Angular Grippers



Angular Motion Gripper Product Overview

2.2

RUA Series Angular Gripper

- 2-Jaw Angular Gripper Spring Assist
- Pneumatic or Hydraulic Operation

Preferred Market:
Global



See 2.4

NEW

Vulcan Series Hi-Temp Angular Gripper

• Air Top or Lateral Blowing Port · Optional Kelvar® Boot, metal seals, or stainless

heat shield · Optional stainless steel jaws and hardware

Preferred Market: A NA

RA Series **Cam Driven Gripper**

RA-5 & 6 DESIGN ADVANTAGES

- Inexpensive
- Adjustable stroke Rugged design

RA-10 DESIGN ADVANTAGES

- Extremely small (1in.) and lightweight (1 oz.)
- Inexpensive

Preferred Market:
Global



See **2.22** Page

DCT/CT Series

DIRECTONNIECT **180° Angular Gripper**

- 180° of travel (Optional Adjustable Stop) • Features DIRECTCONNECT mounting (sizes 12-25)
- Sealed design protects internal components
- from chips and other particulate
- · Optional Resistive or Inductive Sensors

Preferred Market:
Global



DCT-RE/CT-RE Series

DIRECTCONNECT **180° Failsafe Angular Gripper**

- 180° of travel (Optional Adjustable Stop)
- Spring Assist
- Features DIRECTCONNECT mounting (sizes 12-25) Sealed design protects internal components
- from chips and other particulate
- Optional Magneto Resistive or Inductive Sensors

Preferred Market:
 Global

FUA Series

Food Gripper

- 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

Preferred Market:
 Global



See 2.56

See **2.44**

See 2.16

Destaco-Robohand Angular Gripper Product Selector

9

	Three Jaws	12 Degrees 30 Degrees 70 Degrees 180 Degrees	1 - 10 lbs. [0.45 - 45kg] 10 - 25 lbs. [45 - 111kg] 25 - 50 lbs. [111 - 223kg] 50 - 100 lbs. [223 - 445kg] 100 - 500 lbs. [245 - 2225kg] 500 - 3000 lbs. [2225 - 13350]	0- 2 in. [0- 50.8mm] 2- 4 in. [50.8 - 102mm] 4- 6 in. [102 - 152mm] 6- 8 in. [152 - 203mm] 8- 10 in. [203 - 534mm] 10- 12 in. [205 - 305mm] 12- 14 in. [305 - 306mm] 14- 16 in. [305 - 406mm] 16- 18 in. [406 - 457mm] 18- 20 in. [508mm+] 20 in+ [508mm+]	0.05 - 0.1 sec. 0.1 - 0.5 sec. 0.5 - 0.75 sec. 0.75 - 1 sec.	5 - 100 psi [0.3 - 7 bar] 20 - 100 psi [1.5 - 7 bar] 40 - 100 psi [3 - 7 bar] 50 - 100 psi [3.5 - 7 bar] 70 - 150 psi [5 - 7 bar]	Clean Room Environment Normal Environment Harsh/Dirty Environment	Failsafe Operation	Inductive Sensors Magneto Resistive Sensors	Double Acting Cylinder Single Acting/Spring Return Double Acting/Spring Assist Non-Synchronous Option
Model #	Stroke Range	9	Total Grip Force Range	Maximum Finger Length @ 60 PSI [4 bar]	Actuation Time	Operating Pressure	Environ- ment			
CYLINDRICAL	DESIGN									
RUA-62	•	•		_		•	••	•	• •	• • •
RUA-82	•	•				•	• •	•	• •	• • •
RUA-112	•	•				•	••	•	• •	• • •
RUA-142	•	•				•	• •	•	•	• • •
RUA-162	•	•				•	• •	•	•	• • •
HI-TEMP DESI	GN								-	
VULCAN-112	•	•				•	••	•		• • •
VULCAN-142	•	•				•	••	•		• • •
VULCAN-162	•	•				•	• •	•		• • •
CAM DRIVEN I	DESIGN						_			
RA-5	•	•				•	•		•	•
RA-6	•	•			_	•	•		•	•
KA-10	•	•				•	•		•	•
180° DESIGN			_							
DG1-12		•					•••			•
DCT-10	-						•••		•••	
DCT-25										
CT-32							••		•••	•
CT-40	•	•				•	• •		• •	•
CT-50	•	•				•	• •		• •	•
180° FAILSAF	= DESIGN									
DCT-12-RE	•	•				•	• •	•		• • •
DCT-16-RE	•	•	_			•	• •	•	• •	• • •
DCT-20-RE	•	•	_		-	•	• •	•	• •	• • •
DCT-25-RE	•	•				•	• •	•	• •	• • •
CT-32-RE	•	•				•	• •	•	• •	• • •
CT-40-RE	•	•				•	• •	•	• •	• • •
CT-50-RE	•	•				•	• •	٠	• •	• • •
FOOD GRIPPER	DESIGN									
FUA-63	•	•				•	•			• •

Angular Grippers -High Power Series

rua series

• Cost effective:

The simplified drive mechanism makes these grippers an excellent value

• Compact, robust & powerful gripper:

This gripper is designed for use in confined spaces, combining large opening angle with a high torque. Optional safety springs retain the components, should the air supply fail or to increase grip force.

• Multipurpose gripper:

A wide range of options and accessories (hydraulic or pneumatic operation, safety springs for internal or external clamping, Viton® seals, and magneto resistive or inductive sensing) allow these grippers to be used in a number of applications.

• Harsh environment:

Shielded design repels chips and other particulate from internal drive mechanism

• High Temperature Design (Vulcan Series):

Designed for heavy-duty, extreme high temperature applications, the Vulcan Series Gripper can be ordered with optional metal seals and fireproof kevlar boot or stainless steel heat shield for added protection.

Mounting Information:

Grippers can be mounted & operated in any orientation

Gripper is located using pilot boss and a dowel pin and assembled with 4 through body screws.

Gripper can be operated utilizing top manifold air ports.





Fingers are located on jaws with 2 dowel pins and assembled with 1 screw.

Technical Specifications:

Specifications Pneumatic Pressure Operatir	Imperial ng Range:	Metric
Standard	30-100 psi	2-7 bar
with -RE, -RI Spring Optic	on 45-100 psi	3-7 bar
Hydraulic Pressure Operating	g Range:**	
Hydraulic	30-290 psi	2-20 bar
with -RE, -RI Spring Option	on 45-290 psi	3-20 bar
Cylinder Type	Double A	cting
	or Single Acting S or Double Acting	Spring Keturn Spring Assist
Dynamic Seals	Internally Lubri	cated Runa-N
Valve Required 4-w	av 2-nosition for	Double Acting
to Operate or 3-	way, 2-position fo	r Sinale Actina
Air Auglity Poquiromonte		
Air Filtration	40 Micro	n or Retter
Air Lubrication	Not Nece	ssarv*
Air Humidity	Low Moisture (Content (drv)
Townersture Operating B		· · · · · · · · · · · · · · · · · · ·
Viton® Socia (PUA Socias)	and and a source a	200 1500 0
Vulcan Series	-20 ~300 F	-30~150 C
	-20 ~042 1	-30 ~430 0
Maintenance Specificatio	nst	
Expected Life	E million	ovelee
w/ Proventetive Meintener	o 10. milli	Cycles on oveloo*
Field Poppirable		
Soal Ronair Kite Available	Vo	
	103	

Addition of lubrication will greatly increase service life

See Maintenance Section ** The gripper can be operated at 290psi (20 bars) MAXIMUM hydraulic pressure. Cycle times are longer and may depend on the hydraulic system. Grippers must be mounted before being operated under hydraulic pressure. Please contact factory for more information.



- The piston's translatory motion makes the cams levers rotate in a synchronous motion.
- Optional springs can be used to increase the grip force, to hold part in the event of loss of air, or to use the gripper in single acting mode.
- This gripper is suitable for internal or external gripping.

*Grip force @ 100PSI [7 bar], L=2" [50.8], with spring, jaws at 0°

Style: Stroke:

Size

-162M

384 N

0.39 Ka

1228 N

0.70 Kg

2150 N

5775 N

4.1 Kg

3983 N

1.7 Ka

5975 N

VULCAN-162M

See **2.18**

 Stroke:
 34.6°

 Grip Force:*
 2015 lbs
 8964 N

 Weight:
 14.77 lbs
 6.7 Kg

ANGULAR GRIPPER RUA-62M SPRING ASSISTED SERIES



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Ψ.	₽⊕
Dimensions are	Third Angle
symmetrical about	Projection

	$\Rightarrow \oplus$	•	¢	Imperial in.
e out	Third Angle Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]	Metric Threads Course Pitch	$\begin{array}{c} 0.00 = \pm .01 \\ 0.000 = \pm .005 \\ 0.0000 = \pm .0005 \end{array}$

symmetrical about
centerline







Metric [mm]



Specifications	RUA-6	2M	
Total Rated Grip Force L=1 in [25.4mm] @ 0°			
100 psi, 7 bar, w/spring	86 lbs.	384 N	
100 psi, 7 bar, w/o spring	70 lbs.	313 N	
Stroke	16.8° of stroke fo	r each finger	
Weight	0.86 lbs.	0.39 kg	
Pressure Range (without springs)	30-100 psi	2-7 bar	
Pressure Range (with springs)	45-100 psi	3-7 bar	
Cylinder Bore Ø	1.57 in.	40 mm	
Displacement	0.73 in ³ .	12 cm ³	
Temperature Range			
Viton [®] Seals Standard	-20°~300° F	-30~150° C	
Actuation (open/close)	0.18 sec./0).18 sec.	
Accuracy	±0.002 in.	±0.05 mm	
Repeatability	±0.0008 mm.	±0.02 mm	
Valve required to actuate single acting	3-way, 2-position		
Valve required to actuate double acting	4-way, 2-	-position	

ANGULAR GRIPPER RUA-62M SPRING ASSISTED SERIES



Loading Capacity[†] Static Maximum Tensile T 53 lbs. [236 N] 11 lbs. [47.2 N] Maximum Compressive C 53 lbs. [236 N] 11 lbs. [47.2 N] Maximum Moment Mx 111 in.-Ibs. [12.5 Nm] 27 in.-Ibs. [3.1 Nm] 31 in.-Ibs. [3.5 Nm] Maximum Moment My 305 in.-1bs. [34.5 Nm] Maximum Moment Mz 111 in.-Ibs. [12.5 Nm] 27 in.-Ibs. [3.1 Nm]

*Capacities are per set of jaws and are not simultaneous

Accessory Mounting Technical Data



ANGULAR GRIPPER RUA-82M SPRING ASSISTED SERIES





	Dimensions are symmetrical about centerline	t Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]	Metric Threads Course Pitch	Imperial in. Imperial in. 0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005 []	Metric [mm] $[0.] = [\pm .25]$ $[0.0] = [\pm .13]$ $0.00] = [\pm .013]$
How to Order: (Order Separately)						
BASIC MODEL SPRING ASSIST (See Below) RUA-82M - POWER INTEGRATED SENSO POWER P. Pneumatic H-Hydraulic H-Hydraulic POWER P. Pneumatic H-Hydraulic H-Hydraulic POWER P. Pneumatic H-Hydraulic H-Hydraulic POWER P. Pneumatic H-Hydraulic Cobar max.) SPRING RE Closed Ri Open Leave Blank. No Spring Option (standard) INDUCTIVE CASE* KT1 Sensing Range KT2 Leave Blank. No Inductive Option * Inductive Case not available with DUA model	R F C C C C C C C C C C C C C C C C C C C	ENSOR ACCES PNP Magneto Re PNP Magneto Re PNP Magneto Re PNP Magneto Re Replacement PN Quick Disconned Quick Disconned Quick Disconned EALED BOOT PVC Sealed Jaw (evlar Sealed Jaw) (includes 2 intr (includes 2 intr))	SSORIES asistive Sensor w/Qk Disco asistive Sensor w/Qk Disco asistive Sensor (90° Barrel asistive Sensor (90° Barrel P Double Inductive Sensor t 2 Meter Cable* t 5 Meter Cable* t 5 Meter Cable* t 2 Meter Cable (for KT15 KTS Boot Kit (includes 2 interf av Boot Kit (includes	onnect* ** 11 onnect* ** 11) w/Qk Disc* ** 11 \\ w/	ORDER # OHSP-017 OHSN-017 OHSN-017 OHSN-011 #1 OHSP-011 #1 OHSN-011 KT15 CABL-010 CABL-013 r)* CABL-014 boot) SLKT-370 SLKT-371 SLKT-372 HYDRAULIC SLKT-331V unet standard	QTY/UNIT 1 or 2 1 or
SAMPLE ORDER: RUA-82M-H-RE-KT2 Ex: RUA-82M Gripper, Hydraulic, Spring Closed, Sensing Range KT2	**	**Requires KT1 or K	T2 Inductive Case Option			

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UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW



Specifications	RUA-8	2M
Total Rated Grip Force L=1 in [25.4mm] @ 0°		
100 psi, 7 bar, w/spring	276 lbs	1228 N
100 psi, 7 bar, w/o spring	207 lbs.	922 N
Stroke	15.9° of stroke fo	or each finger
Weight	1.55 lbs.	0.70 kg
Pressure Range (without springs)	30-100 psi	2-7 bar
Pressure Range (with springs)	45-100 psi	3-7 bar
Cylinder Bore Ø	2.36 in.	60 mm
Displacement	2.14 in ³ .	35 cm ³
Temperature Range		
Viton [®] Seals Standard	-20°~300° F	-30~150° C
Actuation (open/close)	0.10 sec./0).10 sec.
Accuracy	±0.002 in.	±0.05 mm
Repeatability	±0.0008 mm.	±0.02 mm
Valve required to actuate single acting	3-way, 2	-position
Valve required to actuate double acting	4-way, 2	-position

ANGULAR GRIPPER RUA-82M SPRING ASSISTED SERIES





Maximum Tensile T 65 lbs. [290 N] 13 lbs. [58 N] Maximum Compressive C 13 lbs. [58 N] 65 lbs. [290 N] Maximum Moment Mx 168 in.-1bs. [19 Nm] 42 in.-Ibs. [4.8 Nm] Maximum Moment My 1071 in.-Ibs. [121 Nm] 106 in.-Ibs. [12 Nm] Maximum Moment Mz 168 in.-1bs. [19 Nm] 42 in.-1bs. [4.8 Nm] *Capacities are per set of jaws and are not simultaneous

Accessory Mounting Technical Data



ANGULAR GRIPPER RUA-112M SPRING ASSISTED SERIES

75.0 2.953 [32.0] 1.260 [95.3] Ø 3.750 [5 h7] Ø 0.1969 SF [16.0] 0.630 [21.5] 0.846 [38.4] 1.512 [8.5] - 4 x Ø 0.335 2 [G1/8 x 8 DP] [M8 x 13 DP] 0-Ð φ Close \oplus 4 5 [40.0] 1.575 ¢ \odot [22.1] 0.870 d E 6 OF 5 [110.0] Ø 4.331 1 15° 200 Æ 0 ĝ F [9.0] 0.354 Ć Q Ð φ Ó Open Purge port 6 ¢ 80 [8 H9 x 13 DP] [25.40] 1.0000 E N° Purge / Scavenge port [M5 x 6] Ø 0.3150 SF x 0.512 ¢ [76.2 h7] 40 Open [45.0] 1.772 Ø3.0000 SF Close [19 f8] 0.7480 [3.0] 0.118 [3.1] 0.122 Manifold air port [48.0] 1.890 Supplied plugged [66.0] 2.598 -KT: Inductive sensor [111.0] 4.370 Sensing range Opened: 13° (From close position) Green LED Yellow LED a 0 KT1 17.2° to 19.1° 0° to 1.9° ଚ • KT2 0° to 5.7° 13.4° to 19.1° 0 Inductive sensor 0 0 -0+ Closed: 6.2° Same attachment [102.0] 4.016 as gripper

	Dimensions are symmetrical about centerline	Third Angle Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]	- Metric Threads Course Pitch	$\begin{array}{l} \textbf{Imperial in.} \\ 0.00 = \pm .01 \\ 0.000 = \pm .005 \\ 0.0000 = \pm .0005 \end{array}$	$\begin{array}{l} \textbf{Metric [mm]} \\ [0.] = [\pm .25] \\ [0.0] = [\pm .13] \\ [0.00] = [\pm .013] \end{array}$
How to Order: (Order Separately)						
BASIC MODEL SPRING ASSIST (Gee Below) RUA-112M	SEI PN NP PN Re Qu Qu Qu	NSOR ACCES P Magneto R N Magneto R N Magneto R N Magneto R placement PN ick Disconnee ick Disconnee ick Disconnee	esistive Sensor w/Qk Disco esistive Sensor w/Qk Disco esistive Sensor (90° Barrel esistive Sensor (90° Barrel P Double Inductive Senso tt 2 Meter Cable* tt 5 Meter Cable* tt 2 Meter Cable (for KT15	onnect* ** ^{t†} onnect* ** ^{t†}) w/Qk Disc* **) w/Qk Disc* **) w/Qk Disc* ** Inductive Sens	ORDER # OHSP-017 OHSN-017 OHSN-017 OHSN-017 OHSN-017 KT15 CABL-017 CABL-017 Or)* CABL-014	QTY/UNIT 7 1 or 2 7 1 or 2 1 1 or 2 1 1 or 2 1 1 or 2 1 0 r 2 3 1 or 2 3 1 or 2 4 1 or 2
SPRING RE Closed RI Open Leave Blank. No Spring Option (standard) INDUCTIVE CASE* KT1 Sensing Range KT1 KT2 Sensing Range KT2 Leave Blank. No Inductive Option * Inductive Case not available with DUA model	SEJ PV: Ke: Firr (i SEA	ALED BOOT C Sealed Jaw vlar Sealed Ja eProof Kevlar includes 2 int AL REPAIR KIT on® Seal Repa	KITS Poot Kit (includes 2 interf aw Boot Kit (includes 2 interf Sealed Jaw Boot Kit erfaces, 1 collar, 1 boot) air Kit	aces, 1 collar, 1 erfaces, 1 collar Pneumatic SLKT-158V	boot) SLKT-37; ; 1 boot) SLKT-374 SLKT-379 HYDRAULIC SLKT-332V	3 1 4 1 5 1
	*Sen ††No ***F	isor and cable so ot compatible wit Requires KT1 or k	Id separately †Requires Mounti th Hydraulic (-H) option and requi T2 Inductive Case Option	ng Kit **Piston ma res -RE or -ORI opti	agnet standard on	

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UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

SAMPLE ORDER: RUA-112M-P-RI-KT2 Ex: RUA-112M Gripper, Pneumatic, Spring Open, Sensing Range KT2





Specifications	RUA-1	12M
Total Rated Grip Force L=1 in [25.4mm] @ 0°		
100 psi, 7 bar, w/spring	483 lbs.	2150 N
100 psi, 7 bar, w/o spring	360 lbs.	1600 N
Stroke	19.1° of stroke fo	or each finger
Weight	3.75 lbs.	1.70 kg
Pressure Range (without springs)	30-100 psi	2-7 bar
Pressure Range (with springs)	45-100 psi	3-7 bar
Cylinder Bore Ø	2.99 in.	76 mm
Displacement	5.19 in ³ .	85 cm ³
Temperature Range		
Viton [®] Seals Standard	-20°~300° F	-30~150° C
Actuation (open/close)	0.35 sec./0).35 sec.
Accuracy	±0.003 in.	±0.08 mm
Repeatability	±0.0008 mm.	±0.03 mm
Valve required to actuate single acting	3-way, 2-	-position
Valve required to actuate double acting	4-way, 2-	-position

ANGULAR GRIPPER RUA-112M SPRING ASSISTED SERIES



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Maximum Tensile T	65 lbs. [290 N]	13 lbs. [58 N]
Maximum Compressive C	65 lbs. [290 N]	13 lbs. [58 N]
Maximum Moment M x	168 in1bs. [19 Nm]	42 inIbs. [4.8 Nm]
Maximum Moment My	1071 inIbs. [121 Nm]	106 inIbs. [12 Nm]
Maximum Moment Mz	168 in1bs. [19 Nm]	42 inIbs. [4.8 Nm]
*Capacities are per set of jaws and are not	simultaneous	

Accessory Mounting Technical Data



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ANGULAR GRIPPER RUA-142M SPRING ASSISTED SERIES

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[22 f8]

Close

Open

[6 m6]

[2 x M8 x 18 DP]

26.0

1.024

24.0 0.945

24.0 0.945

2 x Ø 0.2360 SF





[27.0] 1.063

[55.0] 2.165

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Dimensions are symmetrical about centerline	Third Proje

	$\Rightarrow \oplus$	\bullet	\oplus	Imperial in.	Metric [mm]
are bout	Third Angle Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]	Metric Threads Course Pitch	$\begin{array}{c} 0.00 = \pm .01 \\ 0.000 = \pm .005 \\ 0.0000 = \pm .0005 \end{array}$	

How to Order: (Order Separately)



Ex: RUA-142M Gripper, Hydraulic, Spring Closed, Sensing Range KT1

SENSOR ACCESSORIES		ORDER #	QTY/UNIT
Replacement PNP Double Inductive Sensor* ***		KT15	1
Quick Disconnect 2 Meter Cable (for KT15 Induct	ive Sensor)*	CABL-014	1 or 2
SEALED BOOT KITS			
PVC Sealed Jaw Boot Kit (includes 2 interfaces, 1	collar, 1 boot)	SLKT-376	1
Kevlar Sealed Jaw Boot Kit (includes 2 interfaces	, 1 collar, 1 boot)	SLKT-377	1
FireProof Kevlar Sealed Jaw Boot Kit			
(includes 2 interfaces, 1 collar, 1 boot)		SLKT-378	1
SEAL REPAIR KIT PI	NEUMATIC	HYDRAULIC	
Viton® Seal Repair Kit SL	KT-333V	SLKT-334V	1

*Sensor and cable sold separately ***Requires KT1 or KT2 Inductive Case Option



Specifications	RUA-1	42M
Total Rated Grip Force L=1 in [25.4mm] @ 0°		
100 psi, 7 bar, w/spring	1298 lbs.	5775 N
100 psi, 7 bar, w/o spring	886 lbs.	3941 N
Stroke	17.6° of stroke fo	or each finger
Weight	9.05 lbs.	4.1 kg
Pressure Range (without springs)	30-100 psi	2-7 bar
Pressure Range (with springs)	60-100 psi	4-7 bar
Cylinder Bore Ø	4.13 in.	105 mm
Displacement	13.2 in ³ .	215 cm ³
Temperature Range		
Viton [®] Seals Standard	-20°~300° F	-30~150° C
Actuation (open/close)	0.60 sec./().60 sec.
Accuracy	±0.003 in.	±0.8 mm
Repeatability	±0.0008 mm.	±0.03 mm
Valve required to actuate single acting	3-way, 2-	-position
Valve required to actuate double acting	4-way. 2	-position

ANGULAR GRIPPER RUA-142M SPRING ASSISTED SERIES

GRIP FORCE PER FINGER N Ibs. (at 0° with Spring Assist) 7500 1686 6250 1405 FINGER FORCE - F/2 5000 1124 290 PSI [20 bar] WARNING! DO NOT EXCEED MAXIMUM EFFECTIVE FINGER LENGTHS 3750 843 100 PSI [7 bar] 2500 562 -80 PSI [5.5 bar] 1250 281 0 2 3 5 6 8 9 in. 25 51 76 102 127 152 178 203 228 nm EFFECTIVE FINGER LENGTH FROM ROTATION AXIS - L



Loading Capacity ⁺	Static	Dynamic			
Maximum Tensile T	142 lbs. [630 N]	28 lbs. [126 N]			
Maximum Compressive C	142 lbs. [630 N]	28 lbs. [126 N]			
Maximum Moment Mx	460 in1bs. [52 Nm]	115 inIbs. [13 Nm]			
Maximum Moment My	6160 in1bs. [696 Nm]	611 inIbs. [69 Nm]			
Maximum Moment Mz	460 in1bs. [52 Nm]	115 inIbs. [13 Nm]			
*Capacities are per set of jaws and are not simultaneous					

Accessory Mounting Technical Data



ANGULAR GRIPPER RUA-162M SPRING ASSISTED SERIES





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Dimensions are	Thi
ymmetrical about	Pro
centerline	

	$\Rightarrow \oplus$	\bullet	\oplus	Imperial in.	Metric [mm]
ıt	Third Angle Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]	Metric Threads Course Pitch	$\begin{array}{c} 0.00 = \pm .01 \\ 0.000 = \pm .005 \\ 0.0000 = \pm .0005 \end{array}$	$\begin{array}{l} [0.] = [\pm .25] \\ [0.0] = [\pm .13] \\ [0.00] = [\pm .013] \end{array}$

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SENSOR ACCESSORIES	ORDER #	QTY/UNIT
Replacement PNP Double Inductive Sensor* ***	KT15	1
Quick Disconnect 2 Meter Cable (for KT15 Inductive Sensor)*	CABL-014	1 or 2
SEALED BOOT KITS		
PVC Sealed Jaw Boot Kit (includes 2 interfaces, 1 collar, 1 boot)	SLKT-379	1
Kevlar Sealed Jaw Boot Kit (includes 2 interfaces, 1 collar, 1 boot)	SLKT-380	1
FireProof Kevlar Sealed Jaw Boot Kit		
(includes 2 interfaces, 1 collar, 1 boot)	SLKT-381	1
SEAL REPAIR KIT PNEUMATIC	HYDRAULIC	
Viton [®] Seal Repair Kit SLKT-335V	SLKT-336V	1

*Sensor and cable sold separately ***Requires KT1 or KT2 Inductive Case Option

SAMPLE ORDER: RUA-162M-H-RI-KT2 Ex: RUA-162M Gripper, Hydraulic, Spring Open, Sensing Range KT2



Specifications	RUA-10	62M
Total Rated Grip Force L=2 in [50.8mm] @ 0°		
100 psi, 7 bar, w/spring	1234 lbs.	5490 N
100 psi, 7 bar, w/o spring	853 lbs.	3790 N
Stroke	17.2° of stroke fo	r each finger
Weight	14.8 lbs.	6.7 kg
Pressure Range (without springs)	30-100 psi	2-7 bar
Pressure Range (with springs)	60-100 psi	4-7 bar
Cylinder Bore Ø	4.72 in.	120 mm
Displacement	19.7 in ³ .	322 cm ³
Temperature Range		
Viton [®] Seals Standard	-20°~300° F	-30~150° C
Actuation (open/close)	0.80 sec./0.80 sec.	
Accuracy	±0.003 in.	±0.8 mm
Repeatability	±0.0008 mm.	±0.03 mm
Valve required to actuate single acting	3-way, 2-position	
Valve required to actuate double acting	4-way, 2-	position

ANGULAR GRIPPER RUA-162M SPRING ASSISTED SERIES

GRIP FORCE PER FINGER N lbs. 7500 1686 (at 0° with Spring Assist) 6250 1405 FINGER FORCE - F/2 5000 1124 290 PSI [20 bar] WARNING! DO NOT EXCEED 3750 843 MAXIMUM EFFECTIVE FINGER LENGTHS 100 PSI [7 bar] 2500 562 -80 PSI [5.5 ba 1250 281 0 **4 5** 102 127 9 10 11 in. 2 3 76 6 7 8 152 178 203 229 51 254 280mm EFFECTIVE FINGER LENGTH FROM ROTATION AXIS - L



Loading Capacity ^{†1}	Static	Dynamic		
Maximum Tensile T	189 lbs. [840 N]	38 lbs. [168 N]		
Maximum Compressive C	189 lbs. [840 N]	38 lbs. [168 N]		
Maximum Moment M x	664 in1bs. [75 Nm]	166 inIbs. [18.8 Nm]		
Maximum Moment My	9293 in1bs. [1050 Nm]	885 inIbs. [100 Nm]		
Maximum Moment Mz	664 in1bs. [75 Nm]	166 inIbs. [18.8 Nm]		
*Canacities are ner set of jaws and are not simultaneous				

Accessory Mounting Technical Data 1.15 29.2 1.067[27.1] Plumbing Fittings • Adjustable flow controls: – Have thumb screw adjust with locking 0.49[12.4] nut for adjusting actuation time ADJUSTABLE FLOW - Available for 6mm 0D tubing CONTROL G1/4 PLUMBING FITTING • Plumbing fittings: VLVF-010 PLFT-039 For side air port location • Top airport are plugged as standard 1.339 34 Adapter plate 050 7.48[190] Boot for cover set up · Protects the gripper mechanism Provides better performance and longer life time in harsh environment 0 Θ ۲ Three materials available depending on 4.783 121.5 He application: – PVC for grinding applications (up to 176°F / 80°C) ۲ \bigcirc Kevlar for machine applications (up to 480°F / 250°C) Fireproof Kevlar for welding applications (up to 525°F / 275°C) \bigcirc Clamping · A provided spacer has to be added to the jaws Crown

ANGULAR GRIPPER VULCAN-112M HIGH TEMPERATURE SERIES



SAMPLE ORDER: VULCAN-112M-HT-RI-E5 Ex: Vulcan-112M Gripper, Dynamic Steel Ring, Spring Open, Fire-proof Kevlar Sealed Jaw Boot up to 450° C

*HT and T Options are not compatible

Fire-proof Kevlar Sealed Jaw Boot (up to 275°C)

Fire-proof Kevlar Sealed Jaw Boot (up to 450°C)

Leave Blank. No Protection Option (Standard)

Stainless Steel Heat Shield

PROTECTION

E3

E5

ET



ANGULAR GRIPPER VULCAN-142M HIGH TEMPERATURE SERIES



SAMPLE ORDER: VULCAN-142M-T-ET Ex: Vulcan-142M Gripper, Rear Output Shaft for Sensing, Stainless Steel Heat Shield

*HT and T Options are not compatible

Fire-proof Kevlar Sealed Jaw Boot (up to 275°C)

Fire-proof Kevlar Sealed Jaw Boot (up to 450°C)

Leave Blank. No Protection Option (Standard)

Stainless Steel Heat Shield

PROTECTION

E3

E5

ET

ANGULAR GRIPPER VULCAN-162M HIGH TEMPERATURE SERIES

SENSING T*

E3

E5

ET

PROTECTION

Leave Blank. No Sensing Option (Standard) Fire-proof Kevlar Sealed Jaw Boot (up to 275°C)

Stainless Steel Heat Shield

Fire-proof Kevlar Sealed Jaw Boot (up to 450°C)

Leave Blank. No Protection Option (Standard)



SAMPLE ORDER: VULCAN-162M-RE-T-E3

Ex: Vulcan-162M Gripper, Spring Closed, Rear Output Shaft for Sensing, Fireproof Kevlar Sealed Jaw Boot up to 275°

*HT and T Options are not compatible







RUA/VULCAN Series Exploded View

ltem	Qty	Name
01	1	Body
02	1	Piston
03	1	Cam Driver
04	1	Сар
06	2	Jaw
08	1	Shielded case
09	2	Pivot Pin
52	2	SS Screw, Cap
53	4	SHC Screw, Cap
56	1	Magnet
57	2	SS Screw, Body
<u>61</u>	1	SHC Screw, Piston
62	1	Nut, Piston
63	4	Pin, Jaw
64	2	Screw, Shielded case
65	1	Springs
90	1	KT Body
<u>91</u>	1	KT Body, O-Ring
92	1	KT Sensor
93	1	KT Body, Screw
94	1	Target
95	1	Target, Screw
96	2	KT Body, O-Ring
97	1	KT Body, Screw
98	1	Wire Holder
99	3	KT Body, Screw
<u>100</u>	1	Cap for KT Shaft
101	1	Shaft
102	1	KT Body, Pin

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

Assembly Procedure

- 1) Lubricate and install the seals onto the cap (x3), the piston (x2) and the body (x1).
- 2) If top airports are used, remove the plug screws from the cap (#4) and insert into side airports of the body (#1).
- 3) Assemble the piston (#2) and the cam driver (#3) with the washer and the screw.
 - RE option : Place the counterbore holes of the piston on the cam driver side.
 - RI option : Place the counterbore holes of the piston on the screw side.
- Insert the piston into the body. Orientate the piston so that the magnets are placed in front of the body slots.
 - RE option : insert the springs (#65) between the body and the piston in the counterbore holes.
- 5) Place and screw the cap onto the body. The dowel holes of the cap and of the body have to be aligned.
 - RI option : insert the springs (#65) between the cap and the piston in the counterbore holes.
- 6) Lubricate the slots and the jaws (#6) and the groove of the cam driver.
- 7) Place the jaws into the body slot and insert the pivot pin aligning with the jaw hole. The flat of the pivot pin has put in front of the rear side of the body. Screw SS screw into the body to prevent the pivot pin from moving.
 8) Attach the childred case.
- 8) Attach the shielded case.

SK Seal Repair Kit Order #'s See Product Data Sheets

SK		KRYTOX	0	G	GLUE	$\rightarrow \bigcirc$
Seal Kit	Thread	Krytox [™]	Lightweight	Teflon [®] Based	Super	Third Angle
Items	Locker	Lubricant	Machine Oil	Grease	Bonder	Projection

RUA/VULCAN Series Assembled View





90

80

83

A

81

82



item	Qty	Name
01	1	Body
02	1	Piston
03	1	Cam Driver
04	1	Сар
06	2	Jaw
08	1	Shielded case
09	2	Pivot Pin
52	2	SS Screw, Cap
53	4	SHC Screw, Cap
56	1	Magnet
57	2	SS Screw, Body
61	1	SHC Screw, Piston
62	1	Nut, Piston
63	4	Pin, Jaw
64	2	Screw, Shielded case
65	1	Springs

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

Accessory Installation & Adjustment Instructions

Installation - MR Sensors

- 1) Insert sensors (#90) for either end of the profile slots
- 2) Set the sensors with the integrated screw

Installation - Boot

- 1) Mount the gripper onto the customer mounting plate
- 2) Insert the spacer (#81) into the pins of the jaws
- 3) Insert sensor slot plugs (#82) into sensor mounting groove. Install the boot (#80) on the gripper. The jaw opening of the boot has to fit with the spacer. Insert lip of boot seal into the groove of the gripper
- 4) Use the clamping ring (#83) to fasten the boot on the gripper
- 5) Attach fingers to the jaws (ensure that boot is sealed between the jaws and the finger)

Installation - Stainless Steel Shield

- 1) Mount the gripper onto the customer mounting plate
- Insert the spacer plate (#88) using (2) fasteners (#87) to the center of the gripper
- 3) Install the stainless steel shield (#84) using the (2) fasteners (#86) on top of the stainless steel shield and the (4) fasteners (#85) on the side of the stainless steel shield
- 4) Install fingers to gripper as required



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84

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PRECISESIGN NOTESTY

(DEAD)



Angular Grippers -Cam Driven Series



• General Purpose: This style gripper is widely used in the industry and is a rugged design that supplies very high grip force for its size.

 Cost Effective: The simplified drive mechanism makes these grippers an excellent value.

Mounting Information:

Grippers can be mounted & operated in any orientation





Body mounts with screws and locates with slip fit dowel pins for accuracy Warning! Protect jaw mechanism from falling debris when mounted upside down





Fingers attach to jaws with screws and locate by keying

Technical Specifications:

Pneumatic Specifications Pressure Operating Range Cylinder Type Dynamic Seals Valve Required to Operate Imperial Metric 40-100 psi 3-7 bar Double Acting Internally Lubricated Buna-N 4-way, 2-position

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) -30°~180° F -35°~80° C Viton[®] Seals (optional) -20°~300° F -30°~150° C

Maintenance Specifications[†]

Expected Life Normal Application W/ Preventative Maintenance Field Repairable Seal Repair Kits Available *Addition of lubrication will greatly increase service life 'See Maintenance Section

5 million cycles 10+ million cycles* Yes Yes



- The cam rolls in a slot located in each of the jaws converting vertical motion of the wedge into angular synchronous motion of the jaws.
- This gripper is suitable for internal or external gripping.

Designed and manufactured in the USA

ANGULAR GRIPPER RA-5M CAM DRIVEN SERIES









Specifications RA-5 RA-5M Total Rated Grip Force **F** @ 100 psi, 7 bar20 lbs. 89 N Stroke 15° of stroke for each finger Open Stroke Adjustment 15° of stroke for each finger Weight 0.25 lbs. 0.11 Kg Pressure Range..... 40-100 psi 3-7 bar Cylinder Bore Ø813 in. 20.6 mm Displacement 0.130 in³. 2.1 cm³ Temperature Range -35°~80° C Standard Seals -30°~180° F Viton® Seals -20°~300° F -30°~150° C 0.10 sec. 0.10 sec. Actuation Accuracy..... ±0.005 in. ±0.13 mm Repeatability..... ±0.003 in. ±0.08 mm Valve required to actuate 4-way, 2-position





Loading Information



How to Order: (Order Separately)

IU	
EALS	
ORDER #	QTY/UNIT
OHSN-017	1 or 2
OHSP-017	1 or 2
OHSN-011	1 or 2
OHSP-011	1 or 2
CABL-010	1 or 2
CABL-013	1 or 2
AEGV_001	1
0F3V-001	
CI KT_022	1
SLK1-022	- i
JLKI-UZZV	- 1
FE VALVE	
¢ .63 [1	6]
	ORDER # OHSN-017 OHSP-017 OHSP-017 OHSN-011 OHSP-011 CABL-010 CABL-010 CABL-010 CABL-013 OFSV-001 OFSV-004 SLKT-022 SLKT-022V FE VALVE FE VALVE G (1)











Loading Information

Maximum Moment Mz

*Capacities are per set of jaws and are not simultaneous



20 in.-lbs.

2.3 Nm

20 in.-lbs.

2.3 Nm

ANGULAR GRIPPER RA-6M CAM DRIVEN SERIES

Specifications	RA-6	RA-6M
Total Rated Grip Force F @ 100 psi, 7 bar4	14 lbs.	196 N
Stroke	15° of stroke for	r each finger
Open Stroke Adjustment	15° of stroke for	r each finger
Weight	0.69 lbs.	0.31 Kg
Pressure Range	40-100 psi	3-7 bar
Cylinder Bore Ø	1.250 in.	31.8 mm
Displacement	0.300 in ³ .	4.9 cm ³
Temperature Range		
Standard Seals	-30°~180° F	-35°~80° C
Viton [®] Seals	-20°~300° F	-30°~150° C
Actuation	0.11 sec.	0.11 sec.
Accuracy	±0.005 in.	±0.13 mm
Repeatability	±0.003 in.	±0.08 mm
Valve required to actuate	4-way, 2-p	osition





How to Order: (Order Separately)

BASIC MODEL MET	RIC	
RA-6	Į	
VITON® S	EALS	
SENSOR ACCESSORIES	ORDER #	QTY/UNIT
4mm NPN Magneto Resistive Sensor*	OHSN-017	1 or 2
4mm PNP Magneto Resistive Sensor*	OHSP-017	1 or 2
4mm NPN 90° Magneto Resistive Sensor*	OHSN-011	1 or 2
4mm PNP 90° Magneto Resistive Sensor*	OHSP-011	1 or 2
Quick Disconnect 2 Meter Cable Length*	CABL-010	1 or 2
Quick Disconnect 5 Meter Cable Length*	CABL-013	1 or 2
PNEUMATIC ACCESSORIES		
Fail Safe Valve (Imperial)	OFSV-001	1
Fail Safe Valve (Metric)	OFSV-004	1
Standard Seal Repair Kit	SLKT-023	1
Viton [®] Seal Repair Kit	SLKT-023V	1
*Sensor and cable sold separately.		
HALL EFFECT SENSOR FAI	LSAFE VALVE	.63 [16]

2.25







31

RA-5 & 6 Series Assembled View





Item Qty Name

01	1	Body
02	2	Jaw
03	1	Wedge
04	1	Piston
05	1	Сар
06	1	Plate, Adjustment
30	1	SSS, Nylon Patch, Cup Point
31	2	Dowel Pin
40	2	Magnet

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

Accessory Installation & Adjustment Instructions



Installation

1) Install sensors in profile slots as shown.

2) Set with integrated set screw.



ANGULAR GRIPPER RA-10M CAM DRIVEN SERIES





Specifications	RA-10	RA-10M
Total Rated Grip Force F @ 100 psi, 7 bar1	6 lbs.	71 N
Stroke	15° of stroke for	r each finger
Weight	0.063 lbs.	0.03 Kg
Pressure Range	40-100 psi	3-7 bar
Cylinder Bore Ø	.813 in.	20.6 mm
Displacement	0.026 in ³ .	.4 cm ³
Temperature Range		
Standard Seals	-30°~180° F	-35°~80° C
Viton [®] Seals	-20°~300° F	-30°~150° C
Actuation Time	0.08 sec.	0.08 sec.
Accuracy	±0.003 in.	±0.08 mm
Repeatability	±0.001 in.	±0.03 mm
Valve required to actuate	4-way, 2-p	osition



How to Order: (Order Separately)

— UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW —

Ç	\Rightarrow	\bullet	\oplus	Imperial in.	Metric [mm]
Dimensions are symmetrical about centerline	Third Angle Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]	Metric Threads Course Pitch	$\begin{array}{l} 0.00 = \pm .01 \\ 0.000 = \pm .005 \\ 0.0000 = \pm .0005 \end{array}$	

Loading Information



BASIC MODEL METRIC RA-10 O VITON® SEALS Order # QTY/UNIT Standard Seal Repair Kit SLKT-018 1 Viton® Seal Repair Kit SLKT-018V 1



ew

RA-10 Series Exploded Vi

na-	IU J	DCI IC	55 EXPIDUCU
	ltem	Qty	Name

01		Body
02	1	Сар
03	2	Jaw
04	1	Piston
05	1	Shaft
06	1	Pin
31	2	Dowel Pin

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





Δ GLUE SK $\Rightarrow \odot$ 0 KRYTOX G Seal Kit Items Thread Locker Krytox[™] Lubricant Lightweight Machine Oil Teflon® Based Grease Super Bonder Third Angle Projection

RA-10 Series Assembled View



NI.	
 1111	Name

01	1	Body
02	1	Сар
03	2	Jaw
04	1	Piston
05	1	Shaft
06	1	Pin
31	2	Dowel Pin

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



PRECISESIGN NOTESTY



Angular Grippers -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.
- 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. * Inductive sensors not available on CT-12

Technical Specifications:

Pneumatic Specifications	Imperial	Metric
Pressure Operating Range	40-100 psi	3-7 bar
Cylinder Type	Double Ac	sting
Dynamic Seals	Internally Lubrica	ited Buna-N
/alve Required to Operate	4-way, 2-p	osition
/alve Required to Operate	4-way, 2-p	osition

Air Quality Requirements

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Air Filtration	40 Micron or Better
Air Lubrication	Not Necessary*
Air Humidity	Low Moisture Content (dry)
	,

Temperature Operating Range -30°~180° F Buna-N Seals (Standard) -35°~80° C Viton[®] Seals (Optional) -20°~300° F -30°~150° C

Maintenance Specifications

xpected Life	
Normal Application	5 million cycles
w/ Preventative Maintenance	10+ million cycles*
ield Repairable	Yes
Seal Repair Kits Available	Yes
Addition of lubrication will greatly increase service life	1

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.

Gripper can be operated utilizing top manifold air ports.

2.32

The gripper

is protected from falling

debris when it is mounted and operated upside down.



 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)

rotating opposite synchronous motion of both jaws.

Style-DCT A	ngular	Gripper
Size -12M	Style: Stroke: Grip Force: Weight:	DCT-12M 90° each finger 7.2 lbs 32 N 0.20 lbs 0.09 Kg
		See 2.34
Style-DCT A	ngular	Gripper
Size -16M	Style: Stroke: Grip Force: Weight:	DCT-16M 90° each finger 16 lbs 70 N 0.35 lbs 0.16 Kg
		See 2.35 Page
Style-DCT A	ngular	Gripper
Size -20M	Style: Stroke: Grip Force: Weight:	DCT-20M 90° each finger 25 lbs 112 N 0.62 lbs 0.28 Kg
	J	See 2.36
Style-DCT A	ngular	Gripper
Size -25M	Style: Stroke: Grip Force: Weight:	DCT-25M 90° each finger 35 lbs 157 N 1.08 lbs 0.49 Kg
		See 2.37 Page
Style-CT An	igular (aripper
Size -32M	Style: Stroke: Grip Force: Weight:	CT-32M 90° each finger 61 lbs 272 N 1.59 lbs 0.72 Kg
		See 2.38 Page
Style-CT An	gular (aripper
Size -40M	Style: Stroke: Grip Force: Weight:	CT-40M 90° each finger 100 lbs 446 N 2.60 lbs 1.18 Kg
		See 2.39 Page
Style-CT An	gular (ripper
Size -50M	Style: Stroke: Grip Force: Weight:	CT-50M 90° each finger 146 lbs 651 m 4.00 lbs 1.82 Kg
		See 2.40

DCT/CT SERIES

2.33

ANGULAR GRIPPER DCT-12M **180° SERIES**

Maximum Compressive C

Maximum Moment Mx

Maximum Moment My

Maximum Moment Mx

*Capacities are per set of jaws and are not simultaneous

11 lbs.

10 in.-Ibs.

10 in.-Ibs.

10 in.-lbs.

47 N

1.1 Nm

1.1 Nm

1.1 Nm

2 lbs.

3 in.-Ibs.

3 in.-lbs.

3 in.-lbs.

9.4 N

0.3 Nm

0.3 Nm

0.3 Nm







0.59 [15]

ADJUSTABLE

STOP KIT (BR



ANGULAR GRIPPER DCT-16M 180° SERIES



SERIES

50

2.35

ANGULAR GRIPPER DCT-20M **180° SERIES**

SERIES

ba







Maximum Moment Mz

*Capacities are per set of jaws and are not simultaneous

89 in.-Ibs.

10 Nm

22 in.-Ibs.

2.5 Nm

ANGULAR GRIPPER DCT-25M 180° SERIES



DIRECTCONNEC

SERIES

50

2.37

ANGULAR GRIPPER CT-32M 180° SERIES









0.39 [10]

Please see back cover for DE-STA-CO Global Locations. www.destaco.com

2.38



ANGULAR GRIPPER CT-40M 180° SERIES



*Capacities are per set of jaws and are not simultaneous

Series Ξ 2.39

ANGULAR GRIPPER CT-50M 180° SERIES

Maximum Moment My

Maximum Moment Mz

*Capacities are per set of jaws and are not simultaneous

266 in.- lbs.

266 in.- lbs.

30 Nm

30 Nm

66 in.-lbs.

66 in.-Ibs.

7.5 Nm

7.5 Nm





CT SERIES

2.40

Please see back cover for DE-STA-CO Global Locations. www.destaco.com

2.38 [60.5]-0.87 [22] 0.7

Sensors Ø 0.47 [12

0.30

0.83 [2





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

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

Assembly Procedure

- 1) Lubricate and install the seals into cap (x1), piston (x2) and body (x1)
- 2) If top air ports are used, clear them and plug the side air ports on the body (#1)
- 3) Lubricate the sloping rack of jaws (#4)
- 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.
- 5) Lock drive pins in the driver with screws, tightening down on to the flat surface of the pins.
- 6) Position driver and jaws assembly into body.
- 7) 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.
- 8) 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)
- 9) 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.
- 10) Piston mounting:
 - DCT-12 to DCT-20: insert 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 piston with magnet into body. Fix the assembly at the end of the drivers with screw.
- 11) Check unit operation unladen.
- 12) Install the cap (#6) into body and lock it by means of its retaining ring.
- 13) Place both wiper covers (#8) into body and lock them with their screws.
- 14) Fix the shielded plate (#7) onto body with both screws.

Seal Repair Kit Order #'s SK See Product Data Sheets



DCT/CT Series Assembled View



Item Qty Name

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

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

Accessory Installation & Adjustment Instructions



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-32
 - DCT-16M to DCT-32M: fix holder (#3) and spacer (#5) onto body with both screws (#6)
 DCT-40M to DCT-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.



TY PRECISDESIGN NOTESTY

DESTACO

				5																					TV
																				P				C	DCT/CT SERIES Maintenance
																									2.43
			C	5																					TY
				B																P		G		5	ON
					Y		P				C		5						D	U			8		TY
				B		n																			TY
	_																								UN
													5						D						TY
			B																						TY
		R	A	B																P		G		S	ON
							PI	ease s	see ba	ack co	ver fo	r DE-S	STA-CO) Glob	al Loc	ations	s. ww	w.des	taco.c	om	2		R		TV

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 looses 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.

Gripper can be operated utilizing top manifold air ports.

Technical Specifications:

Pneumatic Specifications Pressure Operating Range Cylinder Type	Imperial 60-100 psi Double Act	Metric 4-7 bar ting Spring
Dynamic Seals	Assist or Si Spring Internally Lubri	ngle Acting Return icated Buna-N
Valve Required to Operate	4-way, 2	-position
Air Quality Requirements Air Filtration Air Lubrication Air Humidity	40 Micro Not Neca Low Moisture	n or Better essary* Content (dry)
Temperature Operating Ra Buna-N Seals (Standard) Viton® Seals (Optional)	nge -30°~180° F -20°~300° F	-35°~80° C -30°~150° C
Maintenance Specification	-20 ~300 T	-30 ~130 0
Normal Application w/ Preventative Maintenand Field Repairable	5 million ce 10+ milli Ye	i cycles ion cycles* s
Seal Renair Kits Available	Ye	s

*Addition of lubrication will greatly increase service life *See Maintenance Section

DCT-RE/CT-RE Series

2.44





- 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.

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E/CT-RE RIES

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





DCT-RE SERIES



ANGULAR GRIPPER DCT-16M-RE 180° SERIES

DCT-RE SERIES

2.47



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

DCT-RE SERIES







ANGULAR GRIPPER DCT-25M-RE 180° SERIES

DCT-RE SERIES

2.49



ANGULAR GRIPPER CT-32M-RE 180° SERIES

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Sensors 0 0.31 [8]



ANGULAR GRIPPER CT-40M-RE 180° SERIES



ANGULAR GRIPPER CT-50M-RE 180° SERIES









item	Qty	Name
01	1	Body
02	1	Driver
03	1	Piston
04	2	Jaw
05	1	Washer
06	1	Сар
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

- 1) Lubricate and install the seals into cap (x1), piston (x2) and body (x1)
- 2) If top air ports are used, clear them and plug the side air ports on the body (#1)
- 3) Lubricate the sloping rack of jaws (#4)
- 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.
- 5) Lock drive pins in the driver with screws, tightening down on to the flat surface of the pins.
- 6) Position driver and jaws assembly into body.
- 7) 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.
- 8) 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)
- 9) 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.
- 10) 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.
- 11) Check unit operation unladen.
- 12) Install the cap (#6) into body and lock it by means of its retaining ring.
- 13) Place both wiper covers (#8) into body and lock them with their screws.
- 14) Fix the shielded plate (#7) onto body with both screws.

SK Seal Repair Kit Order #'s See Product Data Sheets



- 2.53





Item Qty Name

01	1	Body
02	1	Driver
03	1	Piston
04	2	Jaw
05	1	Washer
06	1	Сар
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



Installation - Adjustment Stop

(5

- 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.



PRECIDESIGN NOTESTY

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Angular Grippers -Food Handling Gripper Series

FEATURES & BENEFITS:

- 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
- Optional body made of High Performance Polymer, conform to FDA, for a significantly lighter weight
- 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 security 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

APPLICATIONS:

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

Shown with Optional Finger Attachment Kit

ANGULAR GRIPPER FUA-63M FOOD GRIPPER SERIES



SAMPLE ORDER: FUA-63M-LI-C Ex: FUA-63M Food Gripper, Polymer Body, Spring Closed



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