

# 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

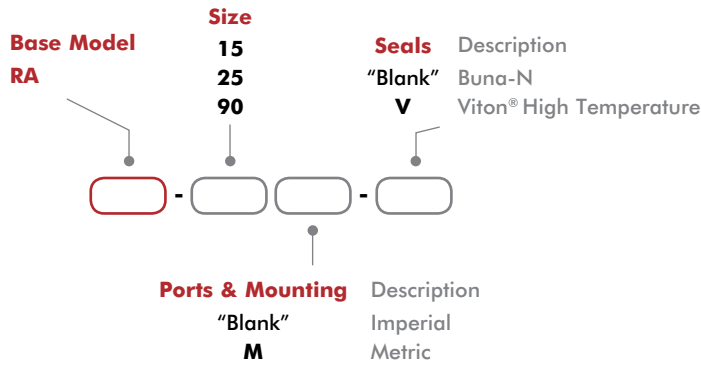
### Applications:

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



(USB key shown for scale)

## 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.

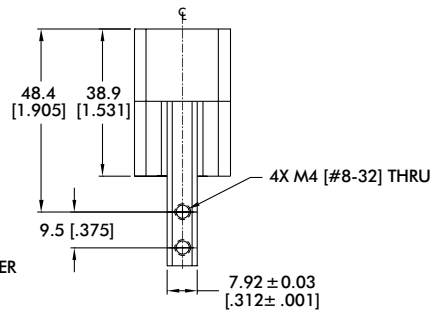
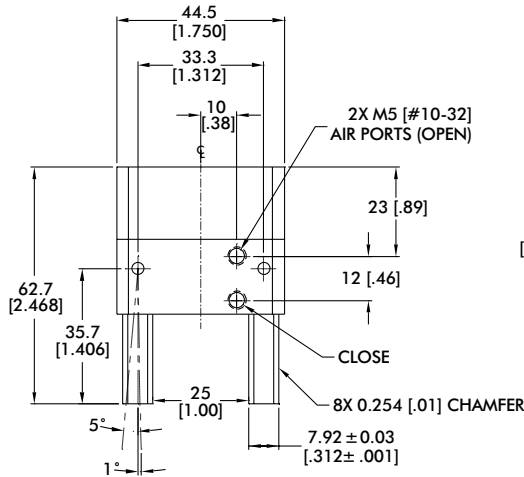
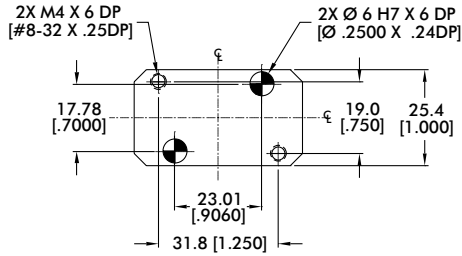
# RA (TOGGLE LOCK) SERIES

## Angular Grippers | Technical Specifications

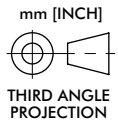
Specifications	Units	15	25	90
Total Rated Grip Force <b>F</b> @ 100 psi [7 bar]	N [lbs]	311 [70]	1112 [250]	356 [80]
Total Stroke		6° (per finger)		90° (per finger)
Stroke Adjustment		--		45° (per finger)
Weight	kg [lbs]	0.14 [0.31]	0.48 [1.06]	0.20 [0.438]
Pressure Range	bar [psi]	3-7 [40-100]		
Ingress 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

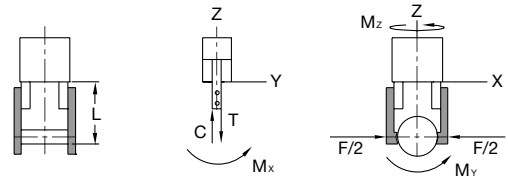
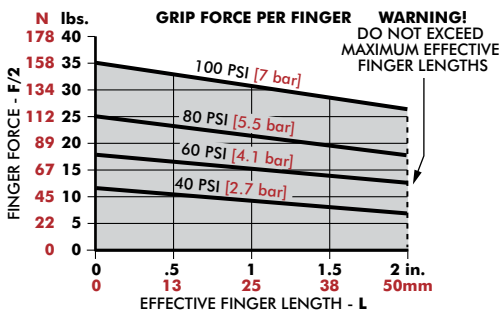


JAW SHOWN PARALLEL  
JAW WILL CLOSE 1° PAST PARALLEL



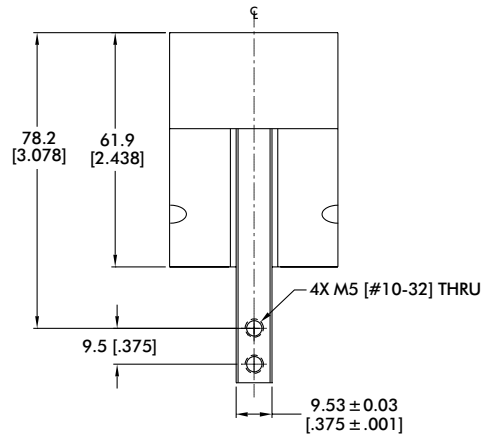
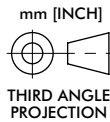
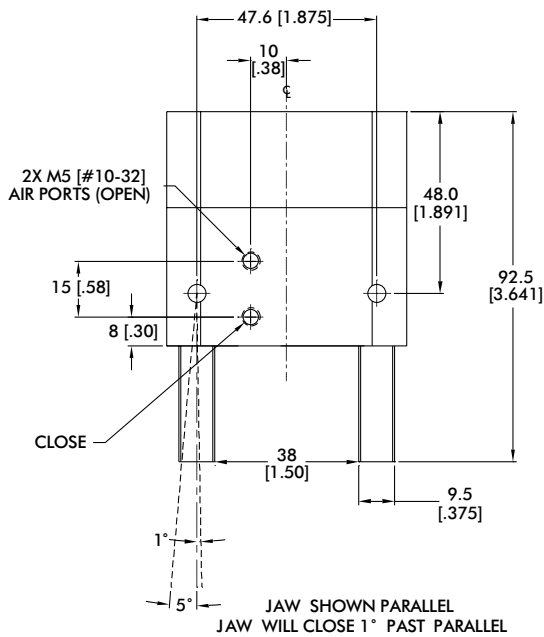
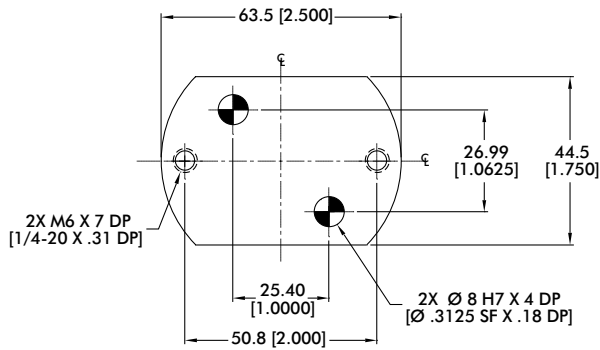
Sensor Accessories	Order #
Inductive Sensor Mounting Kit (mounts 2 sensors)	OSMK-018
Seal Repair Kits	Order #
Buna-N Seal Repair Kit	SLKT-019
Viton® Seal Repair Kit	SLKT-019V

## Loading Information



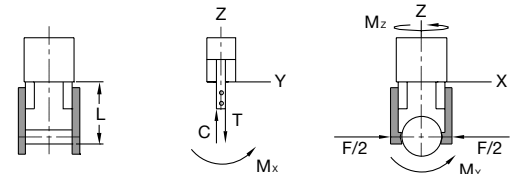
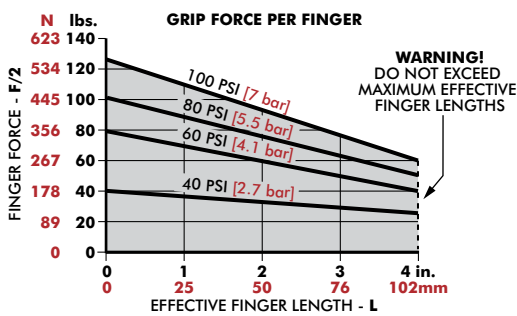
RA-15	Static
Maximum Tensile <b>T</b>	222 N [50 lbs]
Maximum Compressive <b>C</b>	222 N [50 lbs]
Maximum Moment <b>M<sub>x</sub></b>	6.8 Nm [60 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	13.6 Nm [120 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	6.8 Nm [60 in-lbs]

<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



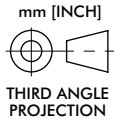
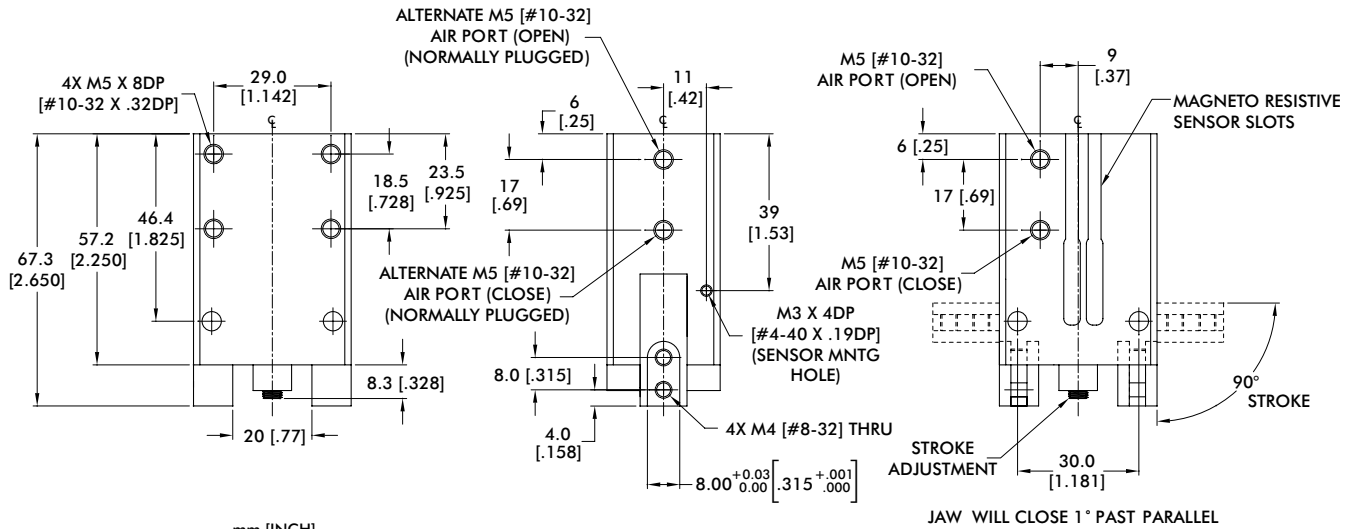
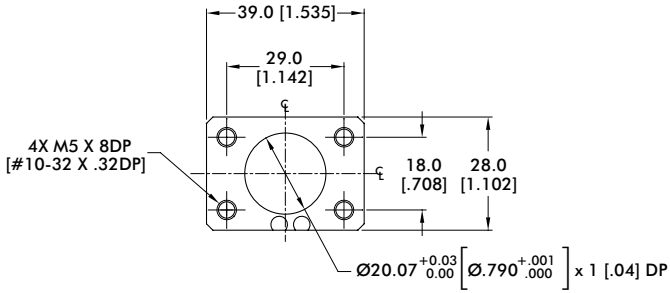
RA-25	Static
Maximum Tensile <b>T</b>	667 N [150 lbs]
Maximum Compressive <b>C</b>	667 N [150 lbs]
Maximum Moment <b>M<sub>x</sub></b>	22.6 Nm [200 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	33.9 Nm [300 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	22.6 Nm [200 in-lbs]

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

# RA-90

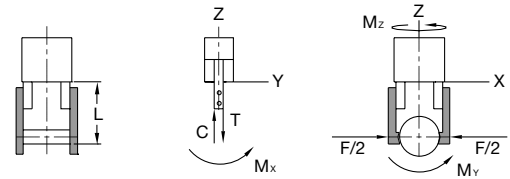
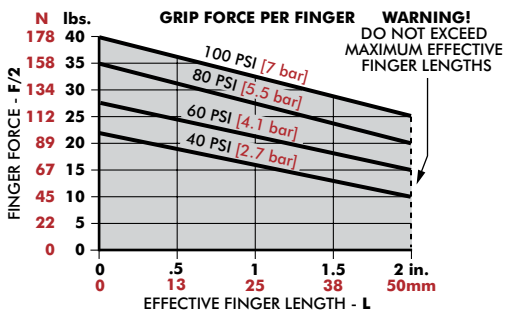
## Angular Grippers | Dimensions and Technical Specifications

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