





# ANGULAR GRIPPERS

## Angular Grippers | Product Overview

Model		Stroke Range	Grip Force Range	Operating Environment	Special Features	Page GR-ANG-#
CT		90° per Jaw	272-651 [61-146]	IP43	180 degree Wide Jaw Opening Angle.	3
DCT		90° per Jaw	32-157 [7.2-35]	IP43	180 degree Wide Jaw Opening, spring assist. <b>DIRECTCONNECT</b>	3
RA (CAM) RA (TOGGLE)		15° per Jaw	71-801 [16-180]	IP43	Low Cost, small compact Gripper. Rugged Applications.	13
RUA		31.8° - 38.2° Total	384-7911 [86-1778]	IP54 Using Purge Port	High Force Gripping for Harsh & Rugged Applications. Spring Assist.	27

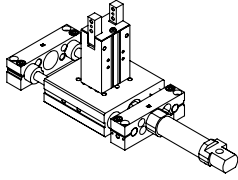
# ANGULAR GRIPPERS

## Angular Grippers | DIRECTCONNECT™ Mounting Compatibility Chart

### **DIRECTCONNECT** Modular Direct Mounting System without Adapter Plates

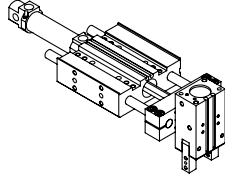
Products can be mounted in multiple positions. Refer to datasheet for complete info.

#### Slide to Gripper



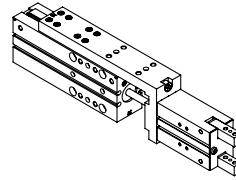
**DLB Base Slide to DCT Angular Gripper**

#### Slide to Gripper



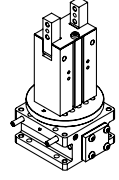
**DLT Thruster Slide to DCT Angular Gripper**

#### Slide to Gripper



**DLM Thruster Slide to DCT Angular Gripper**

#### Rotary to Gripper



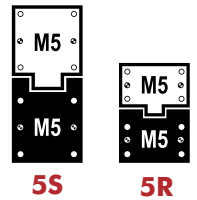
**DRF Rotary Actuator to DCT Angular Gripper**

## **DIRECTCONNECT** Mounting Compatibility Chart

DESTACO's DIRECTCONNECT™ technology, allows all components of the system—grippers, rotaries 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		Grippers	
		DCT-12, 16, 20	DCT-25
Base Slides	DLB-06,08	3R	
	DLB-10,12,16		5R
	DLB-20,25		
Thruster Slides	DLT-06,08	3R	
	DLT-10,12,16	3R	5R
	DLT-20,25		5R
	DLM-07	3R	
	DLM-9,12	3R	5R
Rotary Actuators	DRF-075,094	3R	5R
	DRF-106	3R	5R
	DRF-131		5R

# CT/DCT & CT-RE/DCT-RE SERIES

## Angular Grippers | Features and Benefits | How To Order

### Features:

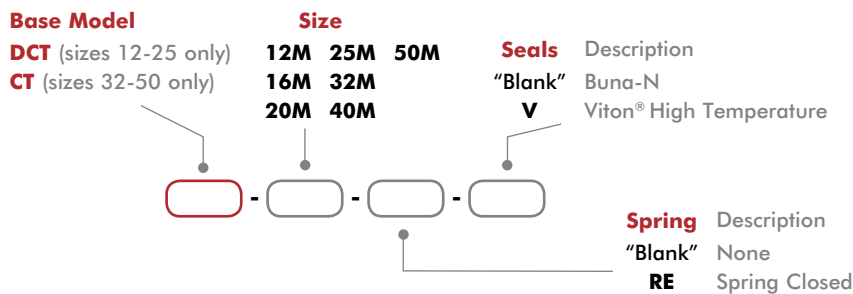
- 180° angular gripper jaw opening for direct feed systems
- Shielded design for working in dirty environments
- Spring assist option maintains grip in case of air pressure loss
- Adjustable 0 to 180° opening angle option.
- Side and bottom gripper mounting
- Multiple air ports, side and top air ports for easy installation

### Applications:

- In-line conveying applications
- OEM pick and place machines
- End-of-arm tooling



## How To Order



## Accessories

Sensor Accessories	Model Numbers	Part Number	Qty/Unit
NPN Magneto Resistive Sensor with M8 Quick Disconnect	All Models	OHSN-017	1-2
PNP Magneto Resistive Sensor with M8 Quick Disconnect	All Models	OHSP-017	1-2
Inductive Sensor Mounting Kit (mounts 2 sensors)	See Datasheet		1
4mm NPN Inductive Sensor with M8 Quick Disconnect*	16M, 20M	OISN-014	1-2
4mm PNP Inductive Sensor M8 with Quick Disconnect*	16M, 20M	OISP-014	1-2
M8 NPN Inductive Sensor with M8 Quick Disconnect*	25M, 32M	OISN-011	1-2
M8 PNP Inductive Sensor with M8 Quick Disconnect*	25M, 32M	OISP-011	1-2
M12 NPN Inductive Sensor with M12 Quick Disconnect*	40M, 50M	OISN-017	1-2
M12 PNP Inductive Sensor with M12 Quick Disconnect*	40M, 50M	OISP-017	1-2
M8 Quick Disconnect 2 Meter Cable Length*	All Models	CABL-010	1-2
M8 Quick Disconnect 5 Meter Cable Length*	All Models	CABL-013	1-2
M12 Quick Disconnect 2 Meter Cable Length*	All Models	CABL-014	1-2
M12 Quick Disconnect 5 Meter Cable Length*	All Models	CABL-018	1-2

Pneumatic Accessories	Model Numbers	Part Number	Qty/Unit
Adjustable Flow Control-M5 Elbow-6mm OD Push-in	12M, 16M, 20M, 25M, 32M	VLVF-008	1-2
Adjustable Flow Control-G1/8 Elbow-6mm OD Push-in	40M, 50M	VLVF-005	1-2

\*Sensor and cable sold separately.

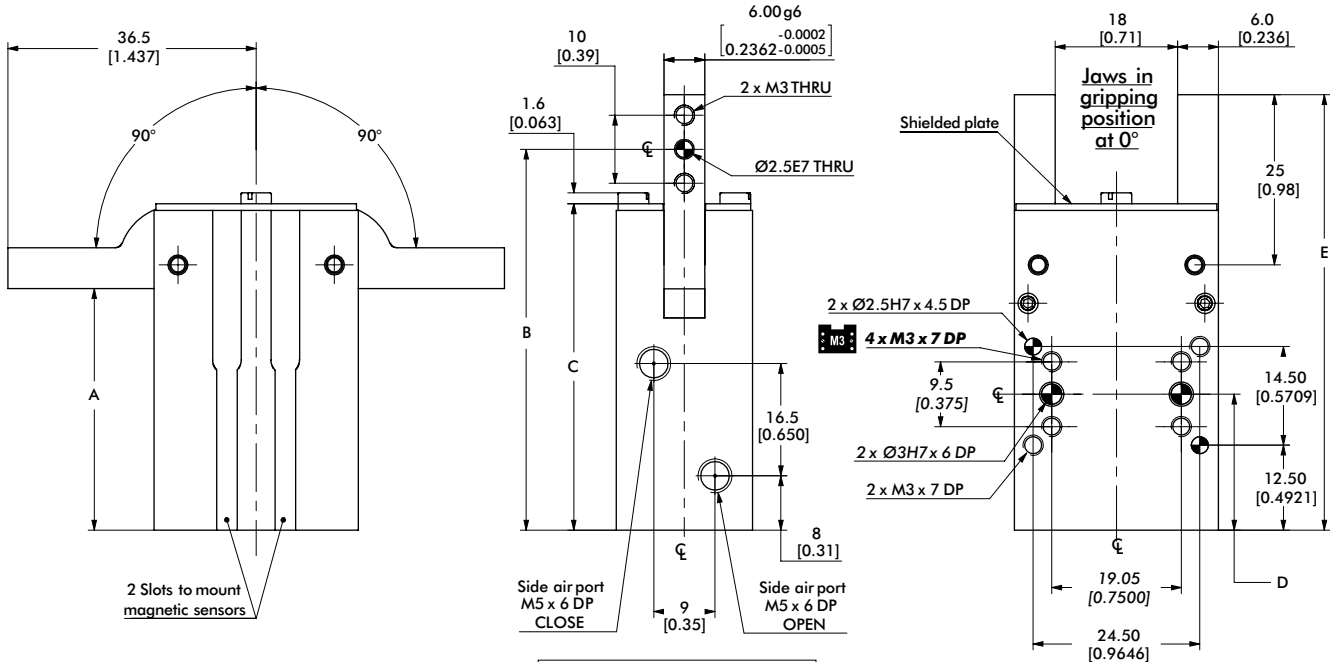
# CT/DCT & CT-RE/DCT-RE SERIES

## Angular Grippers | Technical Specifications

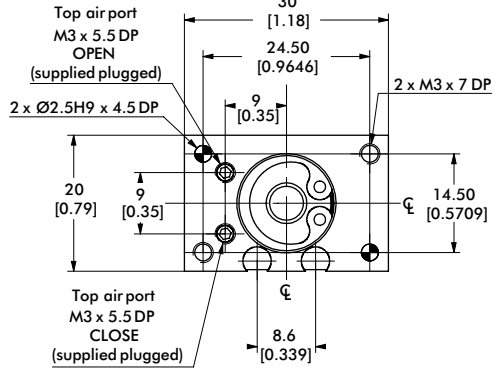
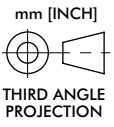
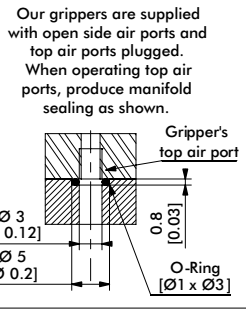
Specifications	Units	12M	12M-RE	16M	16M-RE	20M	20M-RE	25M	25M-RE
Total Rated Grip Force <b>F</b> @ 100 psi [7 bar]	N [lb]	32 [7.2]	40 [9]	70 [16]	87 [19]	112 [25]	141 [32]	157 [35]	199 [45]
Stroke (degrees per finger)		90° stroke for each finger							
Weight	kg [lbs]	0.09 [0.20]	0.12 [0.26]	0.16 [0.35]	0.20 [0.44]	0.28 [0.62]	0.33 [0.73]	0.49 [1.08]	0.57 [1.26]
Pressure Range w/o Spring	bar [psia]	3-7 [40-100] <b>CT/DCT</b>							
Pressure Range w/ Spring	bar [psi]	4-7 [60-100] <b>CT-RE/DCT-RE</b>							
Ingress Protection Class (IP)		IP43							
Displacement	cm <sup>3</sup> [in <sup>3</sup> ]	1.92 [0.117]		4.12 [0.251]		7.92 [0.483]		14.9 [0.909]	
Temperature Range (Buna-N seals)	°C [°F]	-35°~80° [-30°~180°]							
Temperature Range (Viton® seals)	°C [°F]	-30°~150° [-20°~300°]							
Actuation (open)	sec	0.06	0.08	0.13	0.15	0.16	0.20	0.21	0.25
Actuation (close)	sec	0.06	0.05	0.13	0.12	0.16	0.14	0.21	0.19
Accuracy	mm [in]	±0.07 [±0.0028]				±0.08 [±0.003]			
Repeatability	mm [in]	±0.05 [±0.002]							
Valve to Actuate Double Acting		4-way, 2-position <b>CT/DCT</b>							
Valve to Actuate Double Acting Spring Assist		4-way, 2-position <b>CT-RE/DCT-RE</b>							
Valve to Actuate Single Acting		3-way, 2-position <b>CT-RE/DCT-RE</b>							

Specifications	Units	32M	32M-RE	40M	40M-RE	50M	50M-RE	
Total Rated Grip Force <b>F</b> @ 100 psi [7 bar]	N [lb]	272 [61]	353 [79]	446 [100]	592 [133]	651 [146]	893 [201]	
Stroke (degrees per finger)		90° stroke for each finger						
Weight	kg [lbs]	0.72 [1.59]	0.83 [1.83]	1.18 [2.60]	1.39 [3.06]	1.82 [4.01]	2.21 [4.87]	
Pressure Range w/o Spring	bar [psia]	3-7 [40-100] <b>CT/DCT</b>						
Pressure Range w/ Spring	bar [psi]	4-7 [60-100] <b>CT-RE/DCT-RE</b>						
Ingress Protection Class (IP)		IP43						
Displacement	cm <sup>3</sup> [in <sup>3</sup> ]	28.6 [1.745]		52 [3.173]		92 [5.614]		
Temperature Range (Buna-N seals)	°C [°F]	-35°~80° [-30°~180°]						
Temperature Range (Viton® seals)	°C [°F]	-30°~150° [-20°~300°]						
Actuation (open)	sec	0.29	0.35	0.41	0.47	0.46	0.54	
Actuation (close)	sec	0.29	0.26	0.41	0.38	0.46	0.42	
Accuracy	mm [in]	±0.08 [±0.003]			±0.09 [±0.0036]			
Repeatability	mm [in]	±0.05 [±0.002]						
Valve to Actuate Double Acting		4-way, 2-position <b>CT/DCT</b>						
Valve to Actuate Double Acting Spring Assist		4-way, 2-position <b>CT-RE/DCT-RE</b>						
Valve to Actuate Single Acting		3-way, 2-position <b>CT-RE/DCT-RE</b>						

## Angular Grippers | Dimensions and Technical Specifications



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.

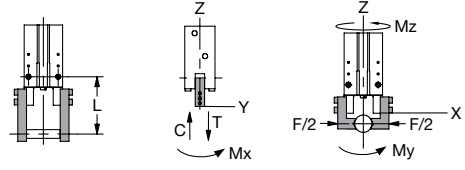
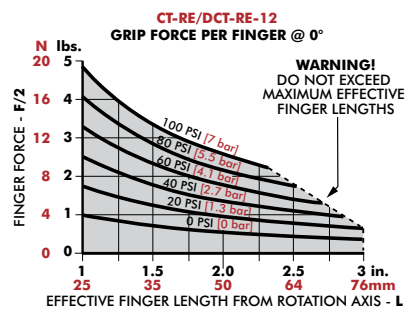
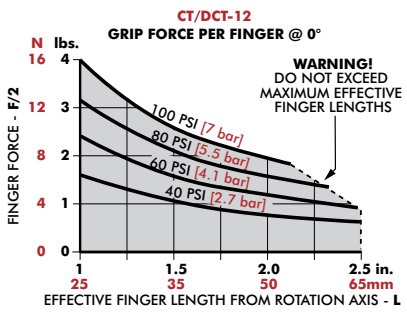


Model	A	B	C	D	E
DCT-12	35.5 [1.398]	56.00 [2.2047]	48 [1.89]	20.00 [0.7874]	64 [2.52]
DCT-12-RE	51.5 [2.028]	72.00 [2.8346]	64 [2.52]	35.00 [1.3780]	80 [3.15]

Dimensions in mm [in]

Mounting Accessories	Order #
Adjustment Stop Kit (1 shielded plate, 1 stop)	KP-DCT12-BR
Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-159
Viton® Seal Repair Kit	SLKT-159V

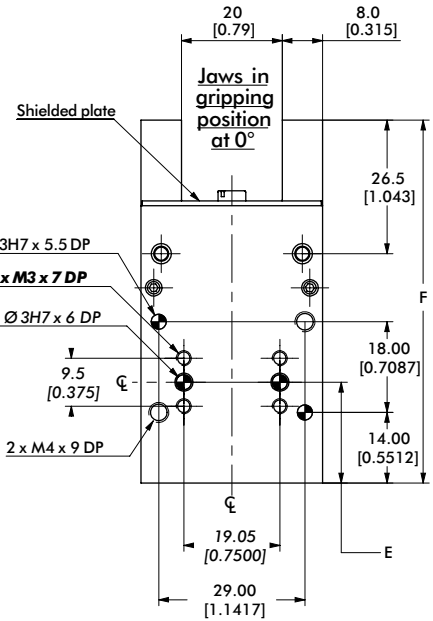
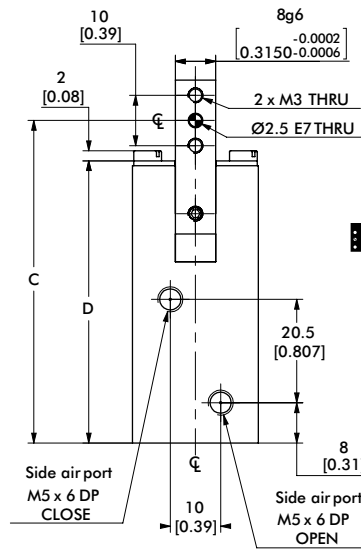
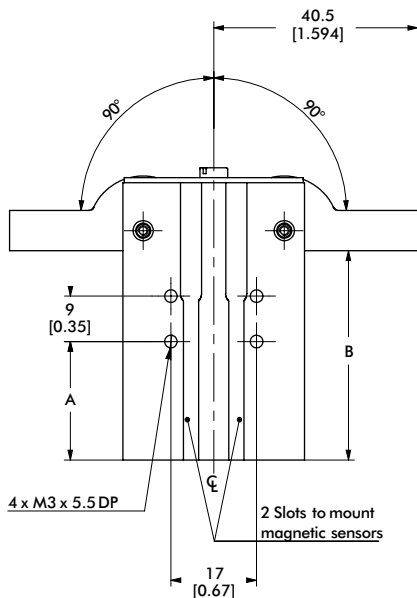
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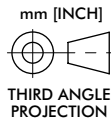
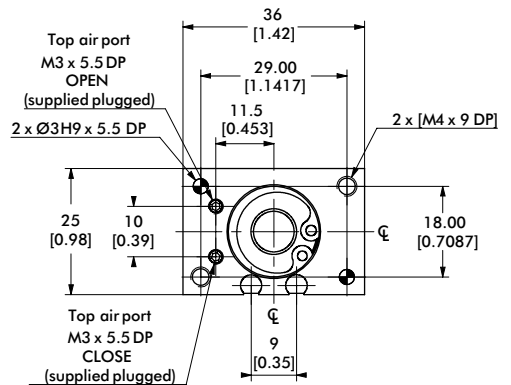
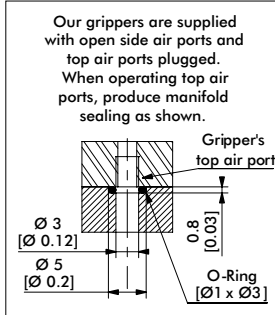
Static	
Maximum Tensile <b>T</b>	47 N [11 lbs]
Maximum Compressive <b>C</b>	47 N [11 lbs]
Maximum Moment <b>M<sub>x</sub></b>	1.1 Nm [10 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	1.1 Nm [10 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	1.1 Nm [10 in-lbs]

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

## Angular Grippers | Dimensions and Technical Specifications



**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.



### Mounting Accessories

Accessories	Order #
Inductive Sensor Mounting Kit (mounts 2 sensors)	SDCT-16-20
Adjustment Stop Kit (1 shielded plate, 1 stop)	KP-DCT16-BR

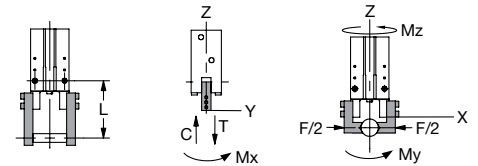
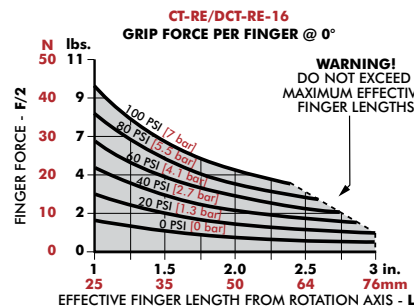
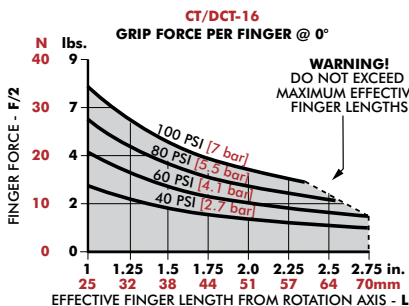
### Seal Repair Kits

Seal Kits	Order #
Buna-N Seal Repair Kit	SLKT-160
Viton® Seal Repair Kit	SLKT-160V

Model	A	B	C	D	E	F
DCT-16	23.5 [0.925]	41.5 [1.634]	64.00 [2.5197]	56 [2.20]	20.00 [0.7874]	72 [2.83]
DCT-16-RE	38.5 [1.516]	56.5 [2.224]	79.00 [3.1102]	71 [2.80]	35.00 [1.3780]	87 [3.43]

Dimensions in mm [in]

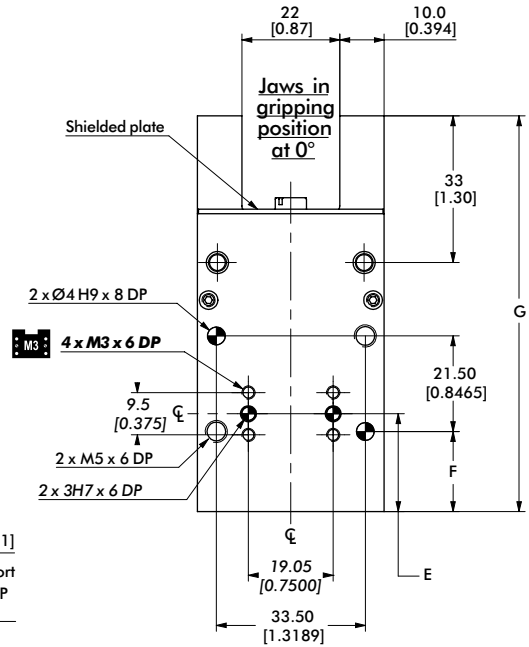
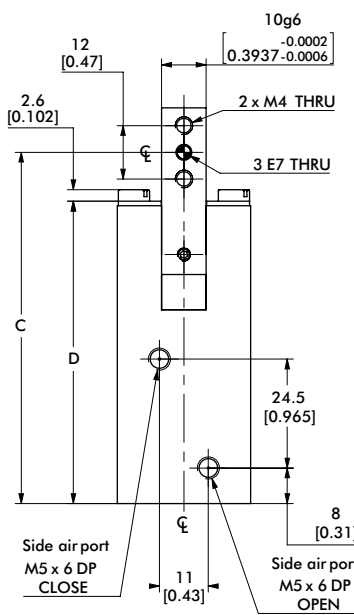
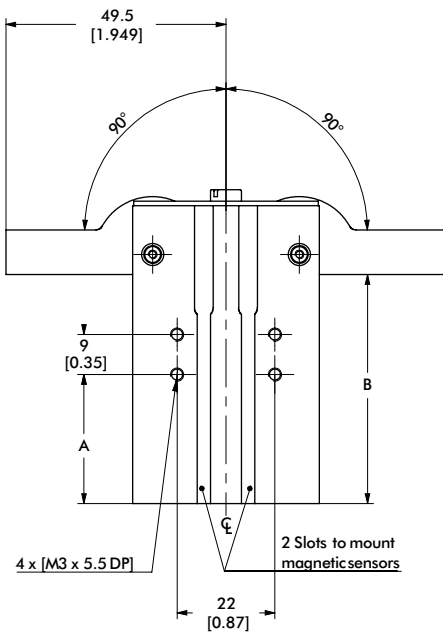
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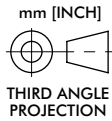
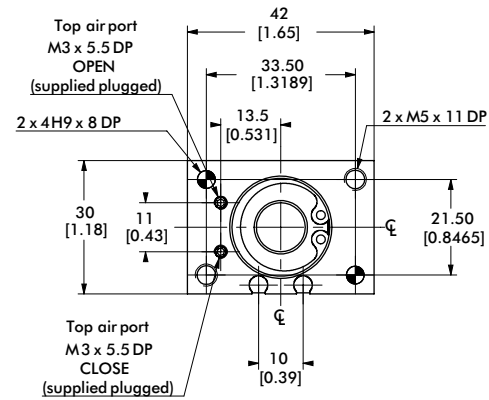
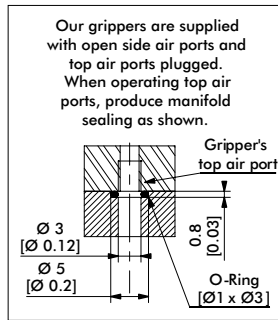
Static	Capacity
Maximum Tensile <b>T</b>	90 N [20 lbs]
Maximum Compressive <b>C</b>	90 N [20 lbs]
Maximum Moment <b>M<sub>x</sub></b>	2.9 Nm [26 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	2.9 Nm [26 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	2.9 Nm [26 in-lbs]

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

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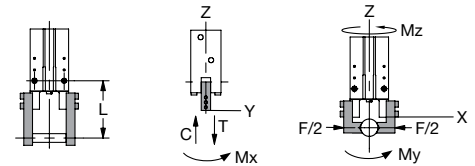
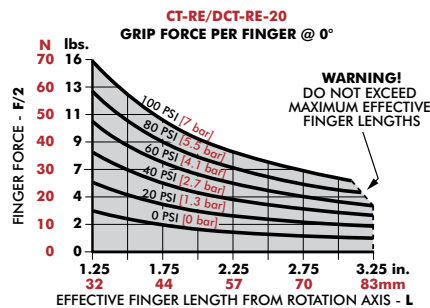
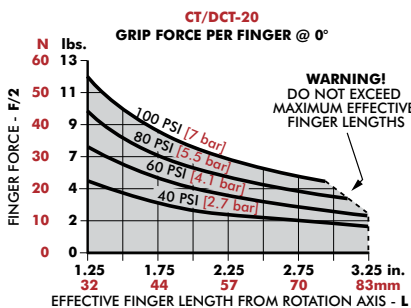


Model	A	B	C	D	E	F	G
DCT-20	29 [1.14]	51.5 [2.028]	79.00 [3.1102]	68 [2.68]	22.00 [0.8661]	18.00 [0.7087]	89 [3.50]
DCG/CT-20-RE	47 [1.85]	66.5 [2.618]	94.00 [3.7008]	83 [3.27]	39.00 [1.5354]	20.00 [0.7874]	104 [4.09]

Dimensions in mm [in]

Mounting Accessories	Order #
Inductive Sensor Mounting Kit (mounts 2 sensors)	SDCT-16-20
Adjustment Stop Kit (1 shielded plate, 1 stop)	KP-DCT20-BR
Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-161
Viton® Seal Repair Kit	SLKT-161V

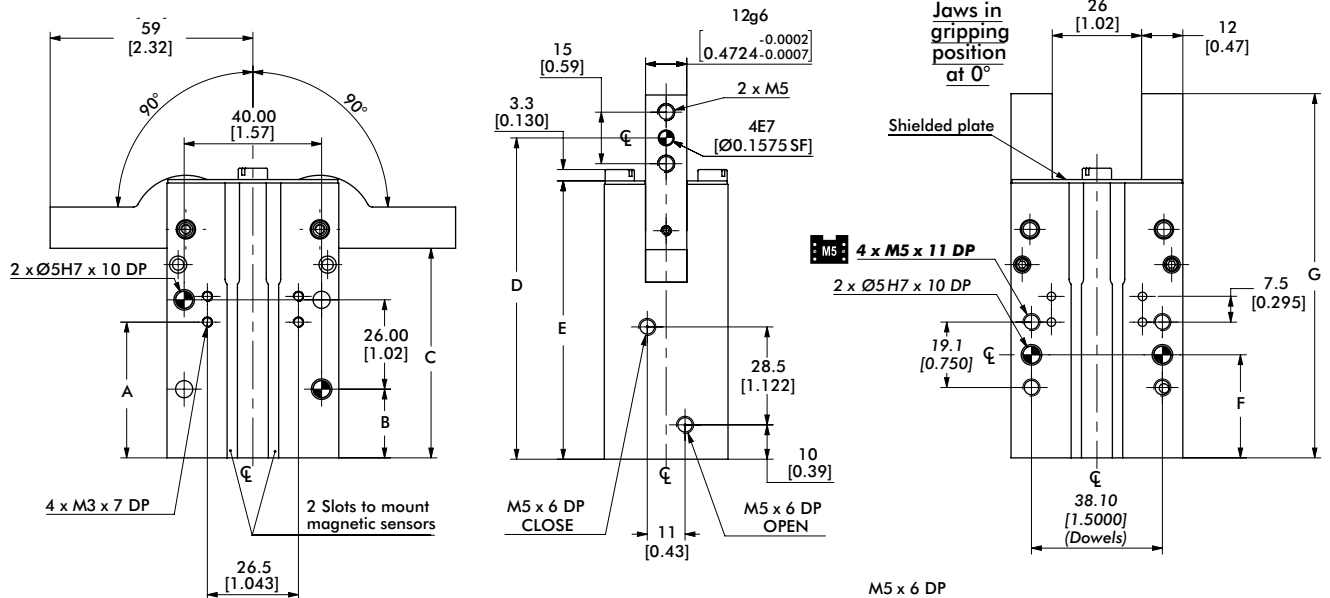
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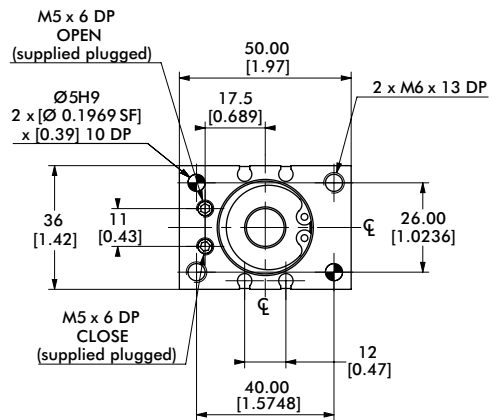
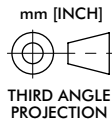
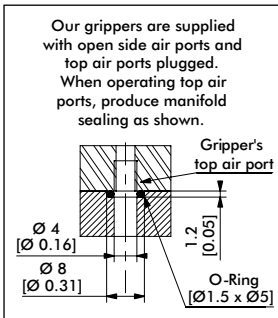
Static	
Maximum Tensile <b>T</b>	150 N [34 lbs]
Maximum Compressive <b>C</b>	150 N [34 lbs]
Maximum Moment <b>M<sub>x</sub></b>	6 Nm [53 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	6 Nm [53 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	6 Nm [53 in-lbs]

<sup>1</sup>Capacities are per set of jaws and are not simultaneous

## Angular Grippers | Dimensions and Technical Specifications



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.

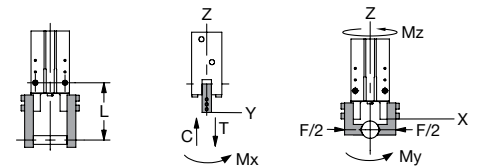
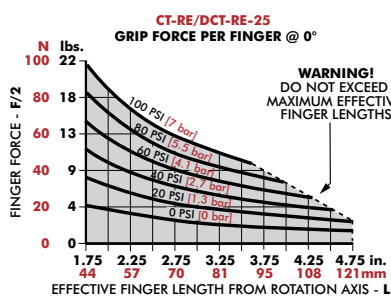
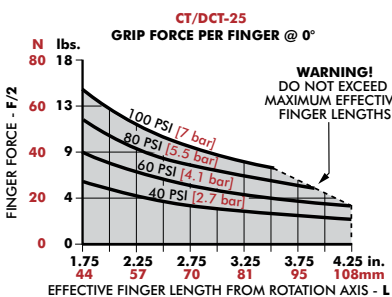


Model	A	B	C	D	E	F	G
DCT-25	39.5 [1.555]	20.00 [0.79]	61 [2.40]	93.50 [3.6811]	81 [3.19]	30.00 [1.1811]	106 [4.17]
DCT-25-RE	60.5 [2.382]	25.00 [0.98]	82 [3.23]	114.50 [4.5079]	102 [4.02]	51.00 [2.0079]	127 [5.00]

Dimensions in mm [in]

Mounting Accessories	Order #
Inductive Sensor Mounting Kit (mounts 2 sensors)	SDCT-25-32
Adjustment Stop Kit (1 shielded plate, 1 stop)	KP-DCT25-BR
Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-162
Viton® Seal Repair Kit	SLKT-162V

## Loading Information



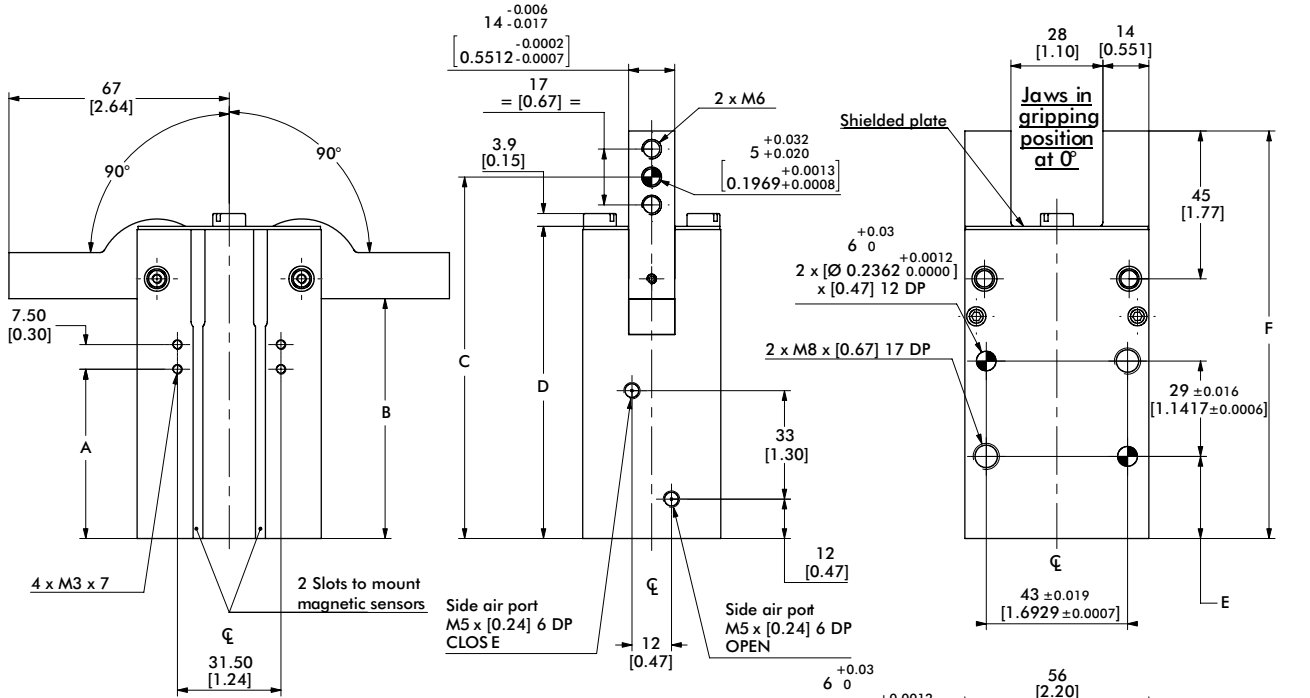
Static	
Maximum Tensile <b>T</b>	205 N [46 lbs]
Maximum Compressive <b>C</b>	205 N [46 lbs]
Maximum Moment <b>M<sub>x</sub></b>	10 Nm [89 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	10 Nm [89 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	10 Nm [89 in-lbs]

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

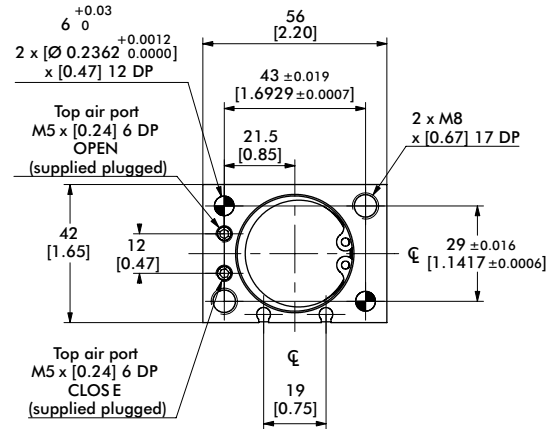
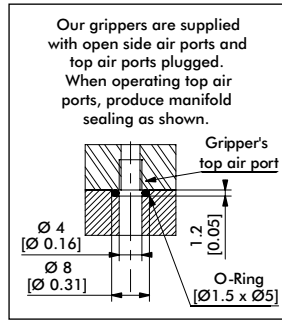
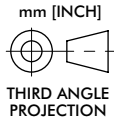


# CT-32/ -32-RE

## Angular Grippers | Dimensions and Technical Specifications



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.

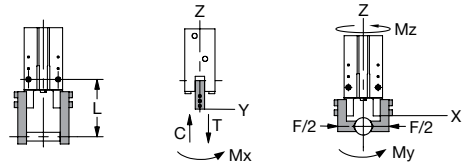
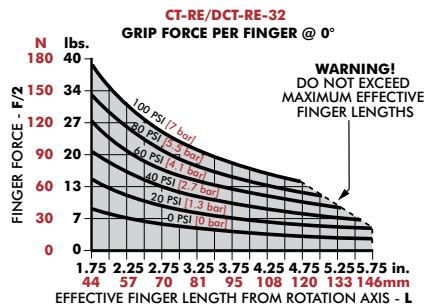
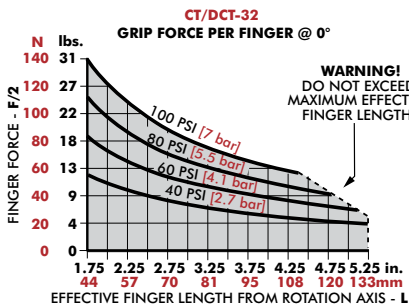


Model	A	B	C	D	E	F
CT-32	51.50 [2.03]	73 [2.87]	110 [4.3307]	95 [3.74]	25 [0.9843]	124 [4.88]
CT-32-RE	72.50 [2.85]	94 [3.70]	131 [5.1575]	116 [4.57]	30 [1.811]	145 [5.71]

Dimensions in mm [in]

Mounting Accessories	Order #
Inductive Sensor Mounting Kit (mounts 2 sensors)	SDCT-25-32
Adjustment Stop Kit (1 shielded plate, 1 stop)	KP-CT32-BR
Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-163
Viton® Seal Repair Kit	SLKT-163V

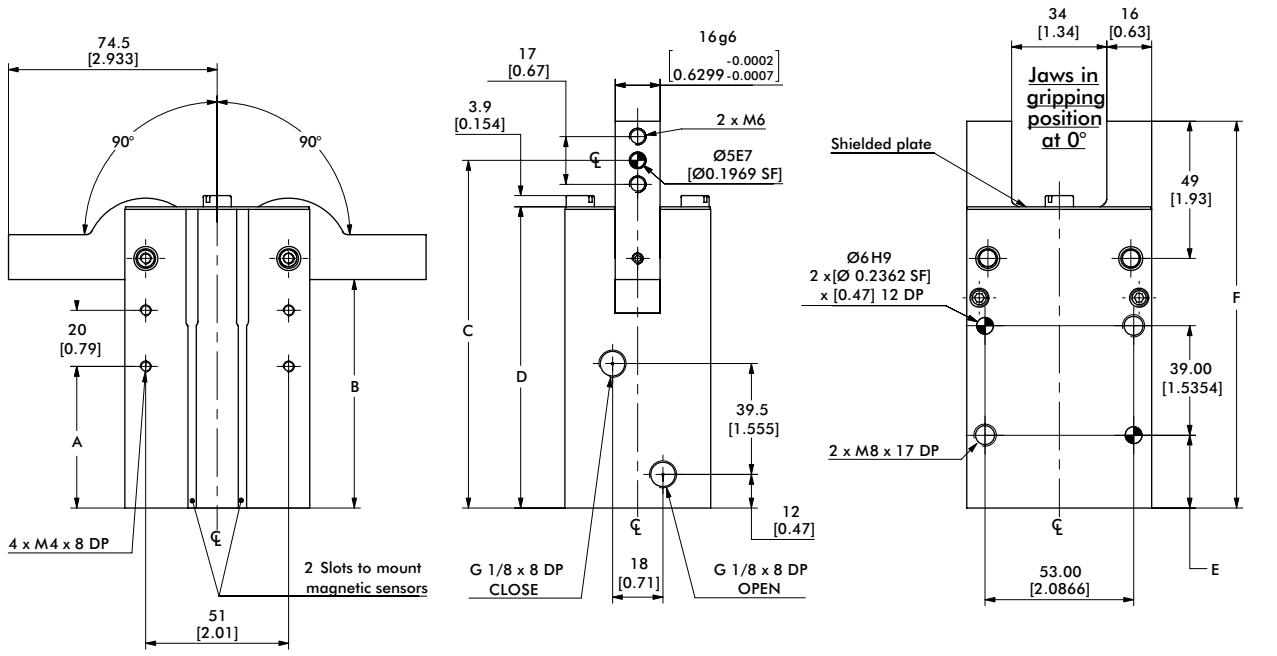
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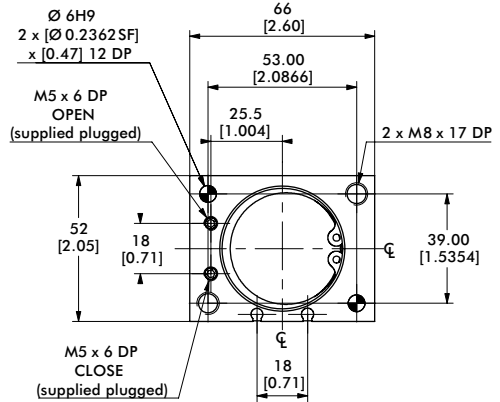
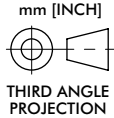
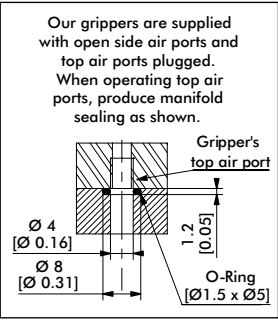
	Static
Maximum Tensile T	288 N [65 lbs]
Maximum Compressive C	288 N [65 lbs]
Maximum Moment M <sub>x</sub>	16 Nm [142 in-lbs]
Maximum Moment M <sub>y</sub>	16 Nm [142 in-lbs]
Maximum Moment M <sub>z</sub>	16 Nm [142 in-lbs]

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

## Angular Grippers | Dimensions and Technical Specifications



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.



Model	A	B	C	D	E	F
CT-40	50.5 [1.988]	81.5 [3.209]	124.00 [4.8819]	107.5 [4.232]	26.00 [1.0236]	138 [5.43]
CT-40-RE	78 [3.07]	109 [4.29]	151.50 [5.9646]	135 [5.31]	32.00 [1.2598]	165.5 [6.516]

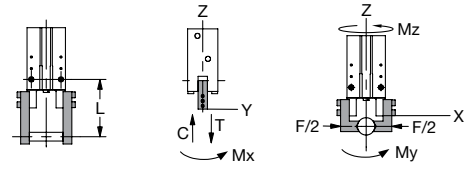
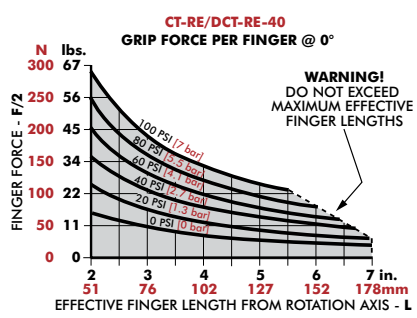
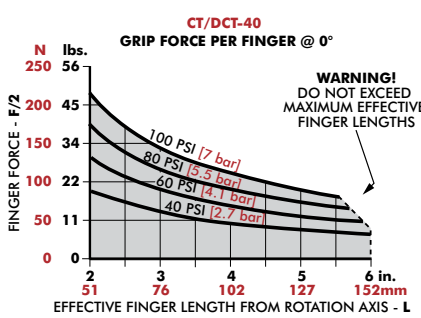
Dimensions in mm [in]

Mounting Accessories	Order #
Inductive Sensor Mounting Kit (mounts 2 sensors)	SDCT-40-63
Adjustment Stop Kit (1 shielded plate, 1 stop)	KP-CT40-BR

Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-164
Viton® Seal Repair Kit	SLKT-164V

### Loading Information

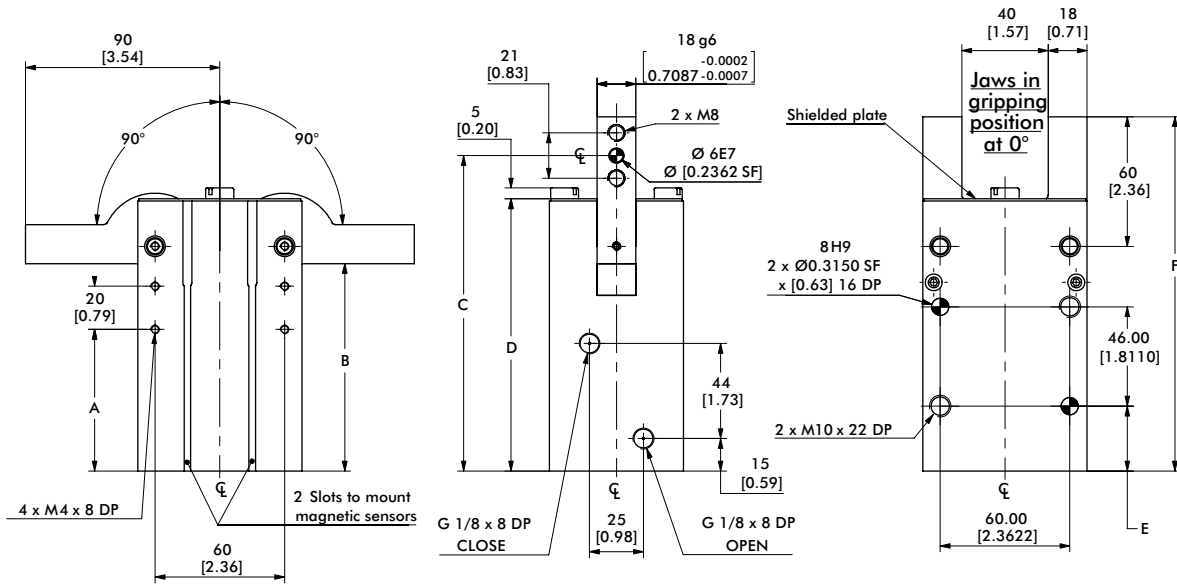


	Static
Maximum Tensile <b>T</b>	420 N [94 lbs]
Maximum Compressive <b>C</b>	420 N [94 lbs]
Maximum Moment <b>M<sub>x</sub></b>	22 Nm [195 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	22 Nm [195 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	22 Nm [195 in-lbs]

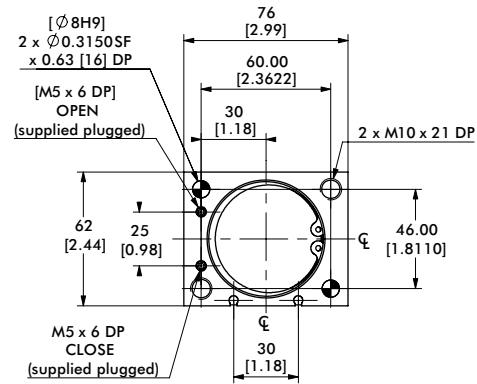
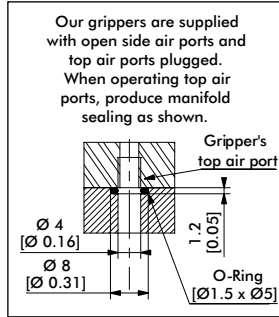
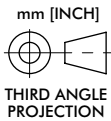
\*Capacities are per set of jaws and are not simultaneous

# CT-50/ -50-RE

## Angular Grippers | Dimensions and Technical Specifications



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.

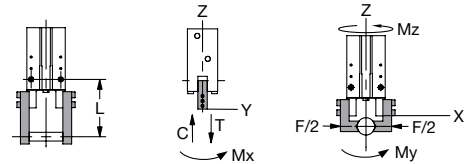
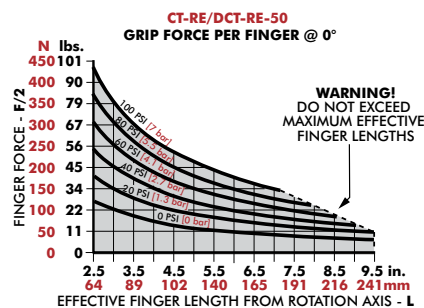
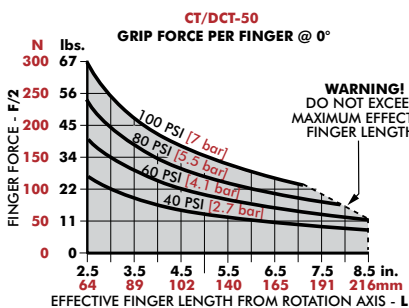


Model	A	B	C	D	E	F
CT-50	65.5 [2.579]	96 [3.78]	146.00 [5.7480]	126 [4.96]	30.00 [1.1811]	164 [6.46]
CT-50-RE	102.50 [4.035]	133 [5.24]	183.00 [7.2047]	163 [6.42]	40.00 [1.5748]	201 [7.91]

Dimensions in mm [in]

Mounting Accessories	Order #
Inductive Sensor Mounting Kit (mounts 2 sensors)	SDCT-40-63
Adjustment Stop Kit (1 shielded plate, 1 stop)	KP-CT50-BR
Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-165
Viton® Seal Repair Kit	SLKT-165V

## Loading Information



Static	
Maximum Tensile <b>T</b>	490 N [110 lbs]
Maximum Compressive <b>C</b>	490 N [110 lbs]
Maximum Moment <b>M<sub>x</sub></b>	30 Nm [266 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	30 Nm [266 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	30 Nm [266 in-lbs]

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



# RA (CAM DRIVEN) SERIES

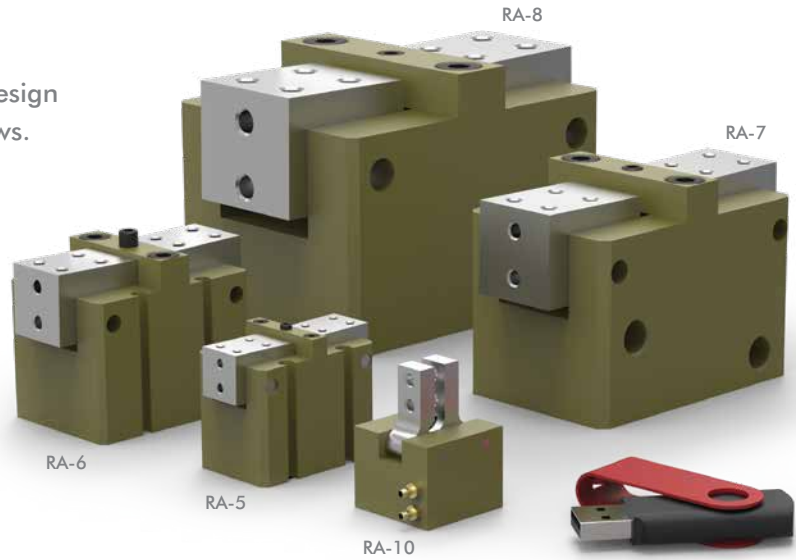
## Angular Grippers | Features and Benefits | How To Order

### Features:

- Highly reliable rugged general purpose gripper
- High grip force to size ratio due to cam driven design
- Fingers can be mounted on the side or top of jaws.
- Optional Viton® seals for high temperatures  
-30°C to +150°C [-20°F to +300°F]
- Use up to 2 magneto resistive sensors

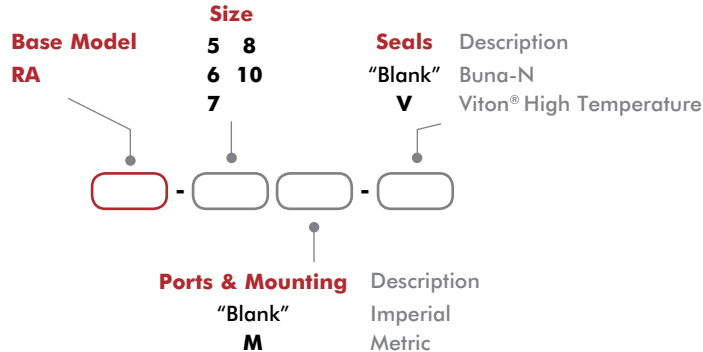
### Applications:

- Industrial assembly machines
- OEM pick and place machines
- General purpose gripping



(USB key shown for scale)

## How To Order



## Accessories

Sensor Accessories	Model Numbers	Part Number	Qty/Unit
NPN Magneto Resistive Sensor with Quick Disconnect*	5, 6, 7, 8	OHSN-017	1-2
PNP Magneto Resistive Sensor with Quick Disconnect*	5, 6, 7, 8	OHSP-017	1-2
NPN Magneto Resistive Sensor 90° with Quick Disconnect*	5, 6, 7, 8	OHSN-011	1-2
PNP Magneto Resistive Sensor 90° with Quick Disconnect*	5, 6, 7, 8	OHSP-011	1-2
Quick Disconnect 2 Meter Cable Length*	5, 6, 7, 8	CABL-010	1-2
Quick Disconnect 5 Meter Cable Length*	5, 6, 7, 8	CABL-013	1-2

Pneumatic Accessories	Model Numbers	Part Number	Qty/Unit
Fail Safe Valve (Imperial)	5, 6	OFSV-001	1
Fail Safe Valve (Metric)	5, 6	OFSV-004	1
Fail Safe Valve (Imperial)	7, 8	OFSV-002	1
Fail Safe Valve (Metric)	7, 8	OFSV-005	1

\* Sensor and cable sold separately.

# RA (CAM DRIVEN) SERIES

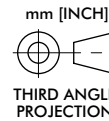
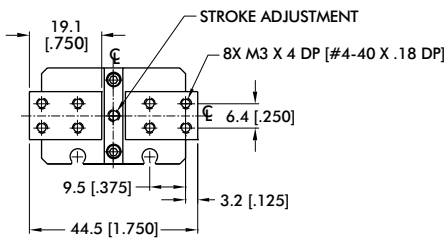
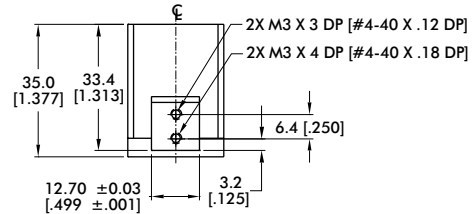
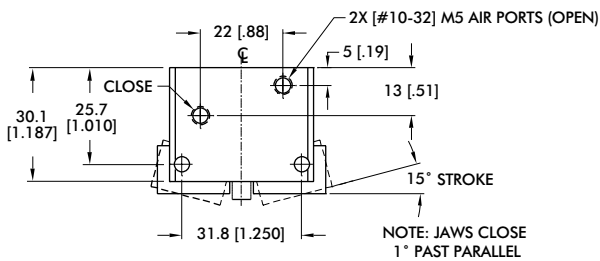
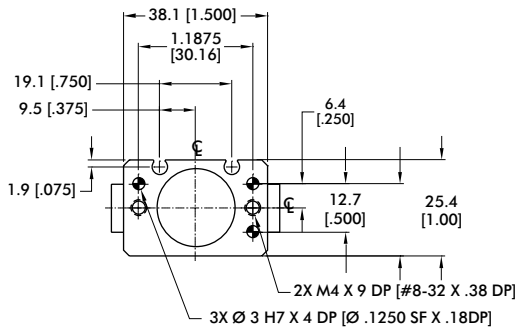
## Angular Grippers | Technical Specifications

Specifications	Units	5	6	7
Total Rated Grip Force <b>F</b> @ 7 bar [100 psi]	N [lbs]	89 [20]	196 [44]	534 [120]
Total Stroke		15° per finger	15° per finger	15° per finger
Open Stroke Adjustment		15° per finger	15° per finger	10° per finger
Weight	kg [lbs]	0.11 [0.25]	0.31 [0.69]	0.8 [1.8]
Pressure Range	bar [psi]	3-7 [40-100]		
Ingress Protection Class (IP)		IP43		
Displacement	cm <sup>3</sup> [in <sup>3</sup> ]	2.1 [0.13]	4.9 [0.300]	9.8 [0.601]
Temperature Range (Buna-N seals)	°C [°F]	-35°~80° [-30°~180°]		
Temperature Range (Viton® seals)	°C [°F]	-30°~150° [-20°~300°]		
Actuation	sec	0.10	0.11	0.15
Accuracy	mm [in]	±0.13 [±0.005]		
Repeatability	mm [in]	±0.08 [±0.003]		
Valve to Actuate		4-way, 2-position		

Specifications	Units	8	10
Total Rated Grip Force <b>F</b> @ 7 bar [100 psi]	N [lbs]	801 [180]	71 [16]
Total Stroke		15° per finger	15° per finger
Open Stroke Adjustment		10° per finger	--
Weight	kg [lbs]	2.1 [4.6]	0.03 [0.063]
Pressure Range	bar [psi]	3-7 [40-100]	
Ingress Protection Class (IP)		IP43	
Displacement	cm <sup>3</sup> [in <sup>3</sup> ]	21.6 [1.320]	0.4 [0.026]
Temperature Range (Buna-N seals)	°C [°F]	-35°~80° C [-30°~180° F]	
Temperature Range (Viton® seals)	°C [°F]	-30°~150° C [-20°~300° F]	
Actuation	sec	0.23	0.08
Accuracy	mm [in]	±0.13 [±0.005]	±0.08 [±0.003]
Repeatability	mm [in]	±0.08 [±0.003]	±0.03 [±0.001]
Valve to Actuate		4-way, 2-position	

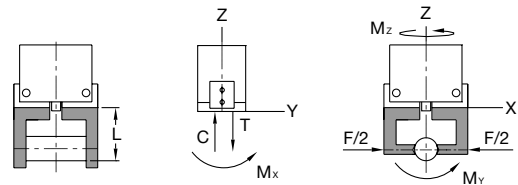
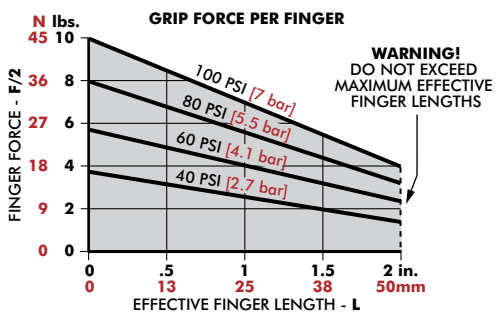
# RA-5

## Angular Grippers | Dimensions and Technical Specifications



Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-022
Viton® Seal Repair Kit	SLKT-022V

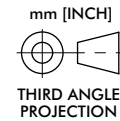
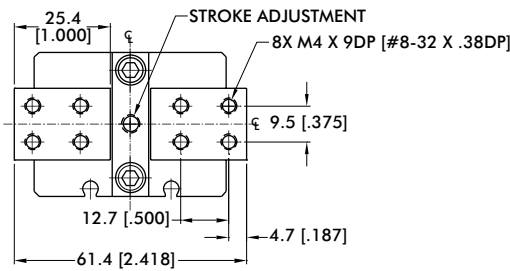
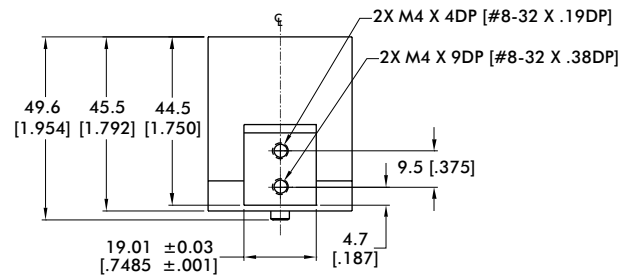
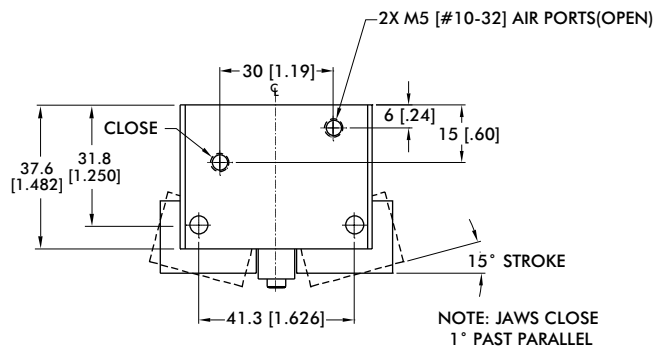
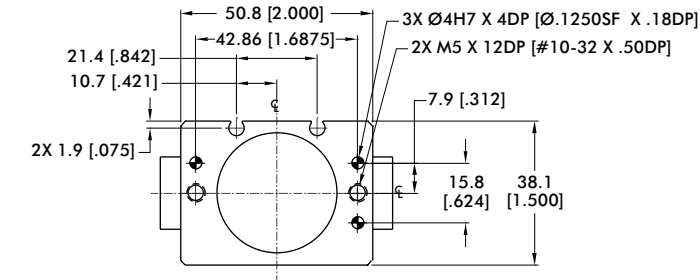
## Loading Information



RA-5	Static
Maximum Tensile T	44 N [10 lbs]
Maximum Compressive C	44 N [10 lbs]
Maximum Moment $M_x$	1.1 Nm [10 in-lbs]
Maximum Moment $M_y$	1.1 Nm [10 in-lbs]
Maximum Moment $M_z$	1.1 Nm [10 in-lbs]

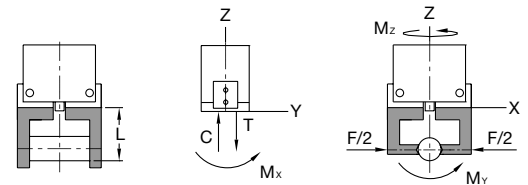
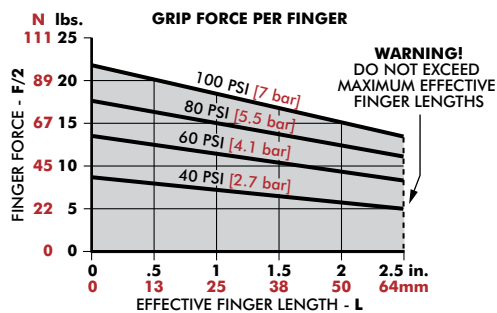
\*Capacities are per set of jaws and are not simultaneous

## Angular Grippers | Dimensions and Technical Specifications



Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-023
Viton® Seal Repair Kit	SLKT-023V

## Loading Information



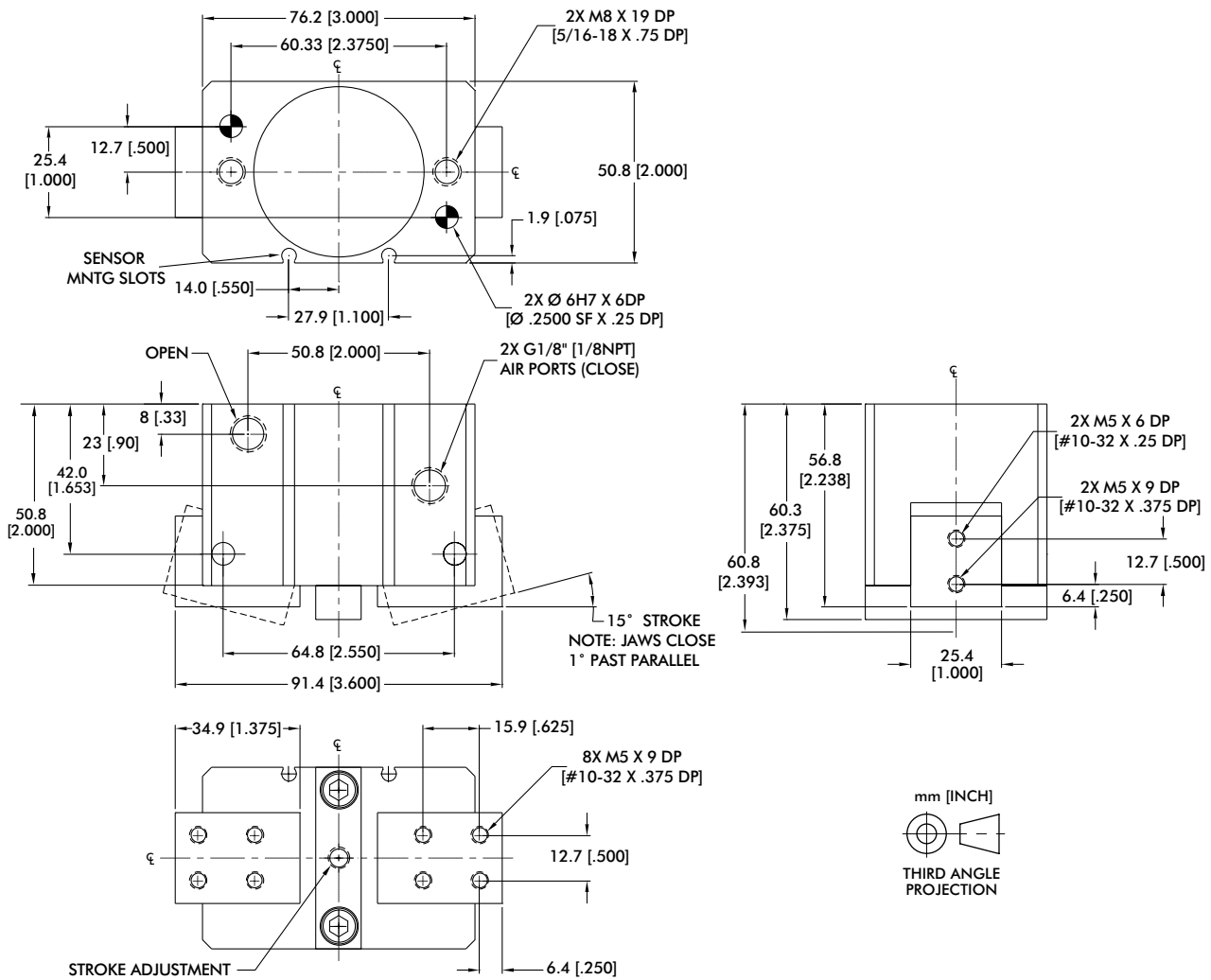
RA-6	Static
Maximum Tensile <b>T</b>	89 N [20 lbs]
Maximum Compressive <b>C</b>	89 N [20 lbs]
Maximum Moment <b>M<sub>x</sub></b>	2.3 Nm [20 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	2.3 Nm [20 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	2.3 Nm [20 in-lbs]

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



# RA-7

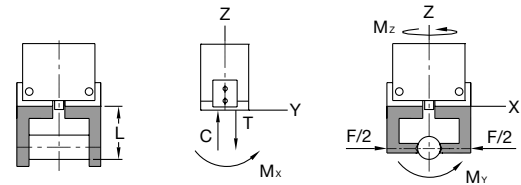
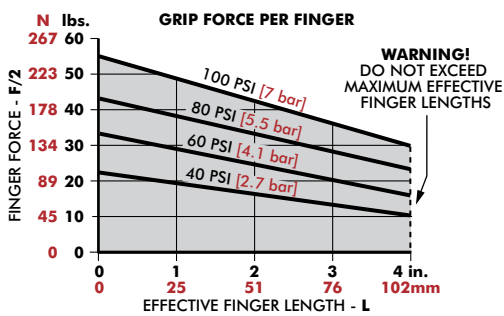
## Angular Grippers | Dimensions and Technical Specifications



mm [INCH]  
  
 THIRD ANGLE PROJECTION

Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-118
Viton® Seal Repair Kit	SLKT-118V

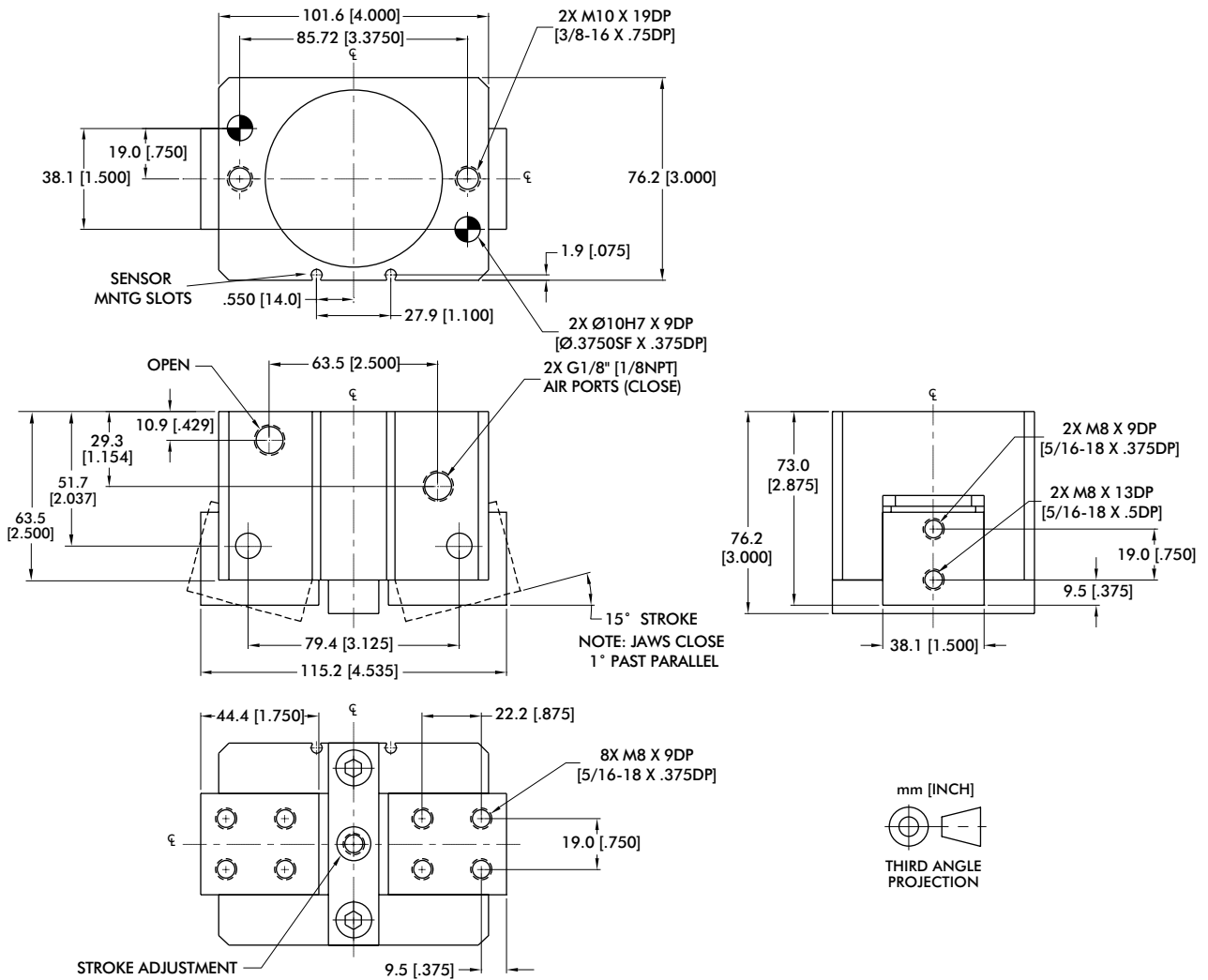
## Loading Information



RA-7	Static
Maximum Tensile <b>T</b>	267 N [60 lbs]
Maximum Compressive <b>C</b>	267 N [60 lbs]
Maximum Moment <b>M<sub>x</sub></b>	6.8 Nm [60 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	6.8 Nm [60 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	6.8 Nm [60 in-lbs]

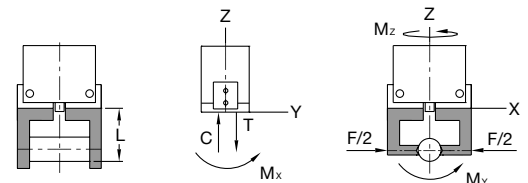
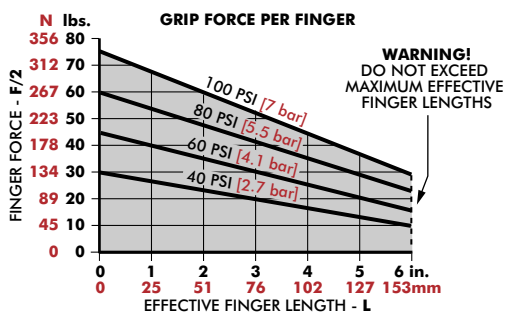
<sup>†</sup>Capacities are per set of jaws and are not simultaneous

## Angular Grippers | Dimensions and Technical Specifications



Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-119
Viton® Seal Repair Kit	SLKT-119V

## Loading Information

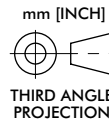
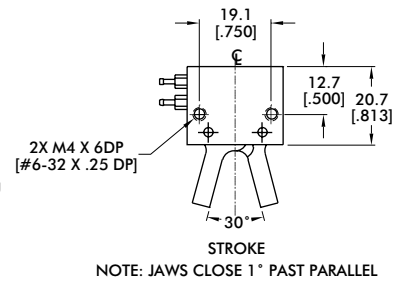
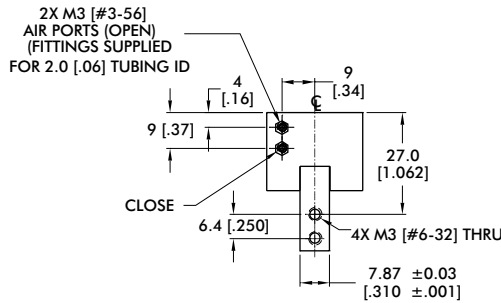
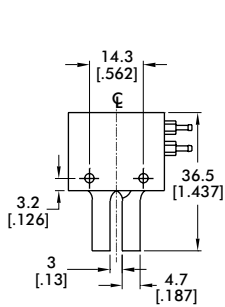
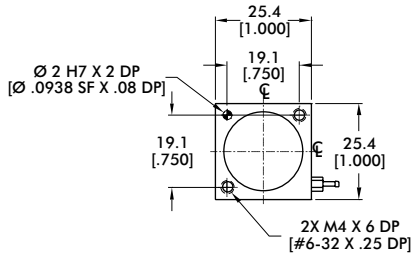


RA-8	Static
Maximum Tensile <b>T</b>	400 N [90 lbs]
Maximum Compressive <b>C</b>	400 N [90 lbs]
Maximum Moment <b>M<sub>x</sub></b>	10.2 Nm [90 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	10.2 Nm [90 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	10.2 Nm [90 in-lbs]

<sup>1</sup>Capacities are per set of jaws and are not simultaneous

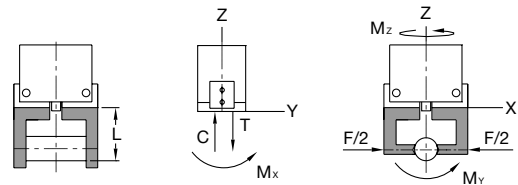
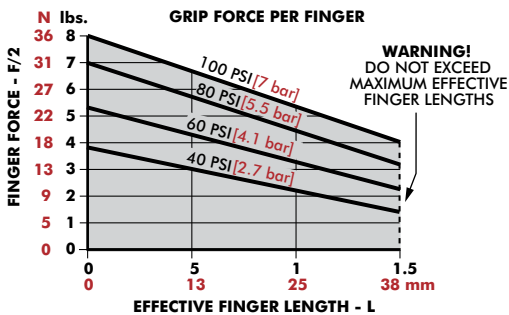
# RA-10

## Angular Grippers | Dimensions and Technical Specifications



Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-018
Viton® Seal Repair Kit	SLKT-018V

## Loading Information



RA-10	Static
Maximum Tensile <b>T</b>	22 N [5 lbs]
Maximum Compressive <b>C</b>	22 N [5 lbs]
Maximum Moment <b>M<sub>x</sub></b>	0.6 Nm [5 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	0.6 Nm [5 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	0.6 Nm [5 in-lbs]

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



# RA (TOGGLE LOCK) SERIES

## Angular Grippers | Features and Benefits | How To Order

### Features:

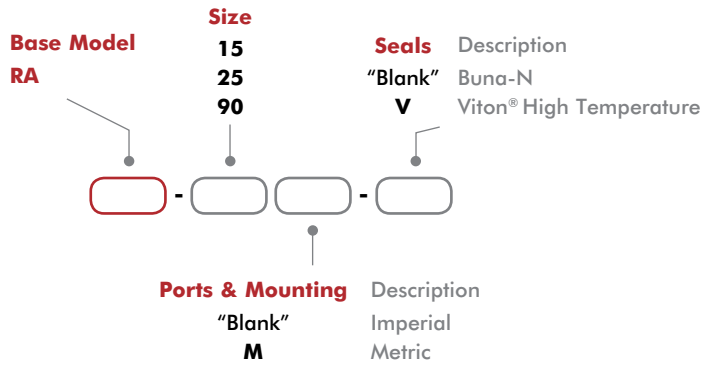
- Highly reliable rugged general purpose gripper
- Very high grip force to size ratio due to toggle mechanism
- True Failsafe with toggle locking jaws— gripper cannot release part without air
- Optional Viton® seals for high temperatures -30°C to +150°C [-20°F to +300°F]
- Optional inductive sensors and flow controls

### Applications:

- Applications requiring internal/external gripping with toggle locking
- Internal gripping Applications without locking
- Industrial assembly machines
- OEM pick and place machines



## How To Order



## Accessories

Sensor Accessories	Model Numbers	Part Number	Qty/Unit
Sensor Mounting Kit, Mounts 2 Inductive Sensors (Imperial/Metric)	See Datasheet		1
NPN Inductive Sensor with Quick Disconnect*	15	OISN-019	1-2
PNP Inductive Sensor with Quick Disconnect*	15	OISP-019	1-2
NPN Inductive Sensor with Quick Disconnect*	25	OISN-014	1-2
PNP Inductive Sensor with Quick Disconnect*	25	OISP-014	1-2
NPN Inductive Sensor with Quick Disconnect*	90	OISN-013	1-2
PNP Inductive Sensor with Quick Disconnect*	90	OISP-013	1-2
NPN Magneto Resistive Sensor with Quick Disconnect*	90	OHSN-008	1-2
PNP Magneto Resistive Sensor with Quick Disconnect*	90	OHSP-008	1-2
NPN Magneto Resistive Sensor 90° with Quick Disconnect*	90	OHSN-011	1-2
PNP Magneto Resistive Sensor 90° with Quick Disconnect*	90	OHSP-011	1-2
Quick Disconnect 2 Meter Cable Length*	All Models	CABL-010	1-2
Quick Disconnect 5 Meter Cable Length*	All Models	CABL-013	1-2

Pneumatic Accessories	Model Numbers	Part Number	Qty/Unit
#10-32 to 1/4" OD Tube Flow Controls	90	VLVF-007	2
M5 to 6mm OD Tube Flow Controls	90	VLVF-008	2

\* Sensor and cable sold separately.

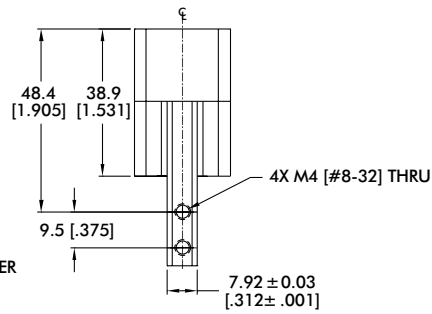
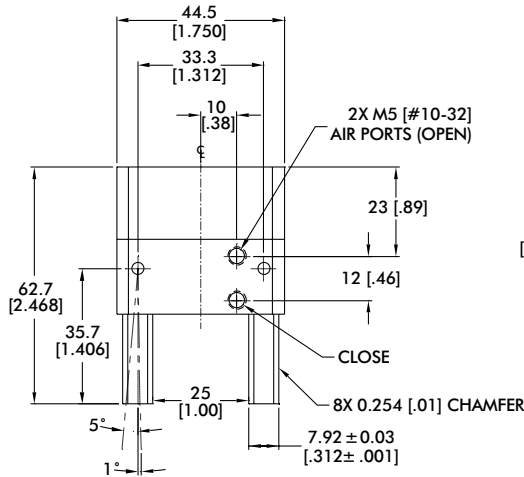
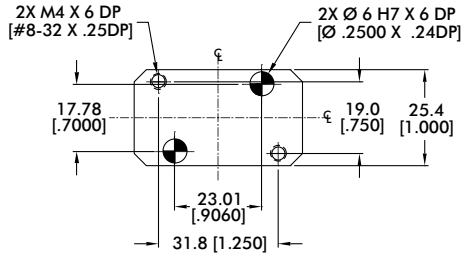
# RA (TOGGLE LOCK) SERIES

## Angular Grippers | Technical Specifications

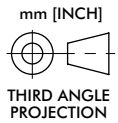
Specifications	Units	15	25	90
Total Rated Grip Force <b>F</b> @ 100 psi [7 bar]	N [lbs]	311 [70]	1112 [250]	356 [80]
Total Stroke		6° (per finger)		90° (per finger)
Stroke Adjustment		--		45° (per finger)
Weight	kg [lbs]	0.14 [0.31]	0.48 [1.06]	0.20 [0.438]
Pressure Range	bar [psi]	3-7 [40-100]		
Ingress Protection Class (IP)		IP43		
Displacement	cm <sup>3</sup> [in <sup>3</sup> ]	1.8 [0.110]	0.8 [0.046]	7.5 [0.460]
Temperature Range (Buna-N seals)	°C [°F]	-35°~80° [-30°~180°]		
Temperature Range (Viton® seals)	°C [°F]	-30°~150° [-20°~300°]		
Actuation	sec	0.10	0.12	0.16
Accuracy	mm [in]	±0.08 [±0.003]		
Repeatability	mm [in]	±0.03 [±0.0001]		
Valve to Required Actuate Double Acting		4-way, 2-position		

# RA-15

## Angular Grippers | Dimensions and Technical Specifications

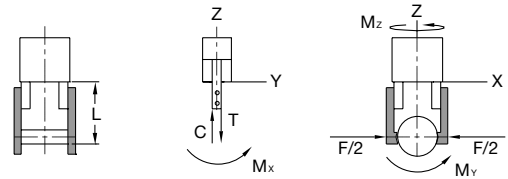
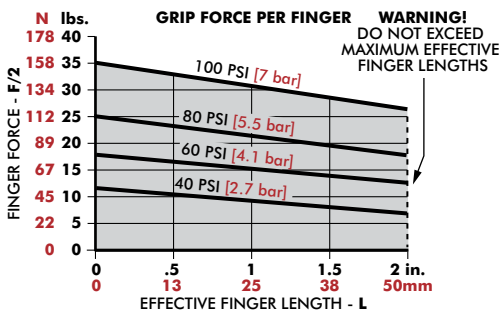


JAW SHOWN PARALLEL  
JAW WILL CLOSE 1° PAST PARALLEL



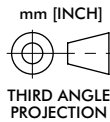
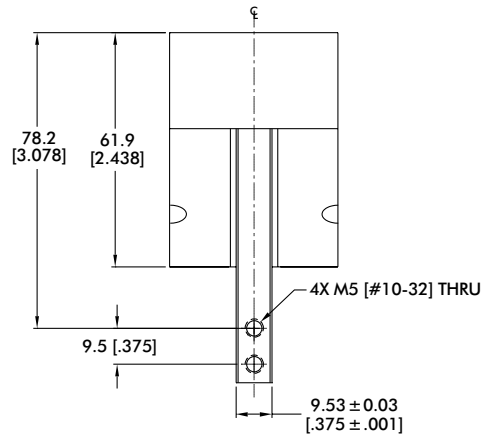
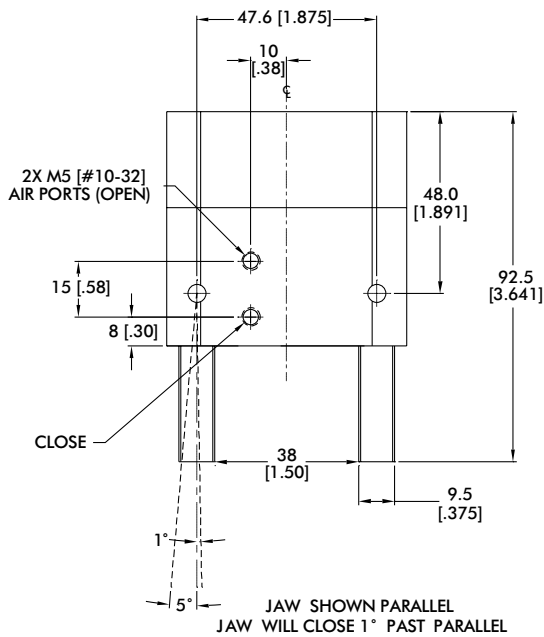
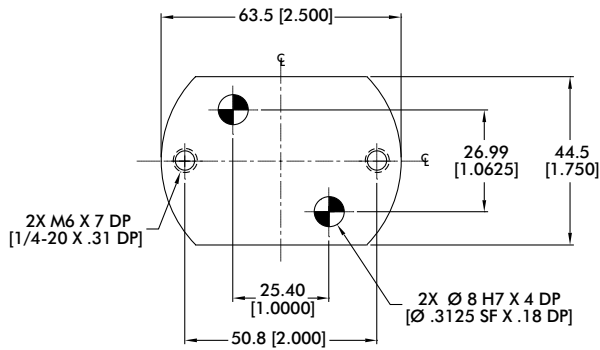
Sensor Accessories	Order #
Inductive Sensor Mounting Kit (mounts 2 sensors)	OSMK-018
Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-019
Viton® Seal Repair Kit	SLKT-019V

## Loading Information



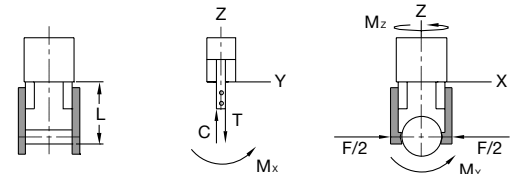
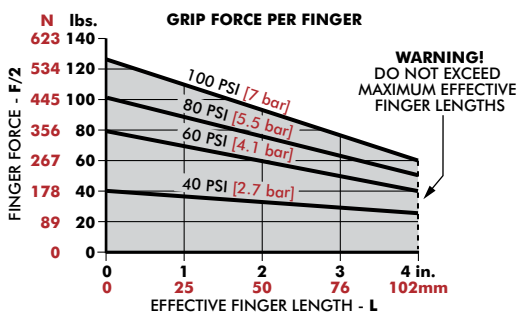
RA-15	Static
Maximum Tensile <b>T</b>	222 N [50 lbs]
Maximum Compressive <b>C</b>	222 N [50 lbs]
Maximum Moment <b>M<sub>x</sub></b>	6.8 Nm [60 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	13.6 Nm [120 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	6.8 Nm [60 in-lbs]

<sup>1</sup>Capacities are per set of jaws and are not simultaneous



Sensor Accessories	Order #
Inductive Sensor Mounting Kit (mounts 2 sensors)	OSMK-019
Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-020
Viton® Seal Repair Kit	SLKT-020V

### Loading Information



RA-25	Static
Maximum Tensile <b>T</b>	667 N [150 lbs]
Maximum Compressive <b>C</b>	667 N [150 lbs]
Maximum Moment <b>M<sub>x</sub></b>	22.6 Nm [200 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	33.9 Nm [300 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	22.6 Nm [200 in-lbs]

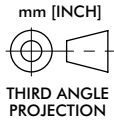
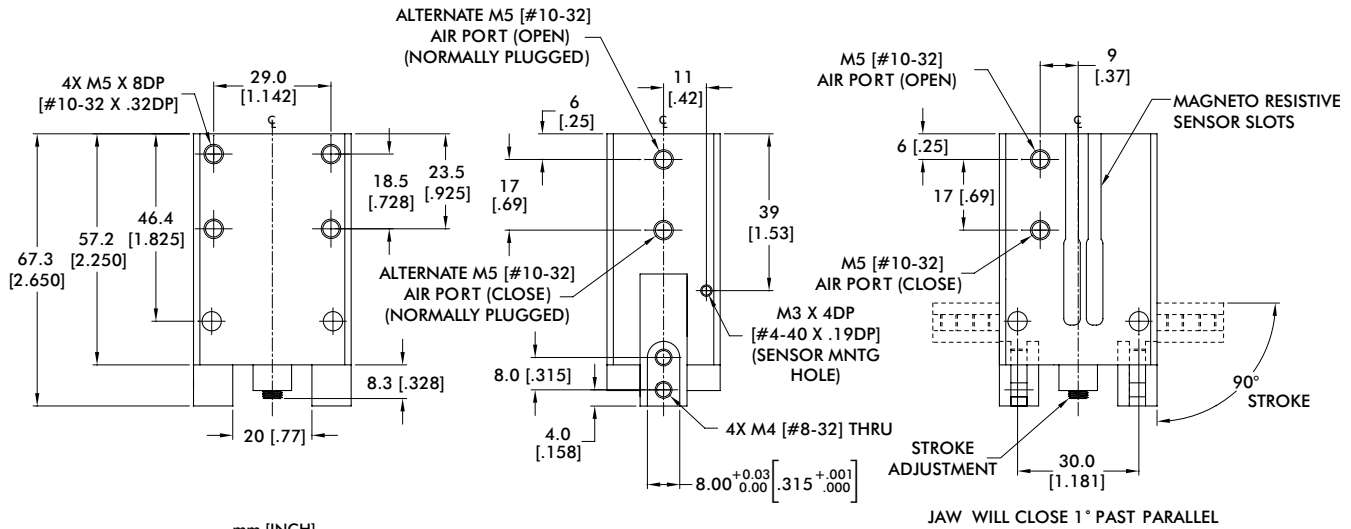
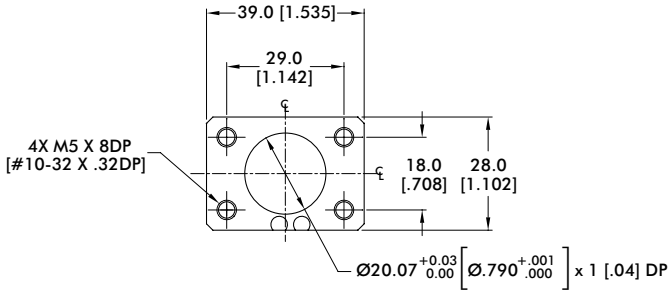
<sup>c</sup>Capacities are per set of jaws and are not simultaneous



# RA-90

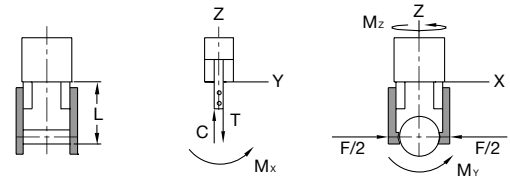
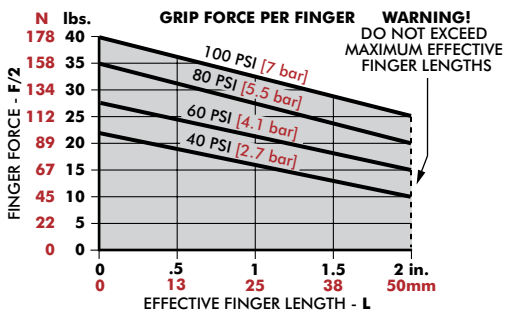
## Angular Grippers | Dimensions and Technical Specifications

DO NOT OPERATE WITHOUT FLOW CONTROLS



Sensor Accessories	Order #
Inductive Sensor Mounting Kit (mounts 2 sensors)	OSMK-003
Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-024
Viton® Seal Repair Kit	SLKT-024V

## Loading Information



RA-90	Static
Maximum Tensile <b>T</b>	222 N [50 lbs]
Maximum Compressive <b>C</b>	222 N [50 lbs]
Maximum Moment <b>M<sub>x</sub></b>	6.8 Nm [60 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	13.6 Nm [120 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	6.8 Nm [60 in-lbs]

<sup>1</sup>Capacities are per set of jaws and are not simultaneous



# RUA SERIES

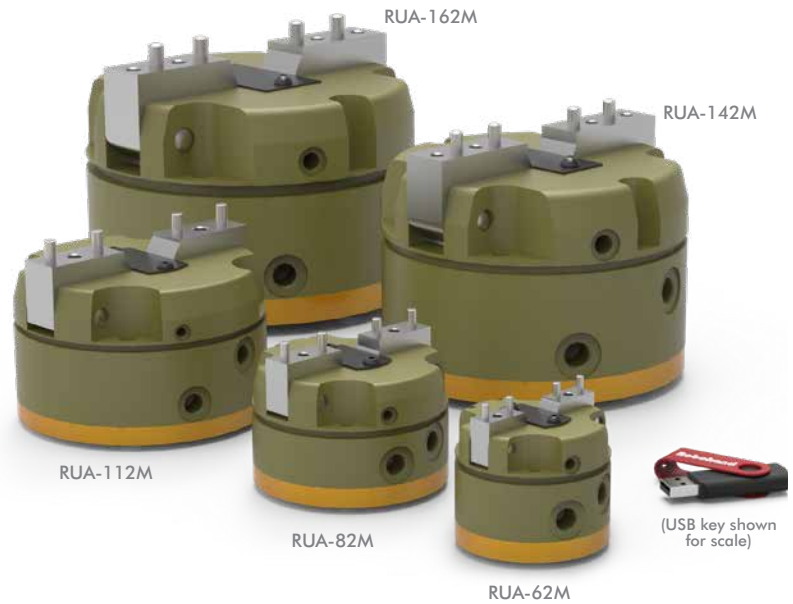
## Angular Grippers | Features and Benefits | How To Order

### Features:

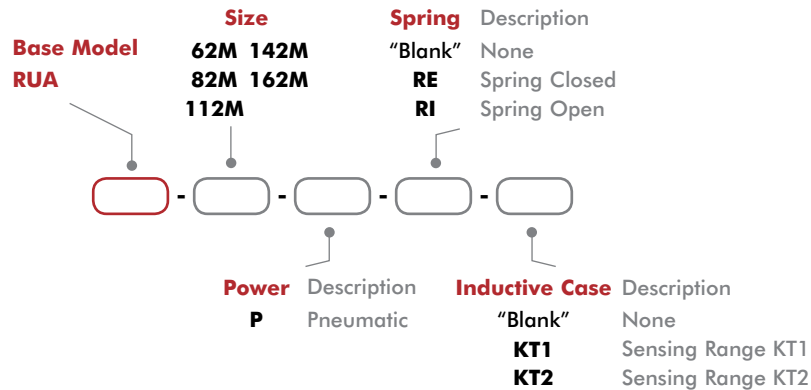
- Robust, shielded, high force gripper
- Optional springs for part retention in case of air loss or increased grip-force
- Side or top manifold air ports
- Viton® seals included for high temperatures -30°C to +150°C [-20°F to +300°F]
- Boot options available for weld splatter applications

### Applications:

- Welding and sandblasting applications
- Paintbooth applications
- Heavy part gripping solutions



## How To Order



## Accessories

Sensor Accessories	Model Numbers	Part Number	Qty/Unit
NPN Magneto Resistive Sensor with Quick Disconnect* **	62M, 82M, 112M	OHSN-017	1-2
PNP Magneto Resistive Sensor with Quick Disconnect* **	62M, 82M, 112M	OHSP-017	1-2
NPN Magneto Resistive Sensor 90° with Quick Disconnect* **	62M, 82M, 112M	OHSN-011	1-2
PNP Magneto Resistive Sensor 90° with Quick Disconnect* **	62M, 82M, 112M	OHSP-011	1-2
Replacement PNP Double Inductive Sensor* †	All Models	KT15	1
Quick Disconnect 2 Meter Cable Length*	62M, 82M, 112M	CABL-010	1-2
Quick Disconnect 5 Meter Cable Length*	62M, 82M, 112M	CABL-013	1-2
Quick Disconnect 2 Meter Cable Length (for KT Inductive Sensor)*	All Models	CABL-014	1-2

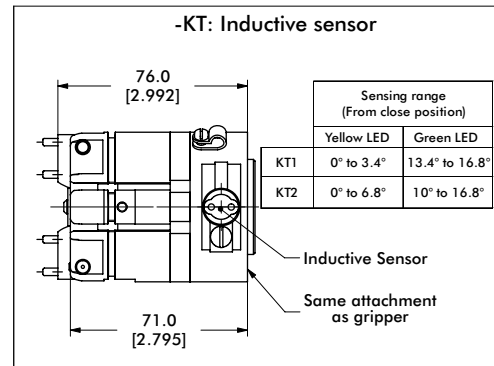
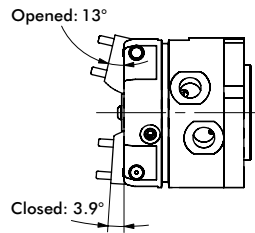
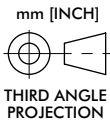
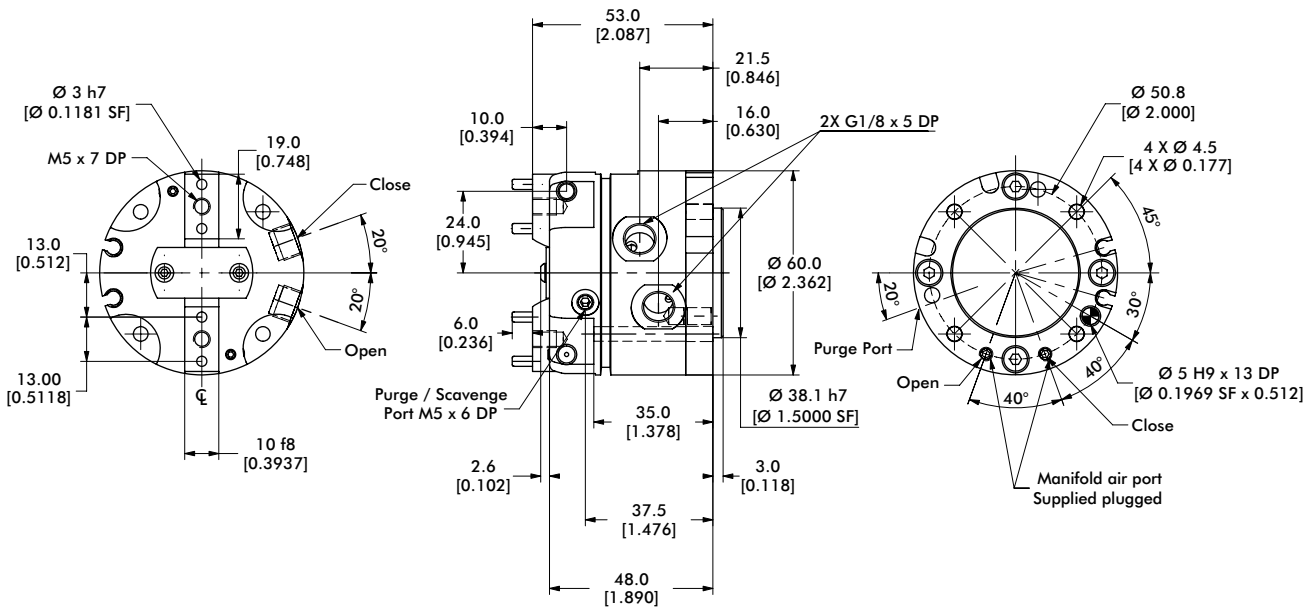
\* Sensor and cable sold separately. \*\* Piston magnet standard. † Requires KT1 or KT2 sensor option.

Specifications	Units	62M	82M	112M
Total Rated Grip Force <b>L=25mm</b> [1 in.] @ 0°				
@ 7 bar [100 psi], w/spring	N [lbs]	384 [86]	1228 [276]	2150 [483]
@ 7 bar [100 psi], w/o spring	N [lbs]	313 [70]	922 [207]	1600 [360]
Total Stroke		16.8° (per finger)	15.9° (per finger)	19.1° (per finger)
Weight	kg [lbs]	0.39 [0.86]	0.70 [1.55]	1.70 [3.75]
Pressure Range without springs	bar [psi]	2-7 [30-100]		
Pressure Range with springs <b>-RE, -RI</b>	bar [psi]	3-7 [45-100]		
Ingress Protection Class (IP)		IP54		
Displacement	cm <sup>3</sup> [in <sup>3</sup> ]	12 [0.73]	35 [2.14]	85 [5.19]
Temperature Range (Viton® seals standard)	°C [°F]	-30°~150° [-20°~300°]		
Actuation	sec	0.18	0.10	0.35
Accuracy	mm [in]	±0.05 [±0.002]		±0.08 [±0.003]
Repeatability	mm [in]	±0.02 [±0.0008]		±0.03 [±0.0008]
Valve to Required Actuate Single Acting		3-way, 2-position		
Valve to Required Actuate Double Acting		4-way, 2-position		

Specifications	Units	142M	162M
Total Rated Grip Force <b>L=25mm</b> [1 in.] @ 0°			
@ 7 bar [100 psi], w/spring	N [lbs]	5775 [1298]	5490 [1234]
@ 7 bar [100 psi], w/o spring	N [lbs]	3941 [886]	3790 [853]
Total Stroke		17.6° (per finger)	17.2° (per finger)
Weight	kg [lbs]	4.1 [9.05]	6.7 [14.8]
Pressure Range without springs	bar [psi]	2-7 [30-100]	
Pressure Range with springs <b>-RE, -RI</b>	bar [psi]	4-7 [60-100]	
Ingress Protection Class (IP)		IP54	
Displacement	cm <sup>3</sup> [in <sup>3</sup> ]	215 [13.2]	322 [19.7]
Temperature Range (Viton® seals standard)	°C [°F]	-30°~150° [-20°~300°]	
Actuation	sec	0.60	0.80
Accuracy	mm [in]	±0.8 [±0.003]	
Repeatability	mm [in]	±0.03 [±0.0008]	
Valve to Required Actuate Single Acting		3-way, 2-position	
Valve to Required Actuate Double Acting		4-way, 2-position	

# RUA-62M

## Angular Grippers | Dimensions and Technical Specifications



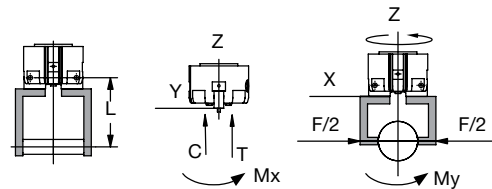
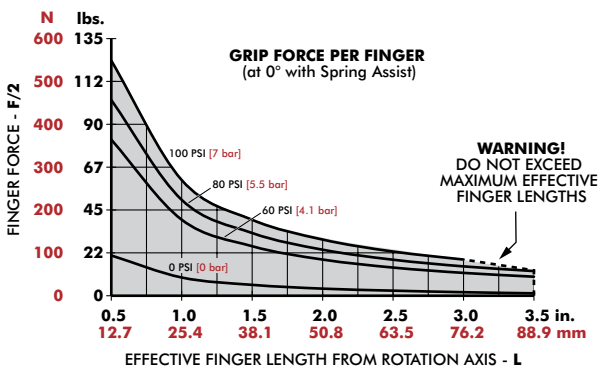
### Protective Boots

Protective Boots	Order #
PVC Sealed Boot Kit (2 interfaces, 1 collar, 1 boot)	SLKT-367
Kevlar Sealed Boot Kit (2 interfaces, 1 collar, 1 boot)	SLKT-368

### Seal Repair Kits

Seal Repair Kits	Order #
Viton® Seal Repair Kit (Pneumatic)	SLKT-156V

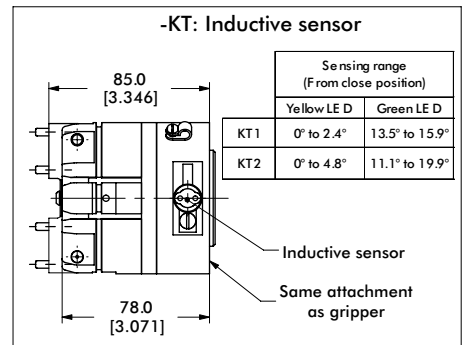
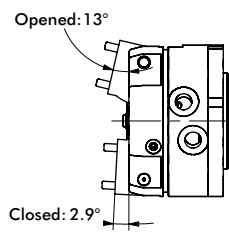
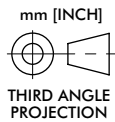
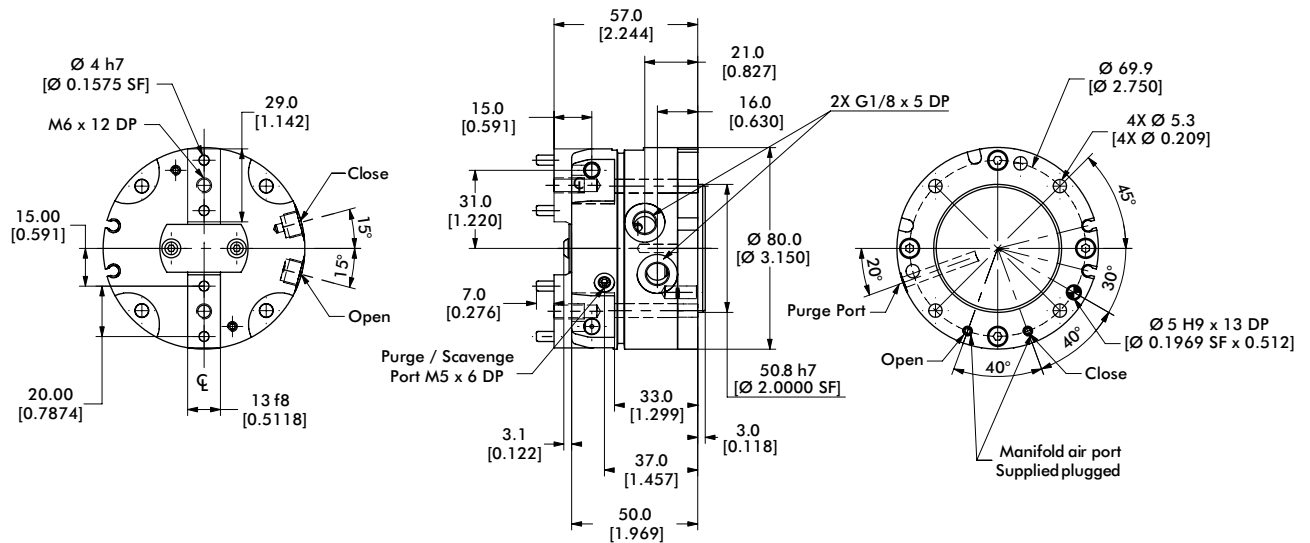
## Loading Information



RUA-62M	Static
Maximum Tensile <b>T</b>	236 N [53 lbs]
Maximum Compressive <b>C</b>	236 N [53 lbs]
Maximum Moment <b>M<sub>x</sub></b>	12.5 Nm [111 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	34.5 Nm [305 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	12.5 Nm [111 in-lbs]

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

## Angular Grippers | Dimensions and Technical Specifications



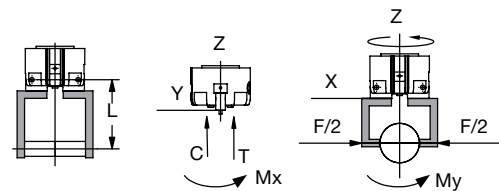
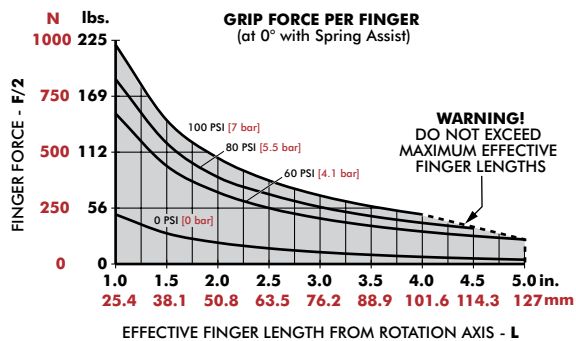
### Protective Boots

Protective Boots	Order #
PVC Sealed Boot Kit (2 interfaces, 1 collar, 1 boot)	SLKT-370
Kevlar Sealed Boot Kit (2 interfaces, 1 collar, 1 boot)	SLKT-371

### Seal Repair Kits

Seal Repair Kits	Order #
Viton® Seal Repair Kit (Pneumatic)	SLKT-157V

## Loading Information

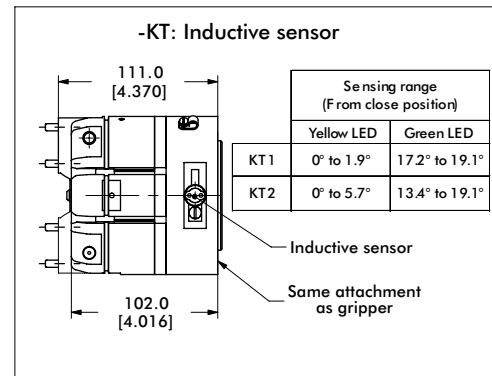
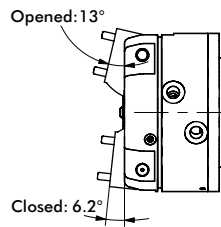
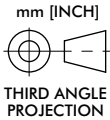
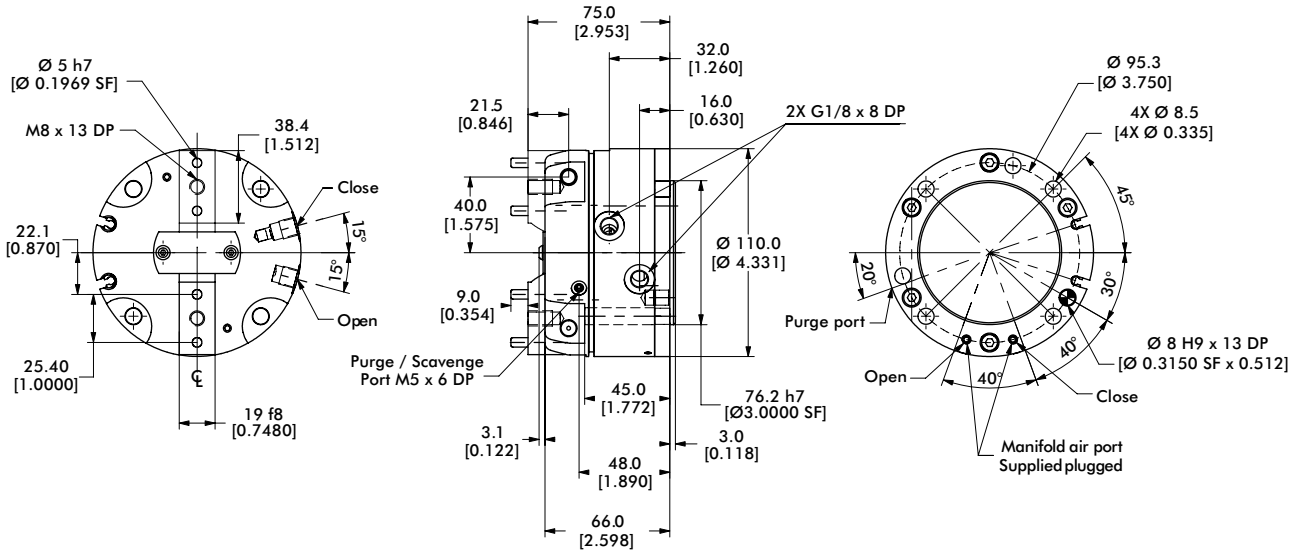


RUA-82M	Static
Maximum Tensile <b>T</b>	290 N [65 lbs]
Maximum Compressive <b>C</b>	290 N [65 lbs]
Maximum Moment <b>M<sub>x</sub></b>	19 Nm [168 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	121 Nm [1071 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	19 Nm [168 in-lbs]

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

# RUA-112M

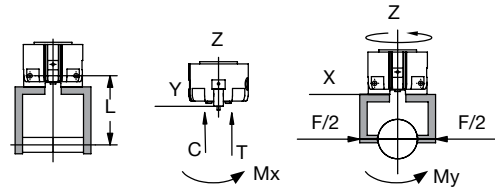
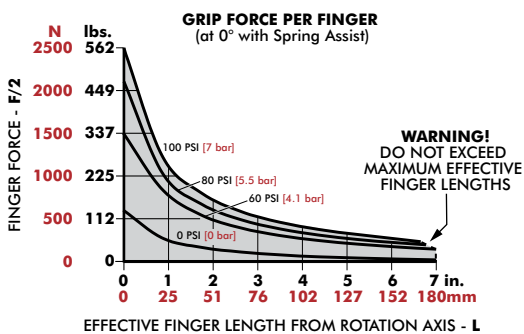
## Angular Grippers | Dimensions and Technical Specifications



Protective Boots	Order #
PVC Sealed Boot Kit (2 interfaces, 1 collar, 1 boot)	SLKT-373

Seal Repair Kits	Order #
Viton® Seal Repair Kit (Pneumatic)	SLKT-158V

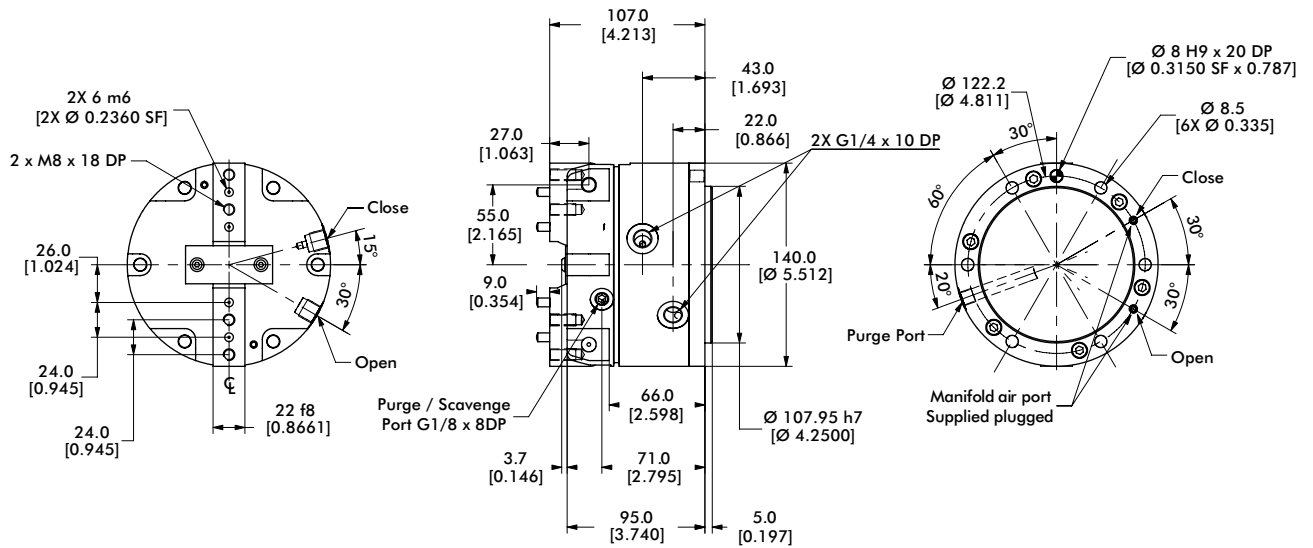
## Loading Information



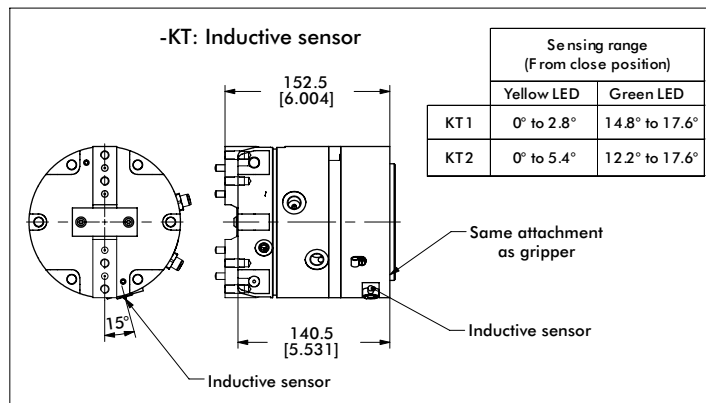
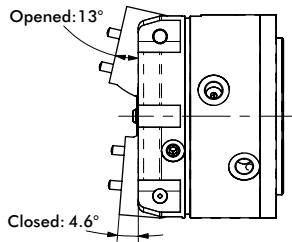
RUA-112M	Static
Maximum Tensile <b>T</b>	290 N [65 lbs]
Maximum Compressive <b>C</b>	290 N [65 lbs]
Maximum Moment <b>M<sub>x</sub></b>	19 Nm [168 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	121 Nm [1071 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	19 Nm [168 in-lbs]

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

## Angular Grippers | Dimensions and Technical Specifications



mm [INCH]  
THIRD ANGLE PROJECTION



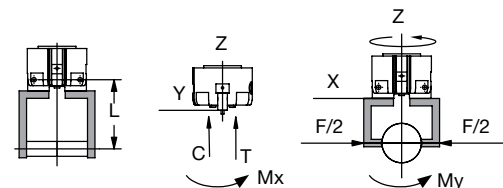
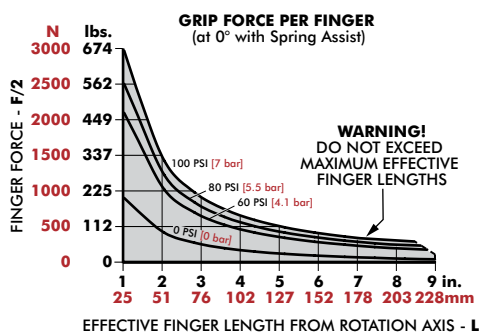
### Protective Boots Order #

PVC Sealed Boot Kit (2 interfaces, 1 collar, 1 boot) SLKT-376

### Seal Repair Kits Order #

Viton® Seal Repair Kit (Pneumatic) SLKT-333V

## Loading Information



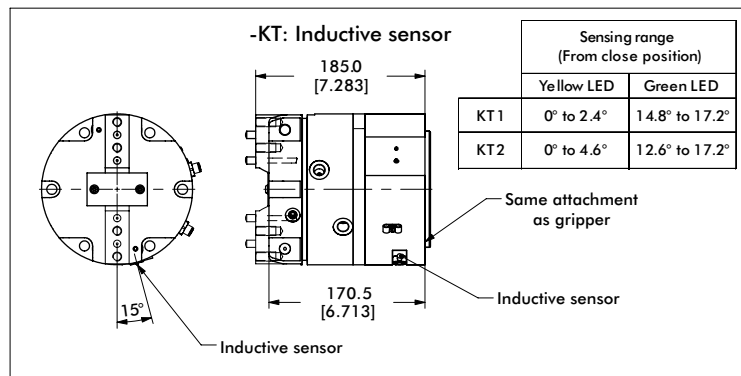
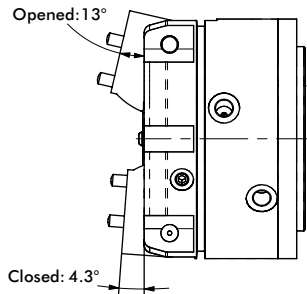
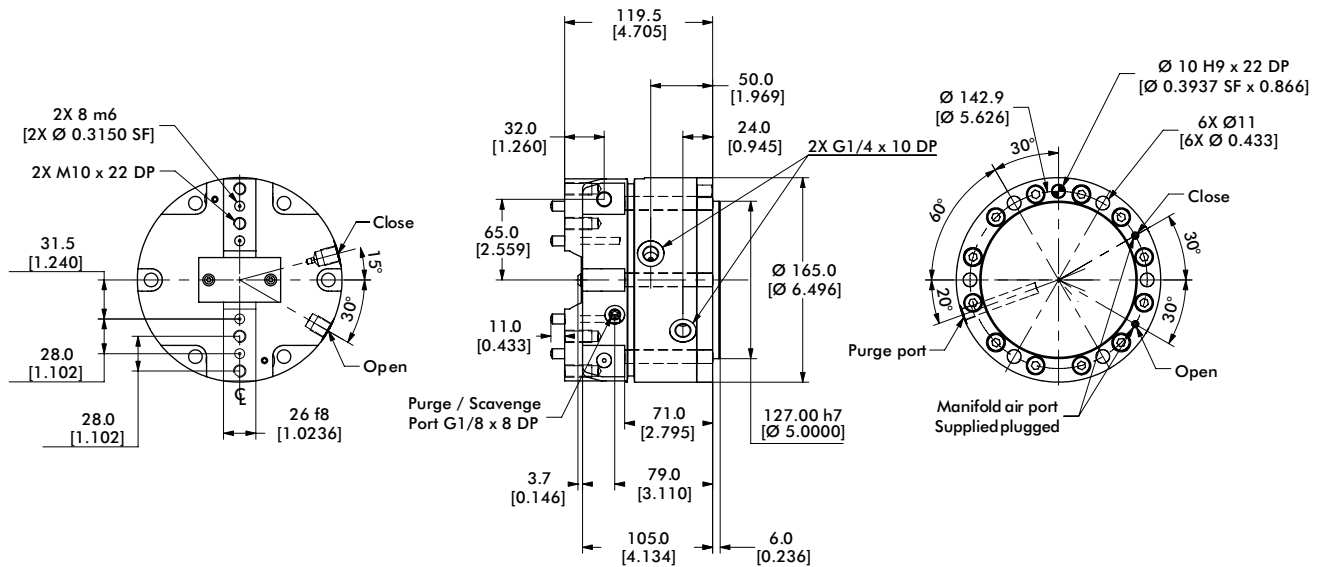
RUA-142M	Static
Maximum Tensile <b>T</b>	630 N [142 lbs]
Maximum Compressive <b>C</b>	630 N [142 lbs]
Maximum Moment <b>M<sub>x</sub></b>	52 Nm [460 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	696 Nm [6160 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	52 Nm [460 in-lbs]

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



# RUA-162M

## Angular Grippers | Dimensions and Technical Specifications

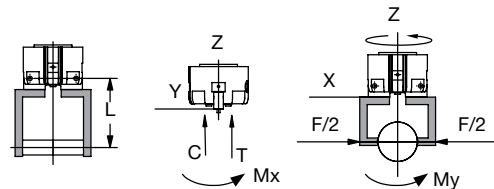
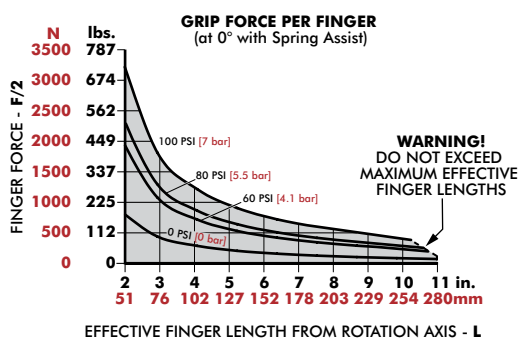


mm [INCH]  
  
 THIRD ANGLE PROJECTION

Protective Boots	Order #
PVC Sealed Boot Kit (2 interfaces, 1 collar, 1 boot)	SLKT-379

Seal Repair Kits	Order #
Viton® Seal Repair Kit (Pneumatic)	SLKT-335V

## Loading Information



RUA-162M	Static
Maximum Tensile <b>T</b>	840 N [189 lbs]
Maximum Compressive <b>C</b>	840 N [189 lbs]
Maximum Moment <b>M<sub>x</sub></b>	75 Nm [664 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	1050 Nm [9293 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	75 Nm [664 in-lbs]

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



# FUA SERIES

## Angular Food Grippers | Features and Benefits | How To Order

### Features:

- Designed for direct product contact in the food zone, according to the food industry standard (EN 1672-2)
- All parts are corrosion resistant, non-toxic, non-contaminating, non-porous, non-absorbent and non-reactive
- Stainless steel design resists chemical cleaning procedures
- Electro-polished exterior with no recessed or inaccessible zones prevents retention of contaminants and simplifies cleaning
- Sealed motion components (IP69K design) for high-pressure and high-temperature daily cleanings
- Any metal/metal contact protected by gasket to obtain a leakproof assembly against bacteria
- Angular gripper design for easier radial sealing of jaws
- Optional safety springs for external gripping, in case of air supply failure, in single acting or spring assist mode
- No external fasteners to avoid any foreign matter in food
- Contains special lubricants suitable for food industry
- Long maintenance-free service life



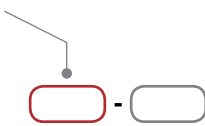
(USB key shown for scale)

### Applications:

- Food zone and splash zone handling of product
- Non-food zone applications
- Other applications requiring a sealed and corrosion resistant gripper

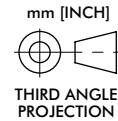
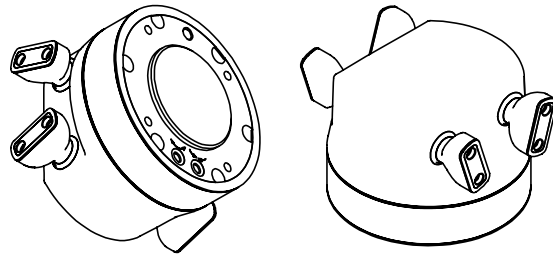
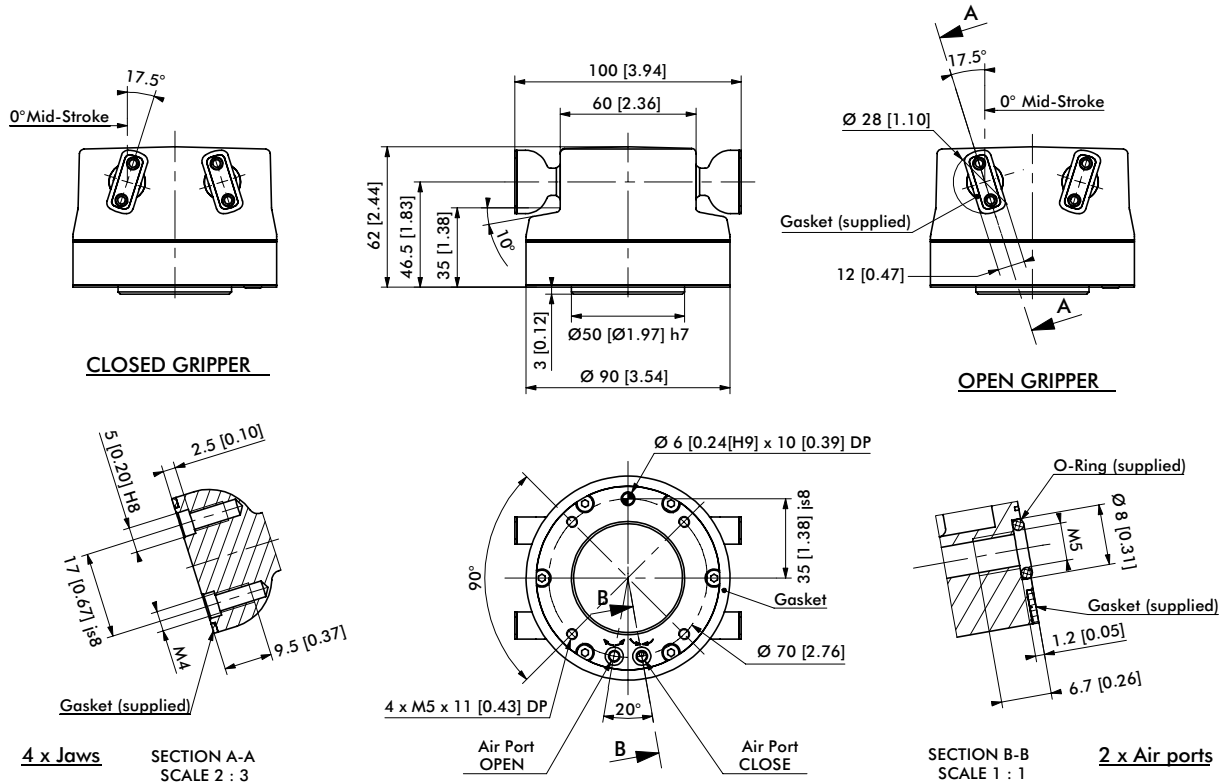
## How To Order

**Base Model**  
**FUA-63M**



<b>Spring</b>	Description
"Blank"	None
<b>C</b>	Spring Closed

## Angular Food Grippers | Dimensions and Technical Specifications



Specifications	Units	FUA-63M
Torque, Jaws @ 0° (mid-stroke)		
@ 6 bar [87 psi], w/spring	Nm [in-lbs]	32 [283]
@ 0 bar [0 psi], w/spring	Nm [in-lbs]	9 [80]
Total Stroke		70°
Weight (Stainless Steel)	kg [lbs]	1.7 [3.75]
Weight (Polymer)	kg [lbs]	0.8 [1.76]
Pressure Range without springs	bar [psi]	2-7 [30-100]
Pressure Range with springs	bar [psi]	3.5-7 [50-100]
Ingress Protection Class (IP)		IP69K
Displacement	cm <sup>3</sup> [in <sup>3</sup> ]	54 [3.30]
Temperature Range	°C [°F]	-15°~80° [5°~175°]