch	<b>Imperial in.</b> 0.00 = ±.01 0.000 = ±.005	<b>Metric [mm]</b> [0.] = ±.25 [0.0] = ±.13 [0.00] = ±.013
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**NOTE:** Jaws have to be designed for a 0° gripping position (parallel jaws). Jaws will close 1.5° past parallel. To limit shocks at the end of an opening or closing stroke, it is highly recommended to design jaws with minimal inertia (as light and short as possible).  
Flow Controls make it possible to reduce the rotation speed and are highly recommended.

## Loading Information

## How to Order: (Order Accessories separately from Basic Model)



### Loading Capacity<sup>†</sup>

	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	110 lbs.	490 N	22 lbs.	98 N
Maximum Compressive <b>C</b>	110 lbs.	490 N	22 lbs.	98 N
Maximum Moment <b>M<sub>x</sub></b>	266 in.-lbs.	30 Nm	66 in.-lbs.	7.5 Nm
Maximum Moment <b>M<sub>y</sub></b>	266 in.-lbs.	30 Nm	66 in.-lbs.	7.5 Nm
Maximum Moment <b>M<sub>z</sub></b>	266 in.-lbs.	30 Nm	66 in.-lbs.	7.5 Nm

<sup>†</sup>Capacities are per set of jaws and are not simultaneous

### BASIC MODEL VITON® SEALS

**CT-50M-RE-V**  
SIZE SPRING

### SENSOR ACCESSORIES\*

PNP Magneto Resistive Sensor Short Barrel M8 w/Qk Disc*	<b>OHSP-017</b>	<b>1 or 2</b>
NPN Magneto Resistive Sensor Short Barrel M8 w/Qk Disc*	<b>OHSN-017</b>	<b>1 or 2</b>
Inductive Sensor Mounting Kit (mounts 2 sensors)	<b>SDCT40-63</b>	<b>1</b>
M12 PNP Inductive Sensor with Quick Disconnect*	<b>OISP-017</b>	<b>1 or 2</b>
M12 NPN Inductive Sensor with Quick Disconnect*	<b>OISN-017</b>	<b>1 or 2</b>
M8 Quick Disconnect 2 Meter Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
M8 Quick Disconnect 5 Meter Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>
M12 Quick Disconnect 2 Meter Cable Length*	<b>CABL-014</b>	<b>1 or 2</b>
M12 Quick Disconnect 5 Meter Cable Length*	<b>CABL-018</b>	<b>1 or 2</b>

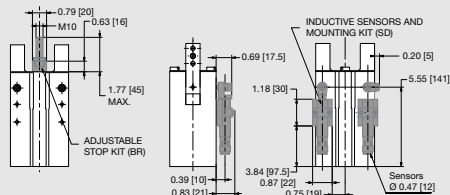
### PNEUMATIC ACCESSORIES

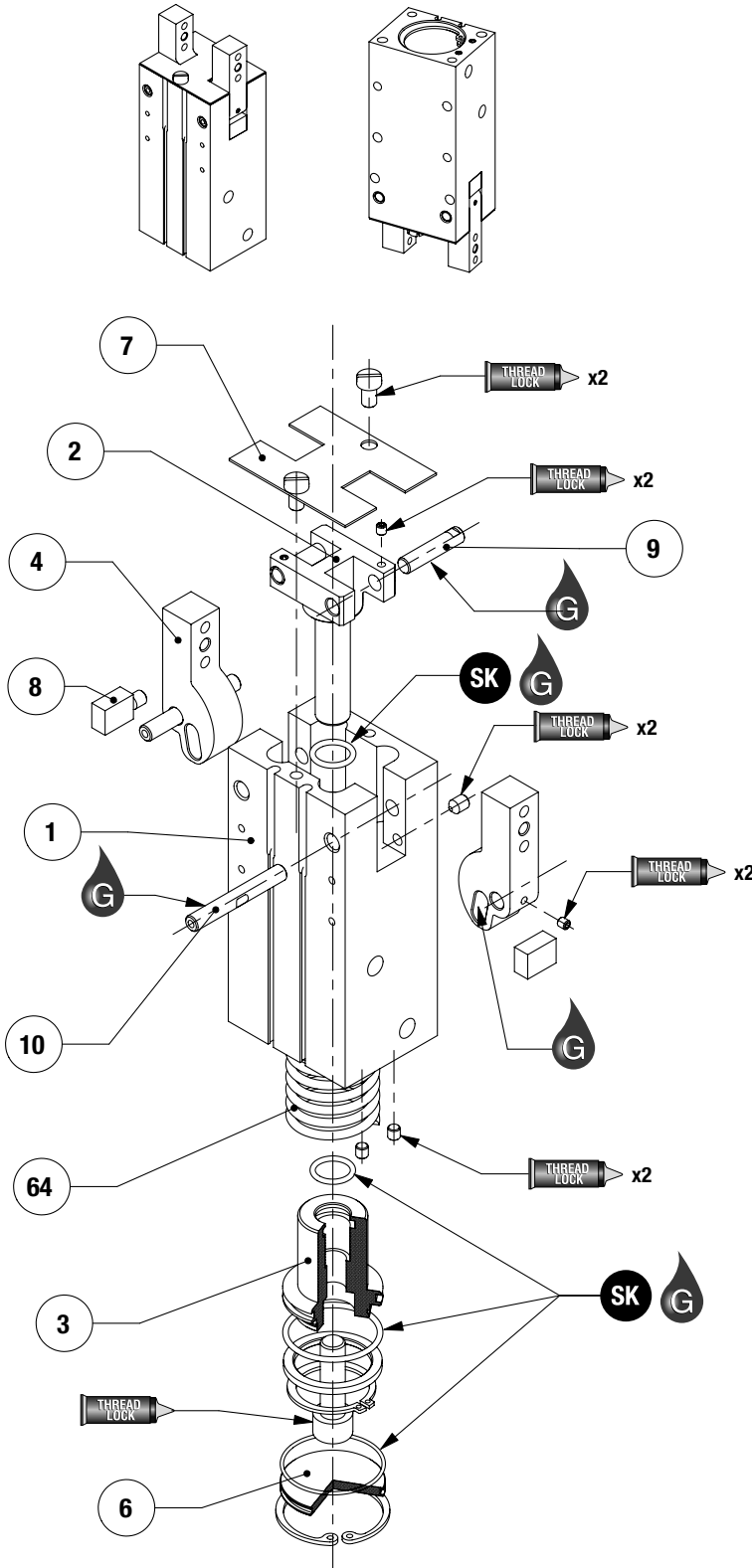
Adj. Flow Control G1/8 Elbow - 6mm OD Push-in (Metric)	<b>VLVF-005</b>	<b>1 or 2</b>
Buna-N Seal Repair Kit	<b>SLKT-165</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-165V</b>	<b>1</b>

### MOUNTING ACCESSORIES

Adjustment Stop Kit (1 Shielded Plate + 1 Stop)	<b>KP-CT50-BR</b>	<b>1</b>
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\*Sensor and cable sold separately.





Item	Qty	Name
01	1	Body
02	1	Driver
03	1	Piston
04	2	Jaw
05	1	Washer
06	1	Cap
07	1	Shielded Plate
08	2	Wiper Cover
09	2	Drive Pin
10	2	Pivot Pin
54	1	Magnet
64	1	Spring

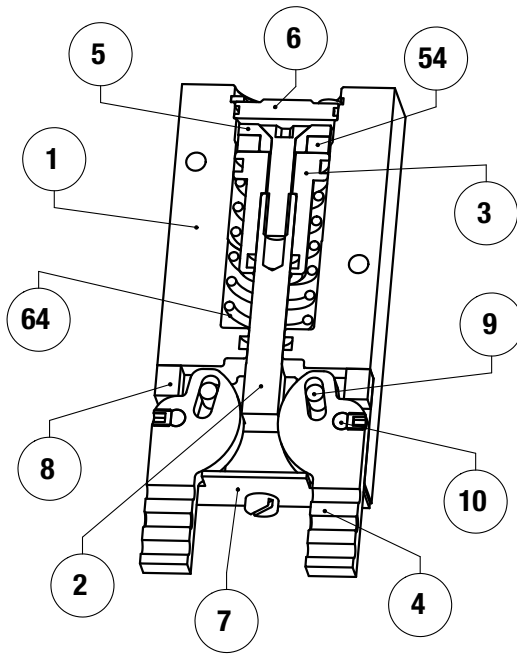
**NOTE:** Contact the Robohand Sales Department for a complete spare parts list with order numbers and prices.

### Assembly Procedure

- Lubricate and install the seals into cap (x1), piston (x2) and body (x1)
- If top air ports are used, clear them and plug the side air ports on the body (#1)
- Lubricate the sloping rack of jaws (#4)
- Install both drive pins (#9) into driver (#2) through sloping racks of jaws. Check that the pin flat surface is correctly aligned before continuing with their installation.
- Lock drive pins in the driver with screws, tightening down on to the flat surface of the pins.
- Position driver and jaws assembly into body.
- Install both pivot pins (#10) into body, through the bore of jaws. Check that the pin flat surface is correctly aligned before continuing with their installation.
- Pivot pin locking:
  - DCT-12 (not shown): lock pivot pins into body with screws, tightening down on to the flat surface of the pins (pins are fixed into body and rotating into jaws)
  - DCT-16 to CT-50: lock pivot pins into jaws with screws, tightening down on to the flat surface of the pins (pins are fixed into jaws and rotating into body)
- Magnet mounting:
  - DCT-12 to DCT-20: install the magnet (#54) on the washer (#5)
  - DCT-25 to CT-50 (not shown): install magnet (#54) onto piston (#3) and lock it by means of its retaining ring.
- Piston mounting:
  - DCT-12 to DCT-20: insert the spring, then the piston and the washer with magnet into body. Fix the assembly at the end of the driver with screw.
  - DCT-25 to CT-50 (not shown): insert the spring, then the piston with magnet into body. Fix the assembly at the end of the drivers with screw.
- Check unit operation unladen.
- Install the cap (#6) into body and lock it by means of its retaining ring.
- Place both wiper covers (#8) into body and lock them with their screws.
- Fix the shielded plate (#7) onto body with both screws.

**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

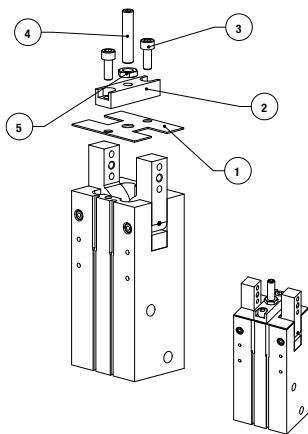


**Item Qty Name**

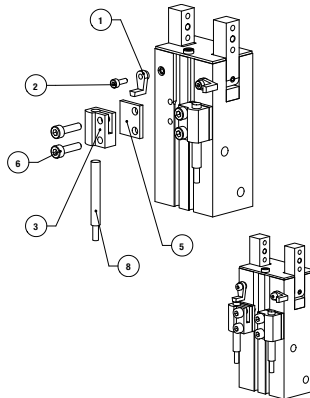
01	1	Body
02	1	Driver
03	1	Piston
04	2	Jaw
05	1	Washer
06	1	Cap
07	1	Shielded Plate
08	2	Wiper Cover
09	2	Drive Pin
10	2	Pivot Pin
54	1	Magnet
64	1	Spring

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

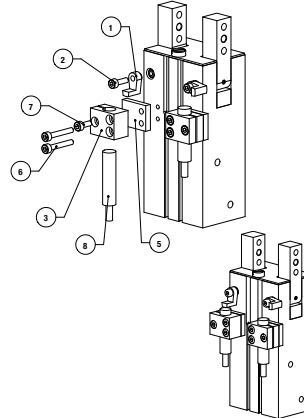
## Accessory Installation & Adjustment Instructions



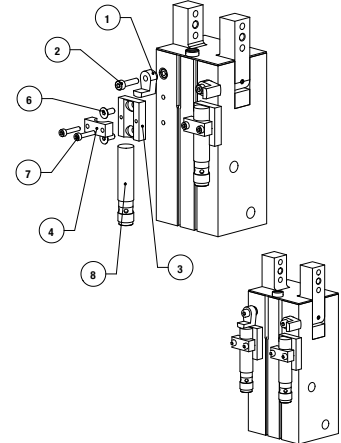
DCT16M, 20M-RE



DCT-25M, 32M-RE



CT-40M, 50M-RE



### Installation - Adjustment Stop

- 1) Unscrew both screws for mounting of the shielded plate and remove it.
- 2) Fix the new shielded plate (#1) and the stop (#2) onto body with both screws (#3)
- 3) Install the locknut system (#4) and (#5) on the stop.
- 4) Tighten screw for maximum target jaw opening and lock with locknut.

### Installation - Inductive Sensor Holders

- 1) Fix the flags (#1) at the end of pivot pins with their screws (#2)
- 2) Holder mounting:
  - DCT-16M to DCT-32M: fix holder (#3) and spacer (#5) onto body with both screws (#6)
  - CT-40M to CT-50M: fix holder (#3) onto body with both screws (#6)
- 3) Sensor mounting:
  - DCT-16M to DCT-20M: unscrew lightly both screws for mounting (#6) of holder and insert sensor (#8, not included) into it. Position sensor so that it senses up on flag. Lock the sensor by tightening both screws.
  - DCT-25M to DCT-32M: unscrew lightly screw (#7) on holder and insert sensor (#8, not included) into it. Position sensor so that it senses up the flag. Lock the sensor by tightening screw.
  - CT-40M to CT-50M: insert sensor (#8, not included) in stop into holder. Lock the sensor by tightening the collar holder with both screws (not shown).
- 4) Adjust flag position by unscrewing their screws for desired sensing positions.



Seal Kit Items



Thread Locker



Krytox™ Lubricant



Lightweight Machine Oil



Teflon® Based Grease



Super Bonder



Third Angle Projection