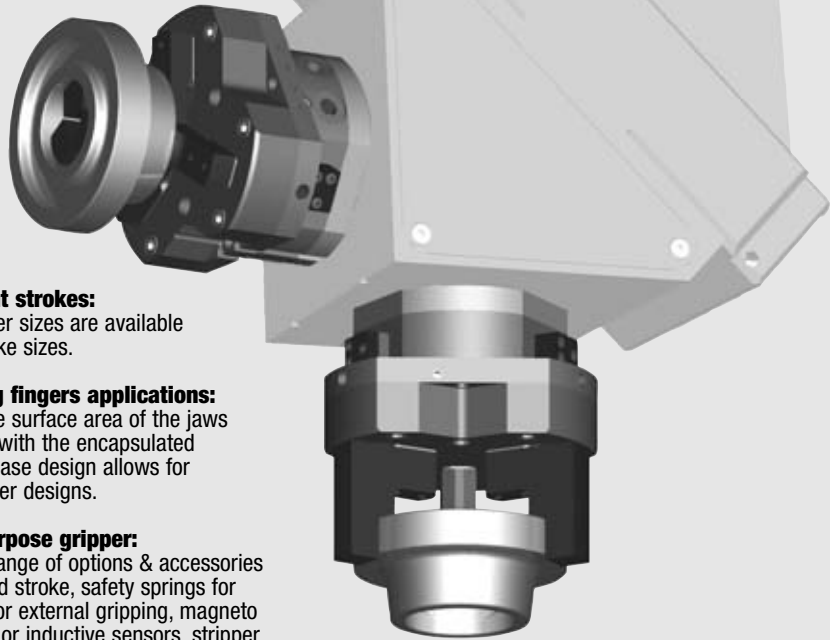


Parallel Grippers - 3-Jaw Centering Series



- Machining applications:**

The 3 concentric jaws and excellent repeatability make it easier to accurately load and unload round parts.

- Harsh environments:**

Shielded design repels chips and other particulate from internal drive mechanism. Viton® seals are standard.

- Compact, robust and powerful gripper**

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

- Different strokes:**

All gripper sizes are available in 2 stroke sizes.

- For long fingers applications:**

The large surface area of the jaws coupled with the encapsulated bottom case design allows for long finger designs.

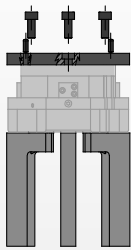
- Multipurpose gripper:**

A wide range of options & accessories (extended stroke, safety springs for internal or external gripping, magneto resistive or inductive sensors, stripper plate) allow these grippers to be used in a wide number of applications.

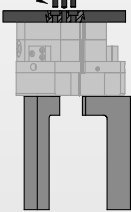
Mounting Information:

Grippers can be mounted & operated in any orientation

Gripper is located using two dowel pins and assembled from the top with 3 screws.

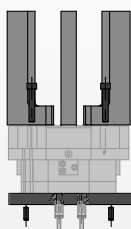


-DTH DIRECTCONNECT MOUNTING



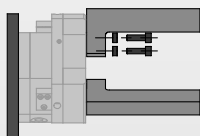
Body mounts with 4 screws and locates with 2 slip fit dowel pins for accuracy

The gripper can also be assembled from the bottom with 3 through body screws.



Gripper is protected from debris when operated upside down.

Gripper can be operated utilizing top manifold air ports.



Fingers are located on jaws with 2 dowel sleeves (provided) and assembled with 2 screws.

Technical Specifications:

Pneumatic Specifications

Pressure Operating Range without Springs
Cylinder Type

Imperial

30-100 psi

Double Acting
or Double Acting Spring Assist
or Single Acting Spring Return
Internally Lubricated Viton®

Metric

2-7 bar

Dynamic Seals

Valve Required to Operate:

Double Acting
Single Acting (-C or -O Option)

4-way, 2-position
3-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)
Viton® Seals (Optional)

-30°~180° F -35°~80° C
-20°~300° F -30°~150° C

Maintenance Specifications†

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

5 million cycles
10+ million cycles*
Yes
Yes

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

Product Features

Viton® Seals (-V) Option

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

Standard and Extended Stroke (-L)

Each model of gripper is available in two stroke lengths

Finger Locating Sleeves

For precise finger mounting (standard)

Jaw Components

Hardened and precision ground steel for minimum jaw play with hard plating for wear resistance and long life

Multiple Air Ports

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

Optional Spring Assist

Optional spring assist retains the component should the air supply fail, to assist the gripper for internal (-D) or external (-C) gripping, or in single acting or spring assist mode

DIRECTCONNECT™ Mounting Patterns

DIRECTCONNECT™ tapped & dowel mounting surface available on DTH version [except -6M, 7M, 8M]

Multiple Mounting Locations

Gripper can be mounted from the top or bottom

Shielded Design

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

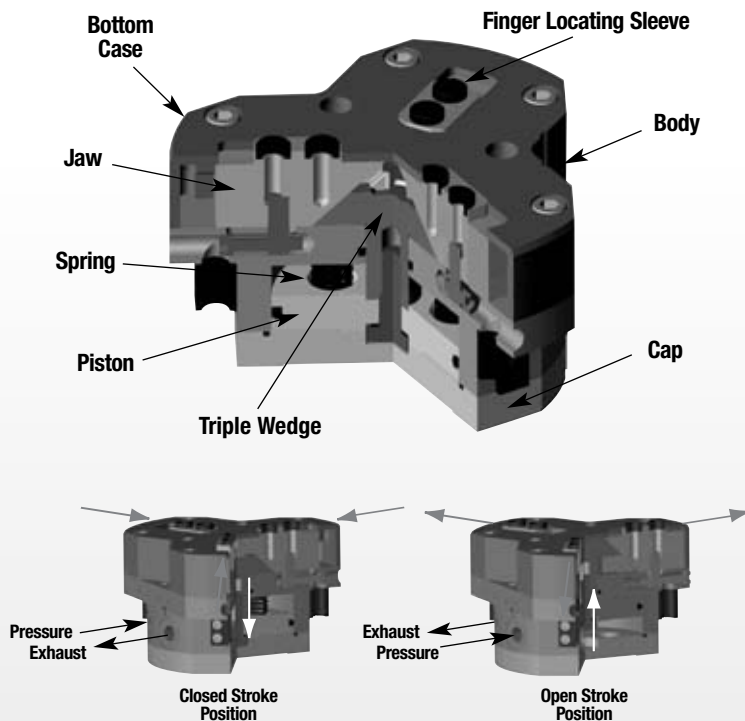
Multiple Sensing Capabilities

Up to 3 magneto resistive sensors (magnets built-in) or inductive sensors available [except -1M, -2M, -3M]

Standard Purge/Scavenge Port

Used with a vacuum for clean room environments or positive pressure for harsh environments

Operating Principle



- A double acting piston is connected to a triple sided wedge.
- The triple wedge slides in a slot in each of the jaws converting the vertical motion of the wedge into a horizontal motion of the jaws.
- Each jaw moves within the slots. The design of the bottom case increases the rigidity and permits longer fingers. The large surface area of the guiding system permits higher moment loads.
- This gripper is suitable for internal or external gripping using single or double acting mode.

Style -RTH/DTH Parallel Gripper

Size -1M

	RTH/DTH-1M	RTH/DTH-1M-L
Total Stroke:	0.16 in. 4 mm	0.32 in. 8 mm
Grip Force:	200 lbs 889 N	130 lbs 579 N
Weight:	0.6 lbs 0.25 Kg	0.6 lbs 0.25 Kg



See Page **1.232**

Style -RTH/DTH Parallel Gripper

Size -2M

	RTH/DTH-2M	RTH/DTH-2M-L
Total Stroke:	0.24 in. 6 mm	0.47 in. 12 mm
Grip Force:	335 lbs 1490 N	220 lbs 979 N
Weight:	1.2 lbs 0.53 Kg	1.2 lbs 0.53 Kg



See Page **1.234**

Style -RTH/DTH Parallel Gripper

Size -3M

	RTH/DTH-3M	RTH/DTH-3M-L
Total Stroke:	0.31 in. 8 mm	0.63 in. 16 mm
Grip Force:	591 lbs 2627 N	384 lbs 1708 N
Weight:	2.4 lbs 1.08 Kg	2.4 lbs 1.08 Kg



See Page **1.236**

Style -RTH/DTH Parallel Gripper

Size -4M

	RTH/DTH-4M	RTH/DTH-4M-L
Total Stroke:	0.39 in. 10 mm	0.79 in. 20 mm
Grip Force:	1026 lbs 4562 N	667 lbs 667 N
Weight:	4.3 lbs 1.95 Kg	4.3 lbs 1.95 Kg



See Page **1.238**

Style -RTH/DTH Parallel Gripper

Size -5M

	RTH/DTH-5M	RTH/DTH-5M-L
Total Stroke:	0.51 in. 13 mm	1.02 in. 26 mm
Grip Force:	1771 lbs 7877 N	1152 lbs 5124 N
Weight:	8.6 lbs 3.9 Kg	8.6 lbs 3.9 Kg



See Page **1.240**

Style -RTH Parallel Gripper

Size -6M

	RTH-6M	RTH-6M-L
Total Stroke:	0.63 in. 16 mm	1.26 in. 32 mm
Grip Force:	3099 lbs 13786 N	2017 lbs 8971 N
Weight:	17.4 lbs 7.9 Kg	17.4 lbs 7.9 Kg



See Page **1.242**

Style -RTH Parallel Gripper

Size -7M

	RTH-7M	RTH-M-L
Total Stroke:	0.98 in. 25 mm	1.97 in. 50 mm
Grip Force:	4967 lbs 22093 N	3222 lbs 14322 N
Weight:	34.6 lbs 15.7 Kg	34.6 lbs 15.7 Kg



See Page **1.244**

Style -RTH Parallel Gripper

Size -8M

	RTH-8M	RTH-8M-L
Total Stroke:	1.38 in. 35 mm	2.76 in. 70 mm
Grip Force:	9971 lbs 44354 N	6450 lbs 28690 N
Weight:	96.8 lbs 43.9 Kg	96.8 lbs 43.9 Kg

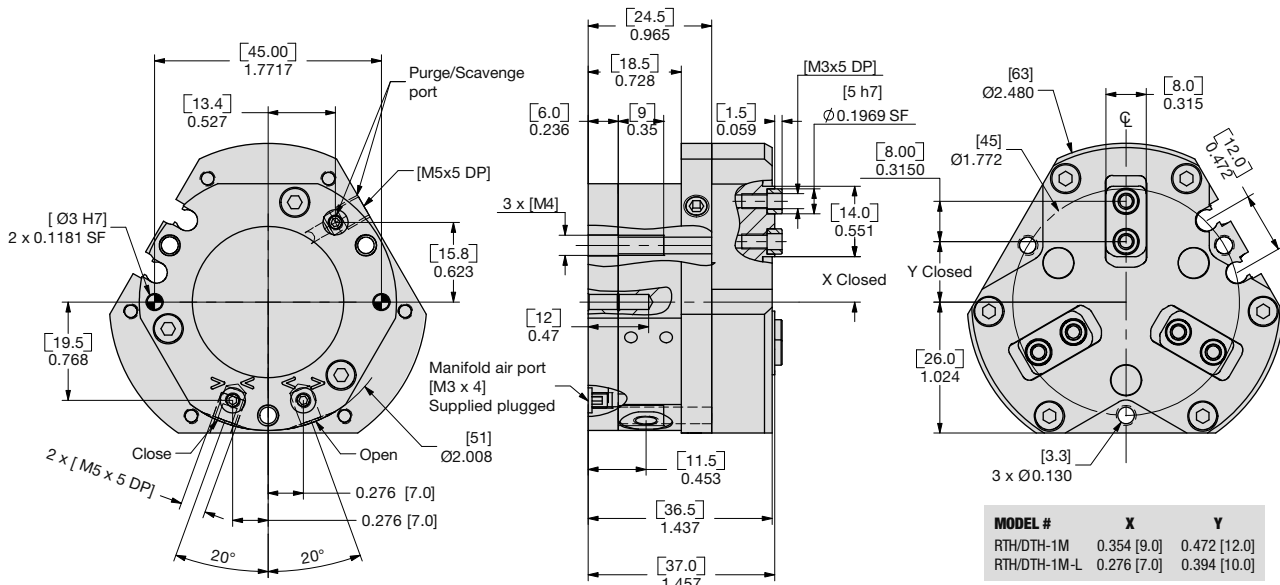


See Page **1.246**

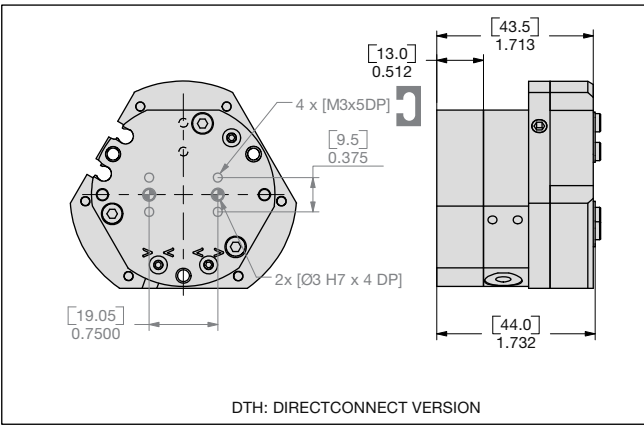
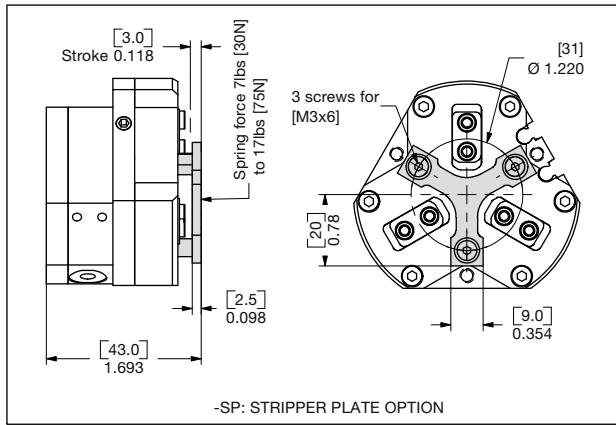
PARALLEL GRIPPER RTH/DTH-1M 3-JAW CENTERING SERIES

RTH/DTH SERIES

1.232



MODEL #	X	Y
RTH/DTH-1M	0.354 [9.0]	0.472 [12.0]
RTH/DTH-1M-L	0.276 [7.0]	0.394 [10.0]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

				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	0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	[0.] = [±.25] [0.0] = [±.13] [0.00] = [±.013]

NOTE: DIRECTCONNECT™ DIMENSIONS ARE SHOWN IN BLUE

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

BASIC MODEL **SIZE** **METRIC** **SPRING ASSIST**



EXTENDED STROKE **STRIPPER PLATE**

BASIC MODEL **RTH** Without DIRECTCONNECT Mounting Pattern
DTH With DIRECTCONNECT Mounting Pattern

SIZE **1**

METRIC **M**

EXTENDED STROKE **L** 0.16" [4mm] Leave Blank (standard)
L 0.32" [8mm]

SPRING **C** Spring Closed
O Spring Open
— Leave Blank. No Spring Option (standard)

STRIPPER PLATE **SP**

VITON® SEALS **V** High Temperature Viton® Seals

SAMPLE ORDER: DTH-1M-L-C-SP-V

Ex: DTH-1M DIRECTCONNECT Gripper, Metric, 8mm Extended Stroke, Spring Closed, Stripper Plate, Viton® Seals

SENSOR ACCESSORIES*

PNP Magneto Resistive Sensor Short Barrel w/Qk Disc*	OHSP-017	1 or 2
NPN Magneto Resistive Sensor Short Barrel w/Qk Disc*	OHSN-017	1 or 2
PNP Magneto Resistive Sensor (90° barrel) w/Qk. Disc*	OHSP-011	1 or 2
NPN Magneto Resistive Sensor (90° barrel) w/Qk. Disc*	OHSN-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

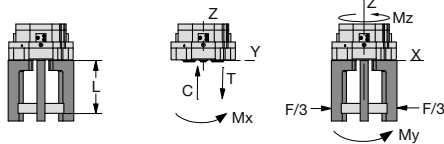
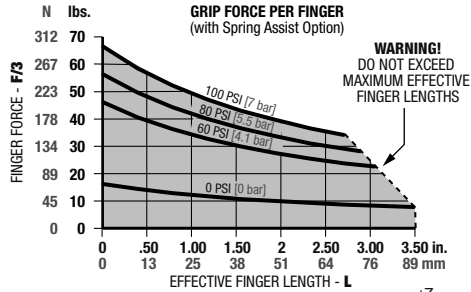
Buna-N Seal Repair Kit	SLKT-347	1
Buna-N Rear Inlet Seal Repair Kit	SLKT-363	1
Viton® Seal Repair Kit	SLKT-347V	1
Viton® Rear Inlet Seal Repair Kit	SLKT-363V	1
M5 Adjustable Flow Control	VLVF-008	1 or 2

*Sensor and cable sold separately.

DIRECTCONNECT™



RTH/DTH-1M Loading Information

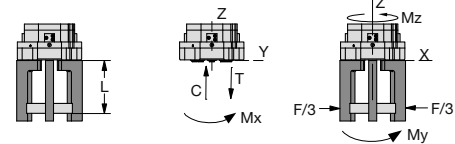
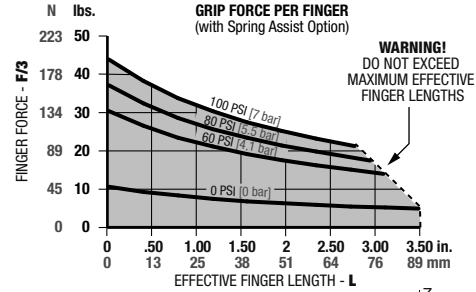


Loading Capacity†

	Static	Dynamic
Maximum Tensile T	182 lbs. [810 N]	20 lbs. [89 N]
Maximum Compressive C	238 lbs. [1060 N]	20 lbs. [89 N]
Maximum Moment M_x	195 in.-lbs. [22 Nm]	18 in.-lbs. [2 Nm]
Maximum Moment M_y	248 in.-lbs. [28 Nm]	27 in.-lbs. [3 Nm]
Maximum Moment M_z	159 in.-lbs. [18 Nm]	27 in.-lbs. [3 Nm]

†Capacities are per set of jaws and are not simultaneous

RTH/DTH-1M-L Loading Information



Loading Capacity†

	Static	Dynamic
Maximum Tensile T	164 lbs. [730 N]	13 lbs. [57 N]
Maximum Compressive C	216 lbs. [960 N]	13 lbs. [57 N]
Maximum Moment M_x	177 in.-lbs. [20 Nm]	9 in.-lbs. [1 Nm]
Maximum Moment M_y	204 in.-lbs. [23 Nm]	9 in.-lbs. [1 Nm]
Maximum Moment M_z	133 in.-lbs. [15 Nm]	9 in.-lbs. [1 Nm]

†Capacities are per set of jaws and are not simultaneous

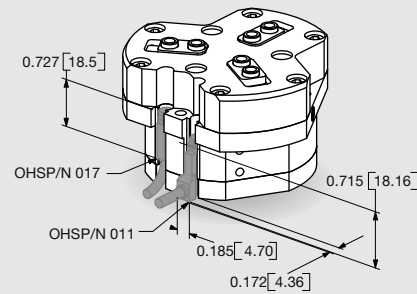
Specifications

Total Rated Grip Force, F @ 100 psi [7 bar]:		
Without Spring Assist	153 lbs.	682 N
Without Spring Assist -L	100 lbs.	443 N
With Spring Assist	200 lbs.	889 N
With Spring Assist -L	130 lbs.	579 N
Total Stroke:		
Standard	0.16 in.	4 mm
Extended -L	0.32 in.	8 mm
Weight	0.6 lbs.	0.25 kg
Pressure Range without Spring	30-100 psi	2-7 Bar
Pressure Range with Spring	60-100 psi	4-7 Bar

Specifications (cont.)

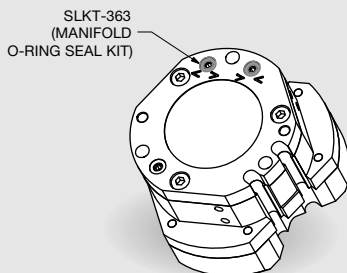
Max. Vacuum for Scavenge Port	8 in. Hg	20 mm Hg
Max. Pressure for Purge Port	30 psi	2.1 Bar
Cylinder Bore \emptyset	1.62 in.	32 mm
Displacement	0.40 in ³	6.5 cm ³
Temperature Range	-20°~300° F	-30°~150° C
Actuation (open/close)	0.06 sec./0.06 sec.	
Accuracy	±0.002 in.	±0.04 mm
Repeatability	±0.001 in.	±0.02 mm
Valve required to actuate single acting		3-way, 2-position
Valve required to actuate double acting		4-way, 2-position

Accessory Mounting Technical Data



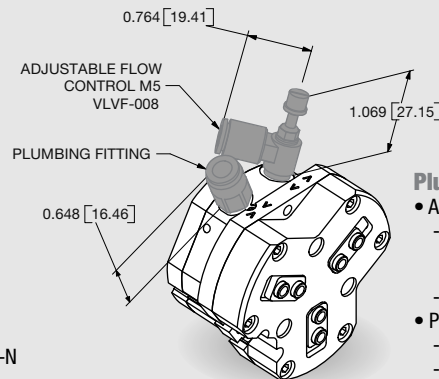
Magneto Resistive Sensors

- PNP and NPN Magneto Resistive available
- Sensors are slot mounted, no mounting kits required
- Simple adjustment with slotted screw driver
- Built in LED for ease of positioning and troubleshooting
- Available with 2M or 5M Quick Disconnect mating cable (order separately)



Manifold O-Ring seals

- Used to seal top air ports and purge/scavenge port
- No C'bore holes in customer's mounting plate required (C'bore are machined in the gripper's body)
- Seals in manifold kit are Buna-N (Viton® seal kit SLKT-363V)



Plumbing Fittings

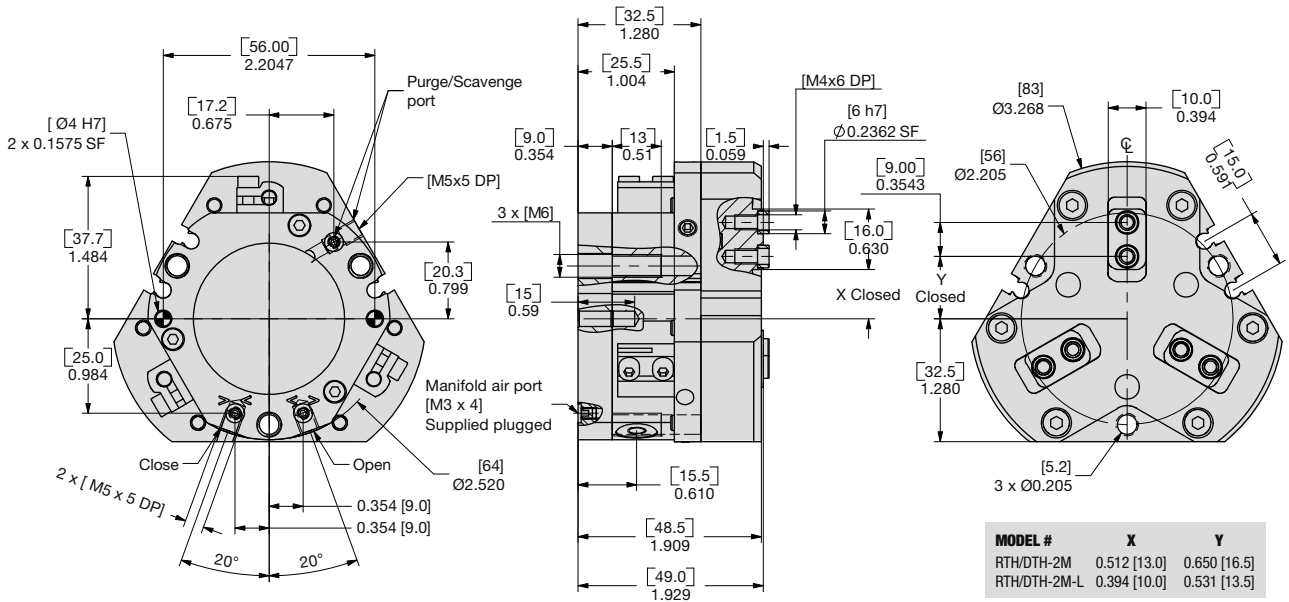
- Adjustable flow controls:
 - Have thumb screw adjust with locking nut for adjusting actuation time
 - Available for 6mm OD tubing
- Plumbing fittings:
 - For side air port location
 - Top air port are plugged as standard



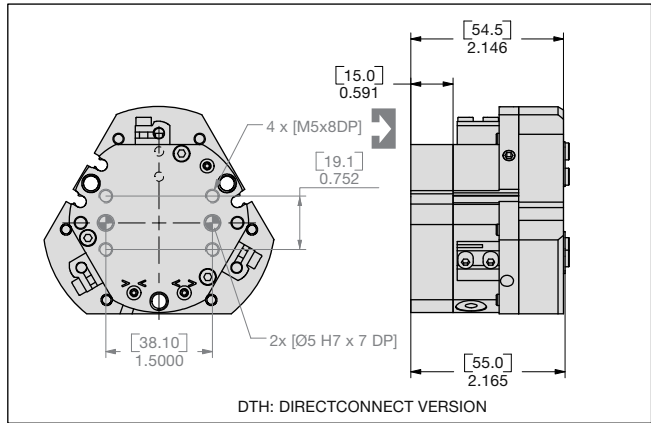
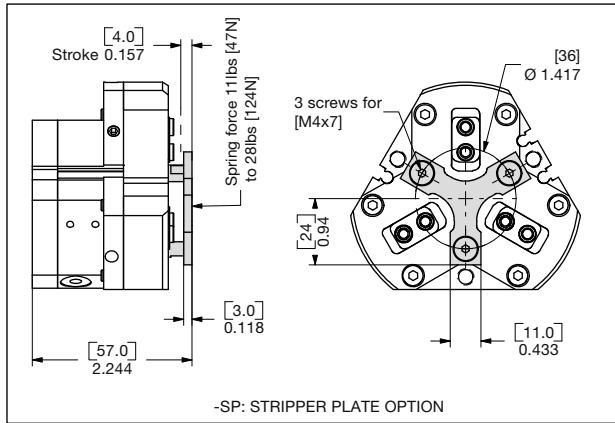
RTM/DTH SERIES

PARALLEL GRIPPER RTH/DTH-2M 3-JAW CENTERING SERIES

1.234



MODEL #	X	Y
RTH/DTH-2M	0.512 [13.0]	0.650 [16.5]
RTH/DTH-2M-L	0.394 [10.0]	0.531 [13.5]

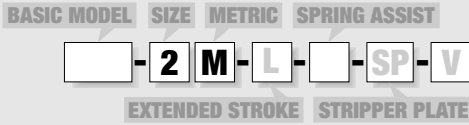


UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

				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	0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	[0.] = [±.25] [0.0] = [±.13] [0.00] = [±.013]

NOTE: DIRECTCONNECT™ DIMENSIONS ARE SHOWN IN BLUE

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



BASIC MODEL	RTH Without DIRECTCONNECT Mounting Pattern	DTH With DIRECTCONNECT Mounting Pattern
SIZE	2	
METRIC	M	
EXTENDED STROKE	L 0.24" [6mm] Leave Blank (standard)	L 0.47" [12mm]
SPRING	C Spring Closed	O Spring Open
	— Leave Blank. No Spring Option (standard)	
STRIPPER PLATE	SP	
VITON® SEALS	V High Temperature Viton® Seals	

SAMPLE ORDER: DTH-2M-L-C-SP-V

Ex: DTH-2M DIRECTCONNECT Gripper, Metric, 12mm Extended Stroke, Spring Closed, Stripper Plate, Viton® Seals

SENSOR ACCESSORIES*

PNP Magneto Resistive Sensor Short Barrel w/Qk Disc*	OHSP-017	1, 2 or 3
NPN Magneto Resistive Sensor Short Barrel w/Qk Disc*	OHSN-017	1, 2 or 3
PNP Magneto Resistive Sensor (90° barrel) w/Qk. Disc*	OHSP-011	1, 2 or 3
NPN Magneto Resistive Sensor (90° barrel) w/Qk. Disc*	OHSN-011	1, 2 or 3
Quick Disconnect 2 Meter Cable Length*	CABL-010	1, 2 or 3
Quick Disconnect 5 Meter Cable Length*	CABL-013	1, 2 or 3

PNEUMATIC ACCESSORIES

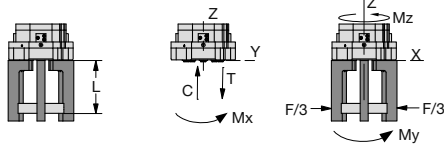
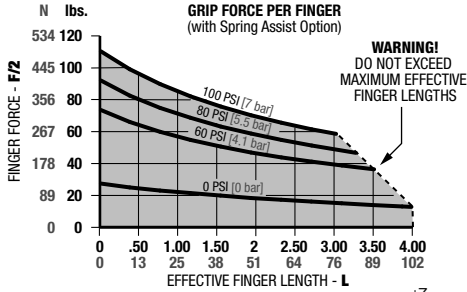
Buna-N Seal Repair Kit	SLKT-348	1
Buna-N Rear Inlet Seal Repair Kit	SLKT-363	1
Viton® Seal Repair Kit	SLKT-348V	1
Viton® Rear Inlet Seal Repair Kit	SLKT-363V	1
M5 Adjustable Flow Control	VLVF-008	1 or 2

*Sensor and cable sold separately.

DIRECTCONNECT™



RTH/DTH-2M Loading Information

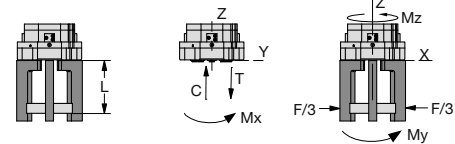
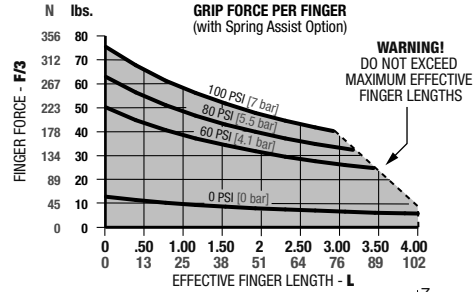


Loading Capacity†

	Static	Dynamic
Maximum Tensile T	270 lbs. [1200 N]	29 lbs. [129 N]
Maximum Compressive C	351 lbs. [1560 N]	29 lbs. [129 N]
Maximum Moment M_x	398 in.-lbs. [45 Nm]	35 in.-lbs. [4 Nm]
Maximum Moment M_y	566 in.-lbs. [64 Nm]	53 in.-lbs. [6 Nm]
Maximum Moment M_z	363 in.-lbs. [41 Nm]	53 in.-lbs. [6 Nm]

†Capacities are per set of jaws and are not simultaneous

RTH/DTH-2M-L Loading Information



Loading Capacity†

	Static	Dynamic
Maximum Tensile T	243 lbs. [1080 N]	19 lbs. [84 N]
Maximum Compressive C	315 lbs. [1400 N]	19 lbs. [84 N]
Maximum Moment M_x	354 in.-lbs. [40 Nm]	27 in.-lbs. [3 Nm]
Maximum Moment M_y	460 in.-lbs. [52 Nm]	35 in.-lbs. [4 Nm]
Maximum Moment M_z	292 in.-lbs. [33 Nm]	35 in.-lbs. [4 Nm]

†Capacities are per set of jaws and are not simultaneous

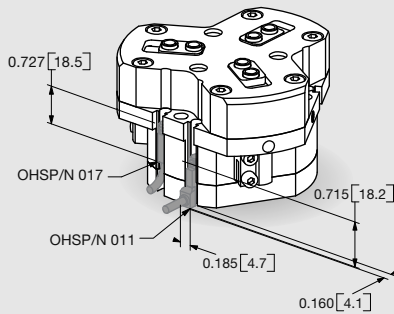
Specifications

Total Rated Grip Force, F @ 100 psi [7 bar]:		
Without Spring Assist	278 lbs.	1238 N
Without Spring Assist -L	183 lbs.	812 N
With Spring Assist	335 lbs.	1490 N
With Spring Assist -L	220 lbs.	979 N
Total Stroke:		
Standard	0.24 in.	6 mm
Extended -L	0.47 in.	12 mm
Weight	1.2 lbs.	0.53 Kg
Pressure Range without Spring	30-100 psi	2-7 Bar
Pressure Range with Spring	60-100 psi	4-7 Bar

Specifications (cont.)

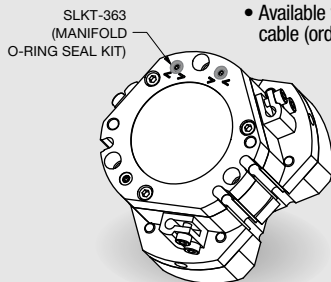
Max. Vacuum for Scavenge Port	8 in. Hg	20 mm Hg
Max. Pressure for Purge Port	30 psi	2.1 Bar
Cylinder Bore \emptyset	1.70 in.	43 mm
Displacement	1.05 in ³	17 cm ³
Temperature Range	-20°~300° F	-30°~150° C
Actuation (open/close)	0.07 sec./0.07 sec.	
Accuracy	±0.002 in.	±0.04 mm
Repeatability	±0.001 in.	±0.02 mm
Valve required to actuate single acting	3-way, 2-position	
Valve required to actuate double acting	4-way, 2-position	

Accessory Mounting Technical Data



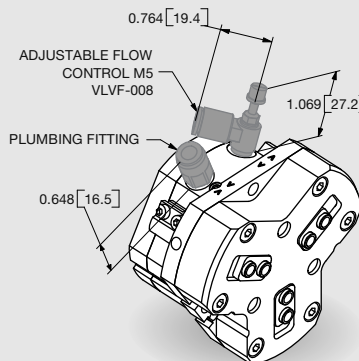
Magneto Resistive Sensors

- PNP and NPN Magneto Resistive available
- Sensors are slot mounted, no mounting kits required
- Simple adjustment with slotted screw driver
- Built in LED for ease of positioning and troubleshooting
- Available with 2M or 5M Quick Disconnect mating cable (order separately)



Manifold O-Ring seals

- Used to seal top air ports and purge/scavenge port
- No C' bore holes in customer's mounting plate required (C' bore are machined in the gripper's body)
- Seals in manifold kit are Buna-N (Viton® seal kit SLKT-363V)



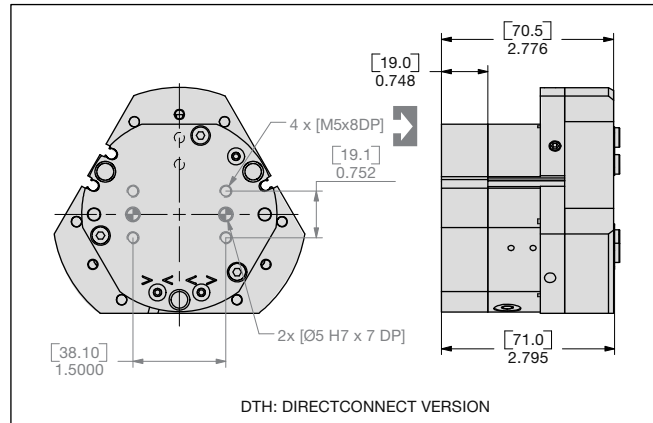
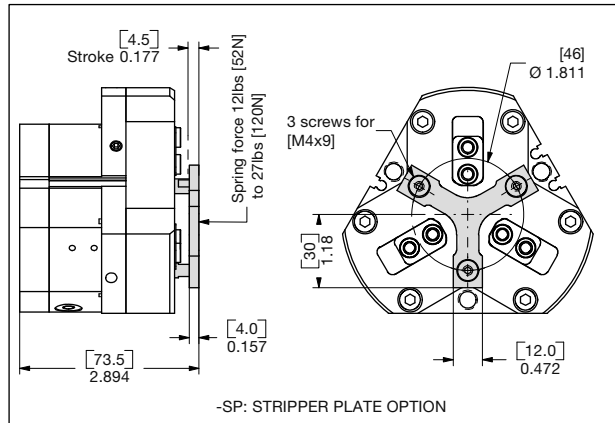
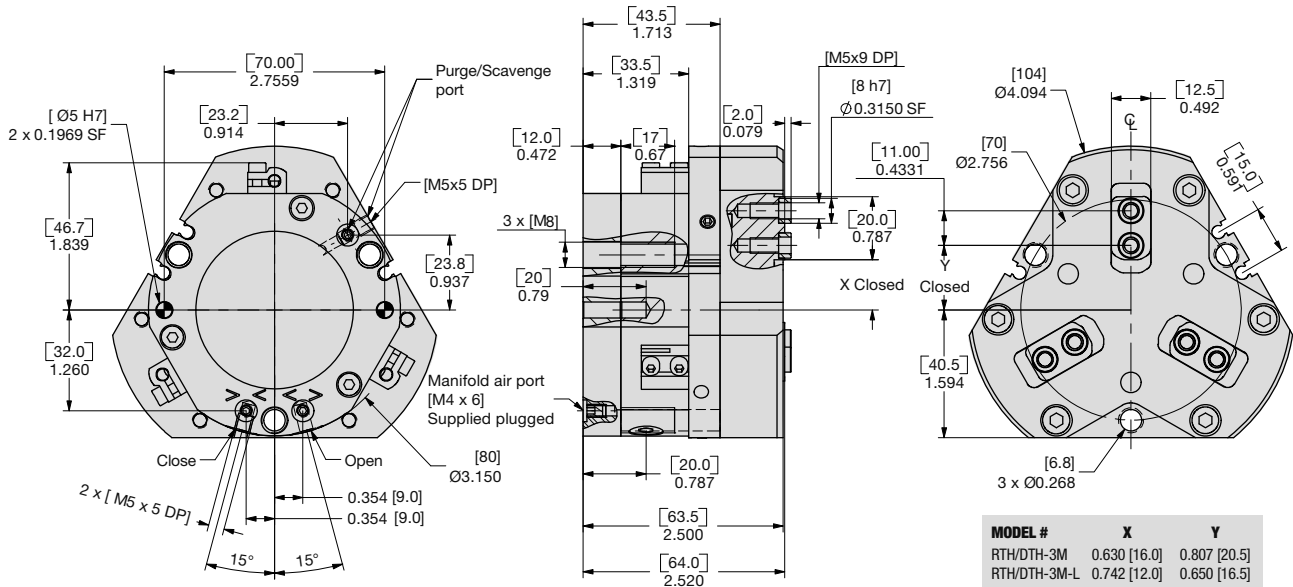
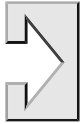
Plumbing Fittings

- Adjustable flow controls:
 - Have thumb screw adjust with locking nut for adjusting actuation time
 - Available for 6mm OD tubing
- Plumbing fittings:
 - For side air port location
 - Top air port are plugged as standard

PARALLEL GRIPPER RTH/DTH-3M 3-JAW CENTERING SERIES

RTH/DTH SERIES

1.236



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Symbol	Imperial in.	Metric [mm]
	0.00 = ±.01	[0.] = [±.25]
	0.000 = ±.005	[0.0] = [±.13]
	0.0000 = ±.0005	[0.00] = [±.013]

Dimensions are symmetrical about centerline
 Third Angle Projection
 All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]
 Metric Threads Course Pitch

NOTE: DIRECTCONNECT™ DIMENSIONS ARE SHOWN IN BLUE

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

BASIC MODEL **SIZE** **METRIC** **SPRING ASSIST**



EXTENDED STROKE **STRIPPER PLATE**

BASIC MODEL **RTH** Without DIRECTCONNECT Mounting Pattern
DTH With DIRECTCONNECT Mounting Pattern

SIZE **3**

METRIC **M**

EXTENDED STROKE **L** 0.31" [8mm] Leave Blank (standard)
L 0.63" [16mm]

SPRING **C** Spring Closed
O Spring Open
Leave Blank. No Spring Option (standard)

STRIPPER PLATE **SP**

VITON® SEALS **V** High Temperature Viton® Seals

SAMPLE ORDER: DTH-3M-L-C-SP-V

Ex: DTH-3M DIRECTCONNECT Gripper, Metric, 16mm Extended Stroke, Spring Closed, Stripper Plate, Viton® Seals

SENSOR ACCESSORIES*

PNP Magneto Resistive Sensor Short Barrel w/Qk Disc*	OHSP-017	1, 2 or 3
NPN Magneto Resistive Sensor Short Barrel w/Qk Disc*	OHSN-017	1, 2 or 3
PNP Magneto Resistive Sensor (90° barrel) w/Qk. Disc*	OHSP-011	1, 2 or 3
NPN Magneto Resistive Sensor (90° barrel) w/Qk. Disc*	OHSN-011	1, 2 or 3
Quick Disconnect 2 Meter Cable Length*	CABL-010	1, 2 or 3
Quick Disconnect 5 Meter Cable Length*	CABL-013	1, 2 or 3

PNEUMATIC ACCESSORIES

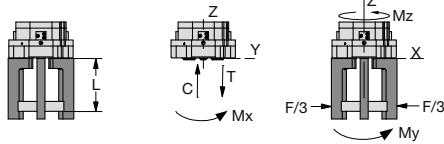
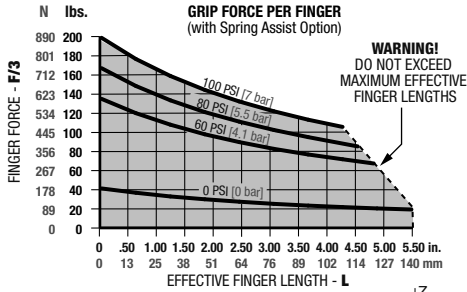
Buna-N Seal Repair Kit	SLKT-349	1
Buna-N Rear Inlet Seal Repair Kit	SLKT-364	1
Viton® Seal Repair Kit	SLKT-349V	1
Viton® Rear Inlet Seal Repair Kit	SLKT-364V	1
M5 Adjustable Flow Control	VLVF-008	1 or 2

*Sensor and cable sold separately.

DIRECTCONNECT™



RTH/DTH-3M Loading Information

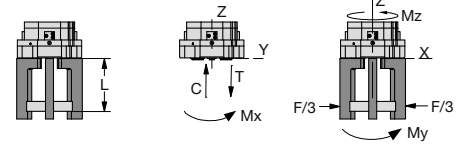
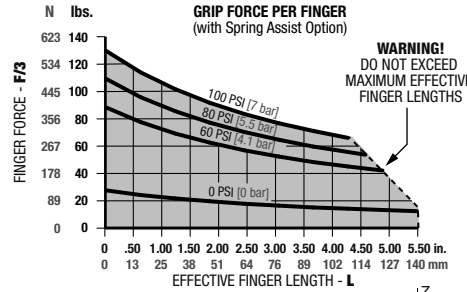


Loading Capacity†

	Static	Dynamic
Maximum Tensile T	378 lbs. [1680 N]	68 lbs. [302 N]
Maximum Compressive C	490 lbs. [2180 N]	68 lbs. [302 N]
Maximum Moment M_x	637 in.-lbs. [72 Nm]	97 in.-lbs. [11 Nm]
Maximum Moment M_y	903 in.-lbs. [102 Nm]	142 in.-lbs. [16 Nm]
Maximum Moment M_z	584 in.-lbs. [66 Nm]	142 in.-lbs. [16 Nm]

†Capacities are per set of jaws and are not simultaneous

RTH/DTH-3M-L Loading Information



Loading Capacity†

	Static	Dynamic
Maximum Tensile T	337 lbs. [1500 N]	44 lbs. [197 N]
Maximum Compressive C	436 lbs. [1940 N]	44 lbs. [197 N]
Maximum Moment M_x	566 in.-lbs. [64 Nm]	62 in.-lbs. [7 Nm]
Maximum Moment M_y	717 in.-lbs. [81 Nm]	80 in.-lbs. [9 Nm]
Maximum Moment M_z	469 in.-lbs. [53 Nm]	80 in.-lbs. [9 Nm]

†Capacities are per set of jaws and are not simultaneous

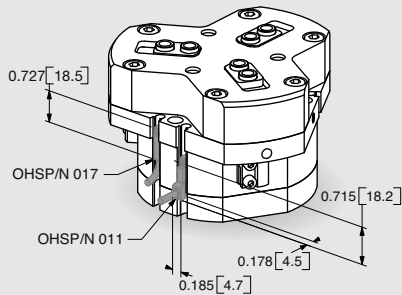
Specifications

Total Rated Grip Force, F @ 100 psi [7 bar]:		
Without Spring Assist	467 lbs.	2078 N
Without Spring Assist -L	303 lbs.	1349 N
With Spring Assist	591 lbs.	2627 N
With Spring Assist -L	384 lbs.	1708 N
Total Stroke:		
Standard	0.31 in.	8 mm
Extended -L	0.63 in.	16 mm
Weight	2.4 lbs.	1.08 Kg
Pressure Range without Spring	30-100 psi	2-7 Bar
Pressure Range with Spring	50-100 psi	3.5-7 Bar

Specifications (cont.)

Max. Vacuum for Scavenge Port	8 in. Hg	20 mm Hg
Max. Pressure for Purge Port	30 psi	2.1 Bar
Cylinder Bore \emptyset	2.17 in.	55 mm
Displacement	2.30 in ³	37 cm ³
Temperature Range	-20°~300° F	-30°~150° C
Actuation (open/close)	0.08 sec./0.08 sec.	
Accuracy	±0.002 in.	±0.04 mm
Repeatability	±0.001 in.	±0.02 mm
Valve required to actuate single acting		3-way, 2-position
Valve required to actuate double acting		4-way, 2-position

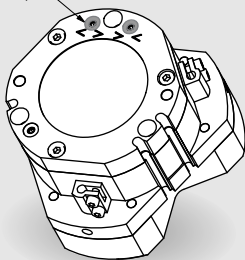
Accessory Mounting Technical Data



Magneto Resistive Sensors

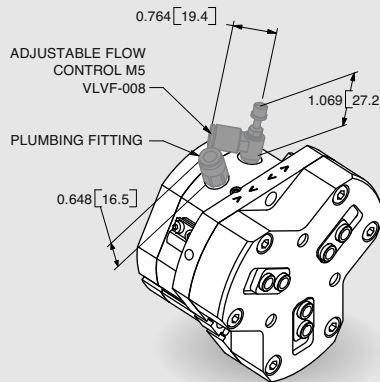
- PNP and NPN Magneto Resistive available
- Sensors are slot mounted, no mounting kits required
- Simple adjustment with slotted screw driver
- Built in LED for ease of positioning and troubleshooting
- Available with 2M or 5M Quick Disconnect mating cable (order separately)

SLKT-364
(MANIFOLD
O-RING SEAL KIT)



Manifold O-Ring seals

- Used to seal top air ports and purge/scavenge port
- No C bore holes in customer's mounting plate required (C bore are machined in the gripper's body)
- Seals in manifold kit are Buna-N (Viton® seal kit SLKT-364V)



Plumbing Fittings

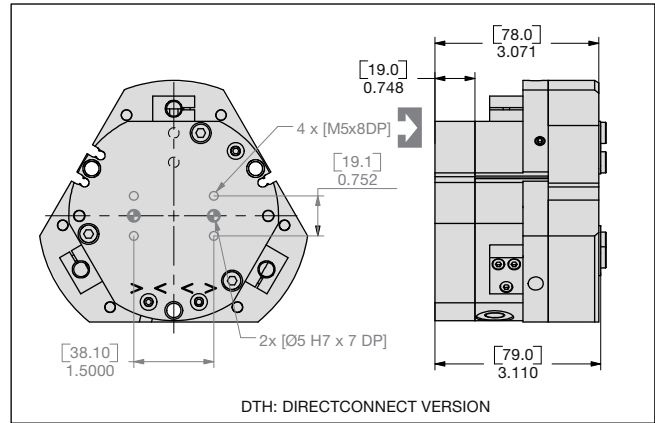
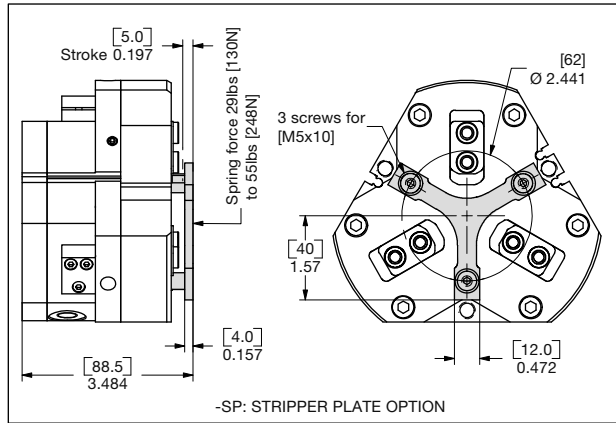
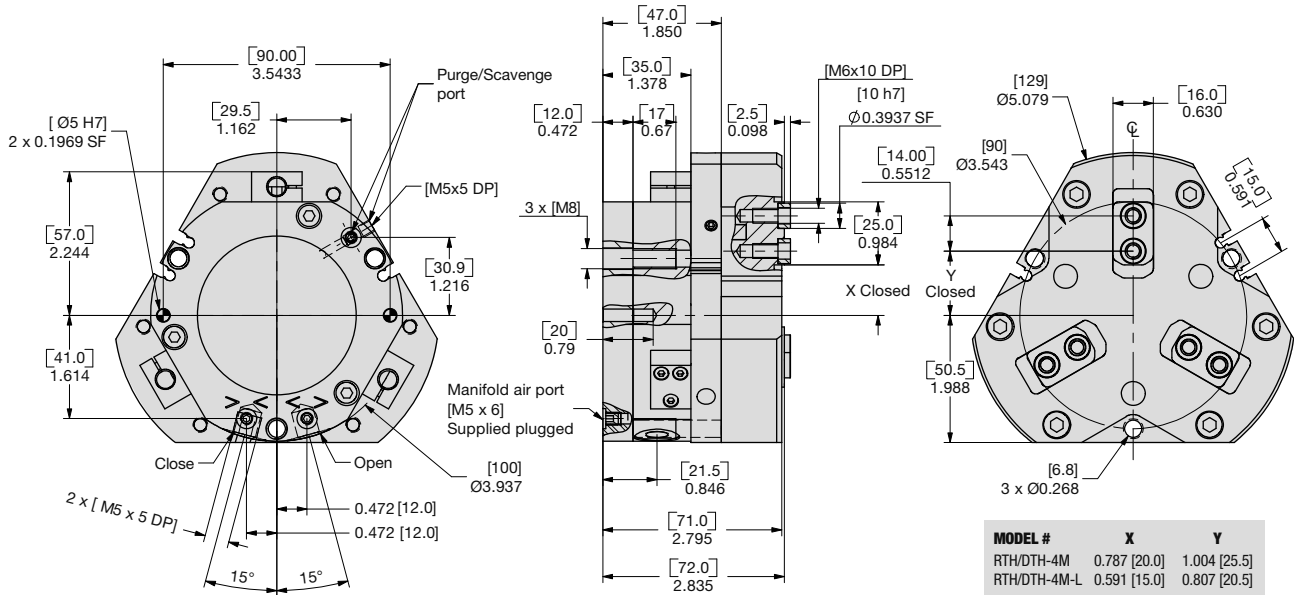
- Adjustable flow controls:
 - Have thumb screw adjust with locking nut for adjusting actuation time
 - Available for 6mm OD tubing
- Plumbing fittings:
 - For side air port location
 - Top air port are plugged as standard



PARALLEL GRIPPER RTH/DTH-4M 3-JAW CENTERING SERIES

RTH/DTH SERIES

1.238



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Symbol	Imperial in.	Metric [mm]
	0.00 = ±.01	[0.] = [±.25]
	0.000 = ±.005	[0.0] = [±.13]
	0.0000 = ±.0005	[0.00] = [±.013]

Dimensions are symmetrical about centerline. Third Angle Projection. All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or ±.013mm. Metric Threads Course Pitch.

NOTE: DIRECTCONNECT™ DIMENSIONS ARE SHOWN IN BLUE

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

BASIC MODEL **SIZE** **METRIC** **SPRING ASSIST**



EXTENDED STROKE **STRIPPER PLATE**

BASIC MODEL **RTH** Without DIRECTCONNECT Mounting Pattern
DTH With DIRECTCONNECT Mounting Pattern

SIZE **4**

METRIC **M**

EXTENDED STROKE **L** 0.39" [10mm] Leave Blank (standard)
L 0.79" [20mm]

SPRING **C** Spring Closed
O Spring Open
Leave Blank. No Spring Option (standard)

STRIPPER PLATE **SP**

VITON® SEALS **V** High Temperature Viton® Seals

SAMPLE ORDER: DTH-4M-L-C-SP-V

Ex: DTH-4M DIRECTCONNECT Gripper, Metric, 20mm Extended Stroke, Spring Closed, Stripper Plate, Viton® Seals

SENSOR ACCESSORIES*

8mm NPN Inductive Sensor w/Quick Disconnect*	OISN-011	1, 2 or 3
8mm PNP Inductive Sensor w/Quick Disconnect*	OISP-011	1, 2 or 3
PNP Magneto Resistive Sensor Short Barrel w/Qk Disc*	OHSP-017	1, 2 or 3
NPN Magneto Resistive Sensor Short Barrel w/Qk Disc*	OHSN-017	1, 2 or 3
PNP Magneto Resistive Sensor (90° barrel) w/Qk. Disc*	OHSP-011	1, 2 or 3
NPN Magneto Resistive Sensor (90° barrel) w/Qk. Disc*	OHSN-011	1, 2 or 3
Quick Disconnect 2 Meter Cable Length*	CABL-010	1, 2 or 3
Quick Disconnect 5 Meter Cable Length*	CABL-013	1, 2 or 3

PNEUMATIC ACCESSORIES

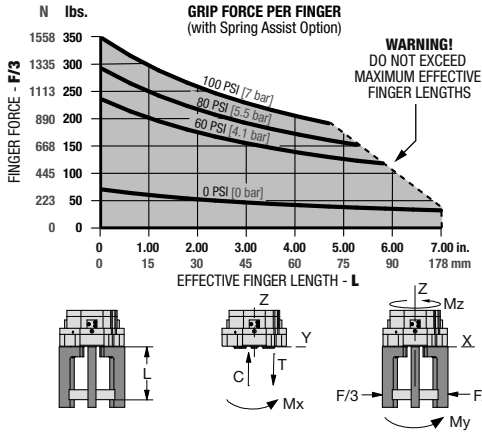
Buna-N Seal Repair Kit	SLKT-350	1
Buna-N Rear Inlet Seal Repair Kit	SLKT-365	1
Viton® Seal Repair Kit	SLKT-350V	1
Viton® Rear Inlet Seal Repair Kit	SLKT-365V	1
G 1/8" Adjustable Flow Control	VLVF-005	1 or 2
Adapter G 1/8 Male to 1/8 NPT Female	PLFT-025	1 or 2

*Sensor and cable sold separately.

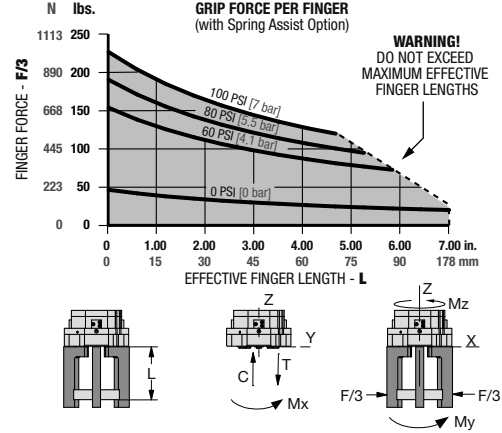
DIRECTCONNECT™



RTH/DTH-4M Loading Information



RTH/DTH-4M-L Loading Information



Loading Capacity†

	Static	Dynamic
Maximum Tensile T	474 lbs. [2110 N]	96 lbs. [425 N]
Maximum Compressive C	627 lbs. [2790 N]	96 lbs. [425 N]
Maximum Moment M_x	814 in.-lbs. [92 Nm]	142 in.-lbs. [16 Nm]
Maximum Moment M_y	1133 in.-lbs. [182 Nm]	195 in.-lbs. [22 Nm]
Maximum Moment M_z	734 in.-lbs. [84 Nm]	195 in.-lbs. [22 Nm]

†Capacities are per set of jaws and are not simultaneous

Loading Capacity†

	Static	Dynamic
Maximum Tensile T	423 lbs. [1880 N]	62 lbs. [275 N]
Maximum Compressive C	560 lbs. [2490 N]	62 lbs. [275 N]
Maximum Moment M_x	726 in.-lbs. [82 Nm]	89 in.-lbs. [10 Nm]
Maximum Moment M_y	903 in.-lbs. [102 Nm]	115 in.-lbs. [13 Nm]
Maximum Moment M_z	593 in.-lbs. [67 Nm]	115 in.-lbs. [13 Nm]

†Capacities are per set of jaws and are not simultaneous

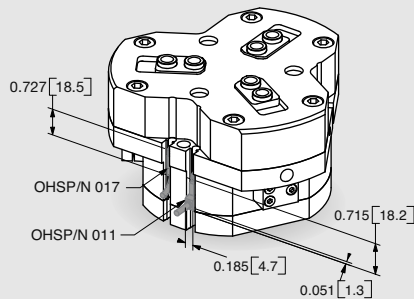
Specifications

Total Rated Grip Force, F @ 100 psi [7 bar]:		
Without Spring Assist	819 lbs.	3644 N
Without Spring Assist -L	532 lbs.	2366 N
With Spring Assist	1026 lbs.	4562 N
With Spring Assist -L	667 lbs.	2967 N
Total Stroke:		
Standard	0.39 in.	10 mm
Extended -L	0.79 in.	20 mm
Weight	4.3 lbs.	1.95 Kg
Pressure Range without Spring	30-100 psi	2-7 Bar
Pressure Range with Spring	45-100 psi	3-7 Bar

Specifications (cont.)

Max. Vacuum for Scavenge Port	8 in. Hg	20 mm Hg
Max. Pressure for Purge Port	30 psi	2.1 Bar
Cylinder Bore \emptyset	2.85 in.	72 mm
Displacement	4.90 in ³	80 cm ³
Temperature Range	-20°~300° F	-30°~150° C
Actuation (open/close)	0.1 sec./0.1 sec.	
Accuracy	±0.0024 in.	±0.06 mm
Repeatability	±0.0012 in.	±0.03 mm
Valve required to actuate single acting		3-way, 2-position
Valve required to actuate double acting		4-way, 2-position

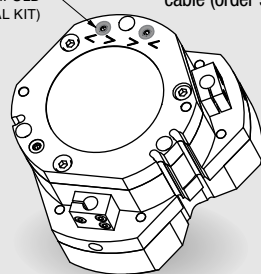
Accessory Mounting Technical Data



Magneto Resistive Sensors

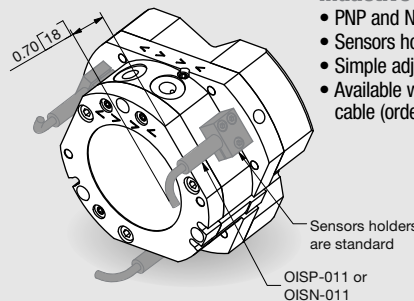
- PNP and NPN Magneto Resistive available
- Sensors are slot mounted, no mounting kits required
- Simple adjustment with slotted screw driver
- Built in LED for ease of positioning and troubleshooting
- Available with 2M or 5M Quick Disconnect mating cable (order separately)

SLKT-365
(MANIFOLD
O-RING SEAL KIT)



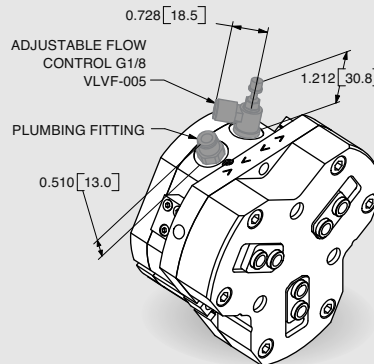
Manifold O-Ring seals

- Used to seal top air ports and purge/scavenge port
- No C'bore holes in customer's mounting plate required (C'bore are machined in the gripper's body)
- Seals in manifold kit are Buna-N (Viton® seal kit SLKT-365V)



Inductive Sensors

- PNP and NPN Magneto Resistive available
- Sensors holders and targets are standard mounted
- Simple adjustment of the target with screw driver
- Available with 2M or 5M Quick Disconnect mating cable (order separately)



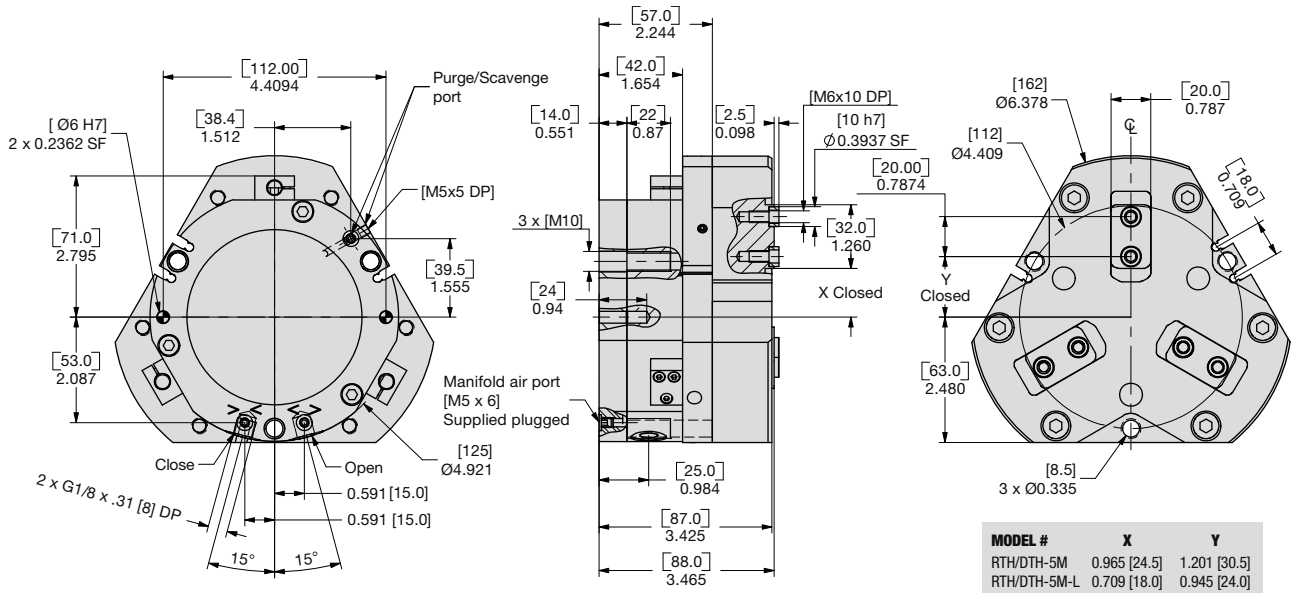
Plumbing Fittings

- Adjustable flow controls:
 - Have thumb screw adjust with locking nut for adjusting actuation time
 - Available for 6mm OD tubing
- Plumbing fittings:
 - For side air port location
 - Top air port are plugged as standard

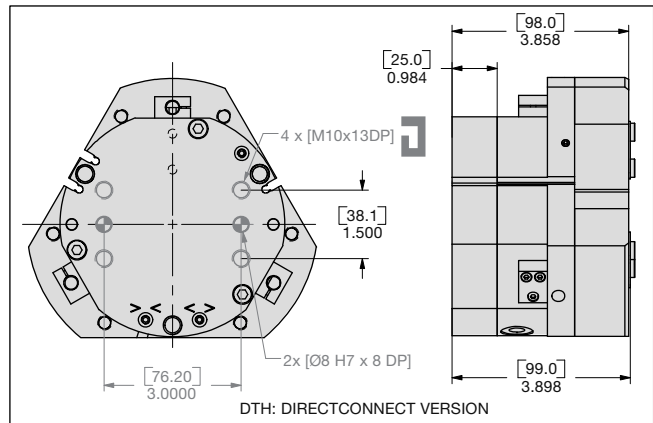
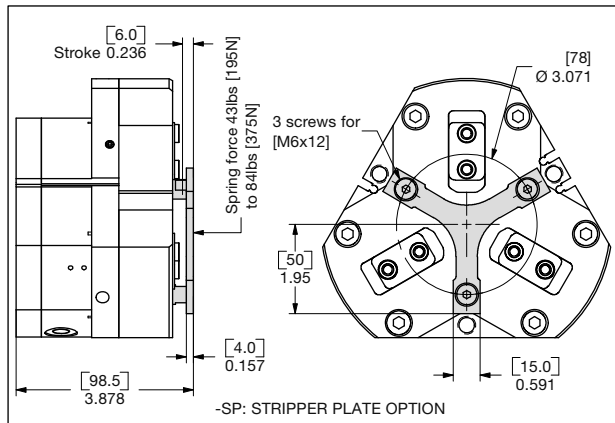
PARALLEL GRIPPER RTH/DTH-5M 3-JAW CENTERING SERIES

RTH/DTH SERIES

1.240



MODEL #	X	Y
RTH/DTH-5M	0.965 [24.5]	1.201 [30.5]
RTH/DTH-5M-L	0.709 [18.0]	0.945 [24.0]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

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

NOTE: DIRECTCONNECT™ DIMENSIONS ARE SHOWN IN BLUE

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

BASIC MODEL **SIZE** **METRIC** **SPRING ASSIST**



EXTENDED STROKE **STRIPPER PLATE**

BASIC MODEL	RTH	Without DIRECTCONNECT Mounting Pattern
	DTH	With DIRECTCONNECT Mounting Pattern
SIZE	5	
METRIC	M	
EXTENDED STROKE	L	0.51" [13mm] Leave Blank (standard) 1.02" [26mm]
SPRING	C	Spring Closed
	O	Spring Open
		Leave Blank. No Spring Option (standard)
STRIPPER PLATE	SP	
VITON® SEALS	V	High Temperature Viton® Seals

SAMPLE ORDER: DTH-5M-L-C-SP-V

Ex: DTH-5M DIRECTCONNECT Gripper, Metric, 26mm Extended Stroke, Spring Closed, Stripper Plate, Viton® Seals

SENSOR ACCESSORIES*

8mm NPN Inductive Sensor w/Quick Disconnect*	OISN-011	1, 2 or 3
8mm PNP Inductive Sensor w/Quick Disconnect*	OISP-011	1, 2 or 3
PNP Magneto Resistive Sensor Short Barrel w/Qk Disc*	OHSP-017	1, 2 or 3
NPN Magneto Resistive Sensor Short Barrel w/Qk Disc*	OHSN-017	1, 2 or 3
PNP Magneto Resistive Sensor (90° barrel) w/Qk. Disc*	OHSP-011	1, 2 or 3
NPN Magneto Resistive Sensor (90° barrel) w/Qk. Disc*	OHSN-011	1, 2 or 3
Quick Disconnect 2 Meter Cable Length*	CABL-010	1, 2 or 3
Quick Disconnect 5 Meter Cable Length*	CABL-013	1, 2 or 3

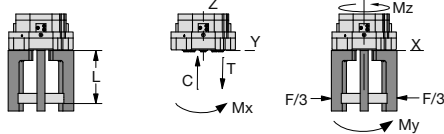
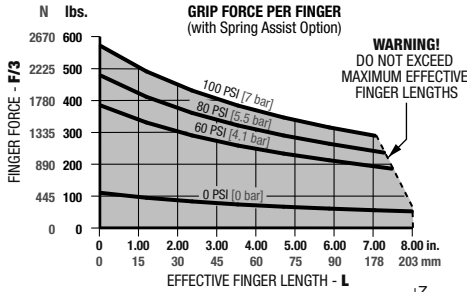
PNEUMATIC ACCESSORIES

Buna-N Seal Repair Kit	SLKT-351	1
Buna-N Rear Inlet Seal Repair Kit	SLKT-365	1
Viton® Seal Repair Kit	SLKT-351V	1
Viton® Rear Inlet Seal Repair Kit	SLKT-365V	1
G 1/8" Adjustable Flow Control	VLVF-005	1 or 2
Adapter G 1/8 Male to 1/8 NPT Female	PLFT-025	1 or 2

*Sensor and cable sold separately.

DIRECTCONNECT™

RTH/DTH-5M Loading Information

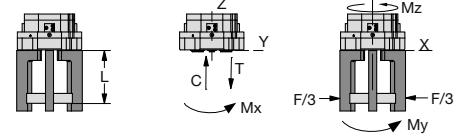
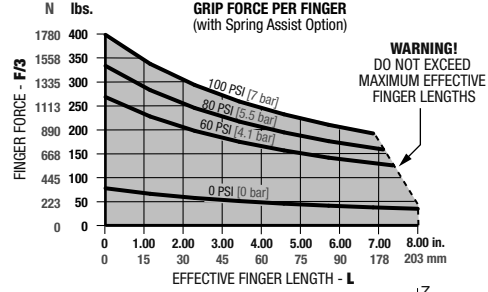


Loading Capacity†

	Static	Dynamic
Maximum Tensile T	672 lbs. [2990 N]	152 lbs. [674 N]
Maximum Compressive C	895 lbs. [3980 N]	152 lbs. [674 N]
Maximum Moment M_x	1124 in.-lbs. [127 Nm]	221 in.-lbs. [25 Nm]
Maximum Moment M_y	1584 in.-lbs. [179 Nm]	310 in.-lbs. [35 Nm]
Maximum Moment M_z	1036 in.-lbs. [117 Nm]	310 in.-lbs. [35 Nm]

†Capacities are per set of jaws and are not simultaneous

RTH/DTH-5M-L Loading Information



Loading Capacity†

	Static	Dynamic
Maximum Tensile T	602 lbs. [2680 N]	97 lbs. [432 N]
Maximum Compressive C	803 lbs. [3570 N]	97 lbs. [432 N]
Maximum Moment M_x	1009 in.-lbs. [114 Nm]	142 in.-lbs. [16 Nm]
Maximum Moment M_y	1275 in.-lbs. [144 Nm]	177 in.-lbs. [20 Nm]
Maximum Moment M_z	832 in.-lbs. [94 Nm]	177 in.-lbs. [20 Nm]

†Capacities are per set of jaws and are not simultaneous

Specifications

Total Rated Grip Force, **F** @ 100 psi [7 bar]:

Without Spring Assist	1428 lbs.	6353 N
Without Spring Assist -L	927 lbs.	4125 N
With Spring Assist	1771 lbs.	7877 N
With Spring Assist -L	1152 lbs.	5124 N

Total Stroke:

Standard	0.51 in.	13 mm
Extended -L	1.02 in.	26 mm

Weight

	8.6 lbs.	3.9 Kg
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Pressure Range without Spring

	30-100 psi	2-7 Bar
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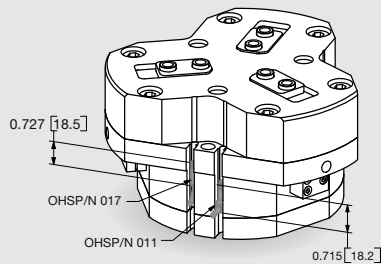
Pressure Range with Spring

	45-100 psi	3-7 Bar
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Specifications (cont.)

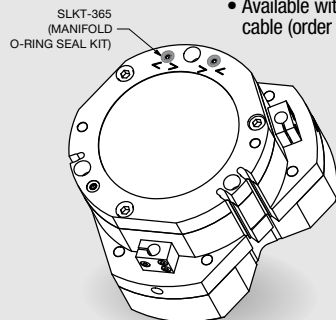
Max. Vacuum for Scavenge Port	8 in. Hg	20 mm Hg
Max. Pressure for Purge Port	30 psi	2.1 Bar
Cylinder Bore Ø	3.75 in.	95 mm
Displacement	11.0 in ³	180 cm ³
Temperature Range	-20°~300° F	-30°~150° C
Actuation (open/close)	0.19 sec./0.19 sec.	
Accuracy	±0.0024 in.	±0.06 mm
Repeatability	±0.0012 in.	±0.03 mm
Valve required to actuate single acting		3-way, 2-position
Valve required to actuate double acting		4-way, 2-position

Accessory Mounting Technical Data



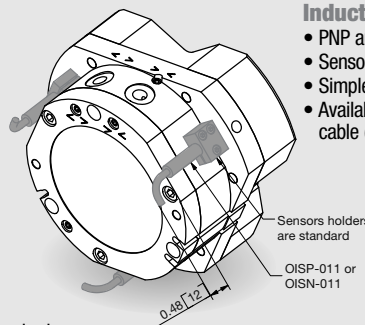
Magneto Resistive Sensors

- PNP and NPN Magneto Resistive available
- Sensors are slot mounted, no mounting kits required
- Simple adjustment with slotted screw driver
- Built in LED for ease of positioning and troubleshooting
- Available with 2M or 5M Quick Disconnect mating cable (order separately)



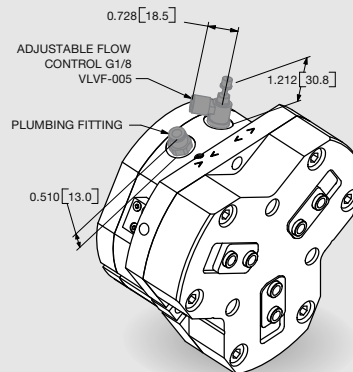
Manifold O-Ring seals

- Used to seal top air ports and purge/scavenge port
- No C' bore holes in customer's mounting plate required (C' bore are machined in the gripper's body)
- Seals in manifold kit are Buna-N (Viton® seal kit SLKT-365V)



Inductive Sensors

- PNP and NPN Magneto Resistive available
- Sensors holders and targets are standard mounted
- Simple adjustment of the target with screw driver
- Available with 2M or 5M Quick Disconnect mating cable (order separately)

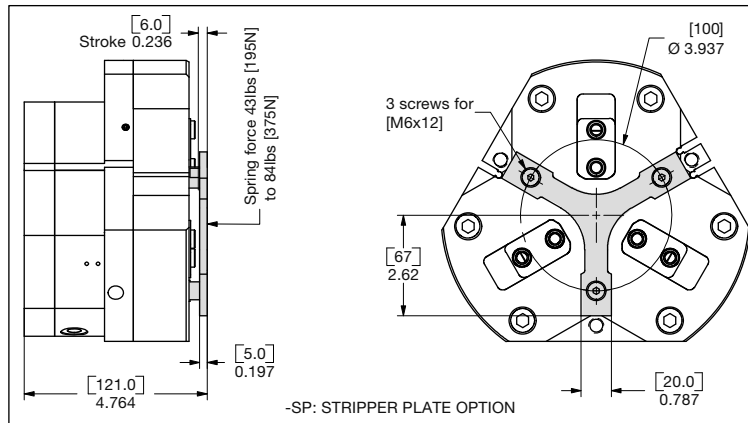
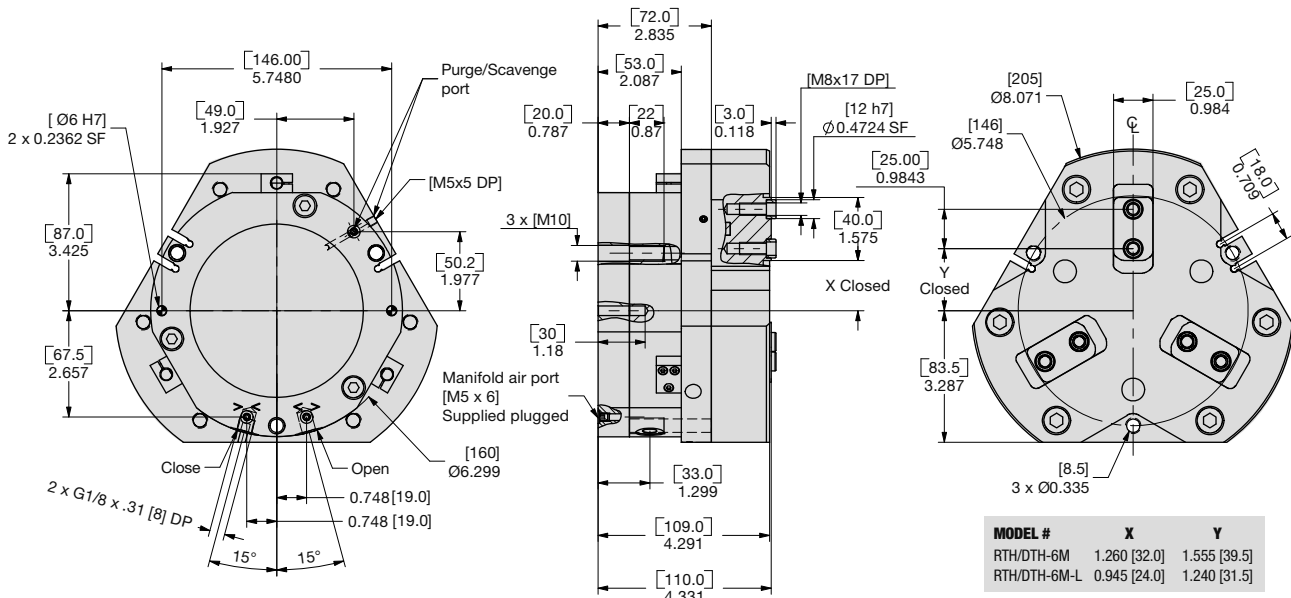


Plumbing Fittings

- Adjustable flow controls:
 - Have thumb screw adjust with locking nut for adjusting actuation time
 - Available for 6mm OD tubing
- Plumbing fittings:
 - For side air port location
 - Top air port are plugged as standard

PARALLEL GRIPPER RTH-6M 3-JAW CENTERING SERIES

1.242



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Symbol	Imperial in.	Metric [mm]
	0.00 = ±.01	[0.] = [±.25]
	0.000 = ±.005	[0.0] = [±.13]
	0.0000 = ±.0005	[0.00] = [±.013]

Dimensions are symmetrical about centerline
 Third Angle Projection
 All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]
 Metric Threads Course Pitch

NOTE: DIRECTCONNECT™ DIMENSIONS ARE SHOWN IN BLUE

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

BASIC MODEL SIZE METRIC SPRING ASSIST

RTH - 6 M - L - SP - V

EXTENDED STROKE STRIPPER PLATE

BASIC MODEL	RTH	Without DIRECTCONNECT Mounting Pattern
SIZE	6	
METRIC	M	
EXTENDED STROKE	L	0.63" [16mm] Leave Blank (standard) 1.26" [32mm]
SPRING	C	Spring Closed
	O	Spring Open
		Leave Blank. No Spring Option (standard)
STRIPPER PLATE	SP	
VITON® SEALS	V	High Temperature Viton® Seals

SENSOR ACCESSORIES*

8mm NPN Inductive Sensor w/Quick Disconnect*	OISN-011	1, 2 or 3
8mm PNP Inductive Sensor w/Quick Disconnect*	OISP-011	1, 2 or 3
PNP Magneto Resistive Sensor Short Barrel w/Qk Disc*	OHSP-017	1, 2 or 3
NPN Magneto Resistive Sensor Short Barrel w/Qk Disc*	OHSN-017	1, 2 or 3
PNP Magneto Resistive Sensor (90° barrel) w/Qk. Disc*	OHSP-011	1, 2 or 3
NPN Magneto Resistive Sensor (90° barrel) w/Qk. Disc*	OHSN-011	1, 2 or 3
Quick Disconnect 2 Meter Cable Length*	CABL-010	1, 2 or 3
Quick Disconnect 5 Meter Cable Length*	CABL-013	1, 2 or 3

PNEUMATIC ACCESSORIES

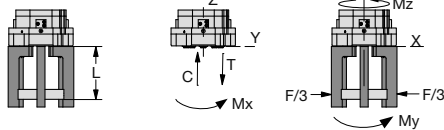
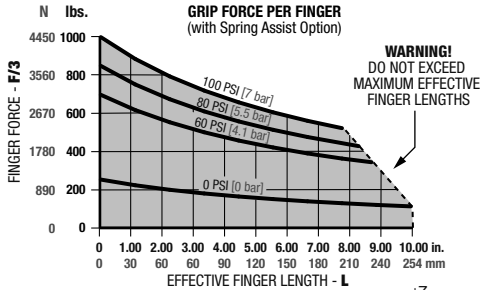
Buna-N Seal Repair Kit	SLKT-352	1
Buna-N Rear Inlet Seal Repair Kit	SLKT-365	1
Viton® Seal Repair Kit	SLKT-352V	1
Viton® Rear Inlet Seal Repair Kit	SLKT-365V	1
G 1/8" Adjustable Flow Control	VLVF-005	1 or 2
Adapter G 1/8 Male to 1/8 NPT Female	PLFT-025	1 or 2

*Sensor and cable sold separately.

SAMPLE ORDER: RTH-6M-L-C-SP-V

Ex: RTH-6M Parallel Gripper, Metric, 32mm Extended Stroke, Spring Closed, Stripper Plate, Viton® Seals

RTH/DTH-6M Loading Information

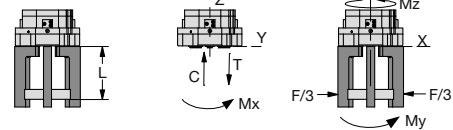
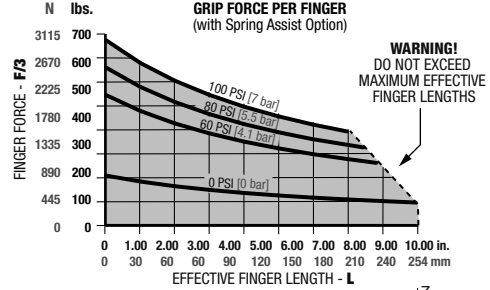


Loading Capacity†

	Static	Dynamic
Maximum Tensile T	971 lbs. [4320 N]	296 lbs. [1315 N]
Maximum Compressive C	1306 lbs. [5810 N]	296 lbs. [1315 N]
Maximum Moment M_x	1522 in.-lbs. [172 Nm]	398 in.-lbs. [45 Nm]
Maximum Moment M_y	2213 in.-lbs. [250 Nm]	575 in.-lbs. [65 Nm]
Maximum Moment M_z	1452 in.-lbs. [164 Nm]	575 in.-lbs. [65 Nm]

†Capacities are per set of jaws and are not simultaneous

RTH/DTH-6M-L Loading Information



Loading Capacity†

	Static	Dynamic
Maximum Tensile T	868 lbs. [3860 N]	192 lbs. [852 N]
Maximum Compressive C	1165 lbs. [5180 N]	192 lbs. [852 N]
Maximum Moment M_x	1363 in.-lbs. [154 Nm]	257 in.-lbs. [29 Nm]
Maximum Moment M_y	1761 in.-lbs. [199 Nm]	327 in.-lbs. [37 Nm]
Maximum Moment M_z	1159 in.-lbs. [131 Nm]	327 in.-lbs. [37 Nm]

†Capacities are per set of jaws and are not simultaneous

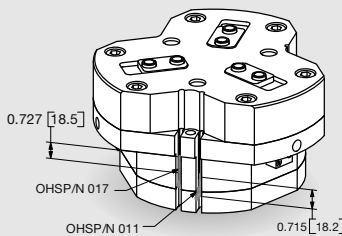
Specifications

Total Rated Grip Force, F @ 100 psi [7 bar]:		
Without Spring Assist	2294 lbs.	10202 N
Without Spring Assist -L	1490 lbs.	6629 N
With Spring Assist	3099 lbs.	13786 N
With Spring Assist -L	2017 lbs.	8971 N
Total Stroke:		
Standard	0.63 in.	16 mm
Extended -L	1.26 in.	32 mm
Weight	17.4 lbs.	7.89 Kg
Pressure Range without Spring	30-100 psi	2-7 Bar
Pressure Range with Spring	55-100 psi	4-7 Bar

Specifications (cont.)

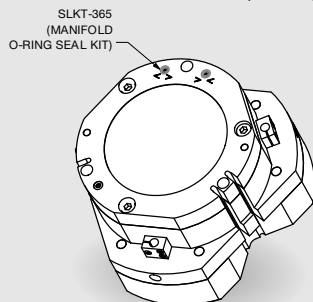
Max. Vacuum for Scavenge Port	8 in. Hg	20 mm Hg
Max. Pressure for Purge Port	30 psi	2.1 Bar
Cylinder Bore \emptyset	4.72 in.	120 mm
Displacement	22 in ³	355 cm ³
Temperature Range	-20°~300° F	-30°~150° C
Actuation (open/close)	0.36 sec./0.36 sec.	
Accuracy	±0.0032 in.	±0.08 mm
Repeatability	±0.002 in.	±0.04 mm
Valve required to actuate single acting		3-way, 2-position
Valve required to actuate double acting		4-way, 2-position

Accessory Mounting Technical Data



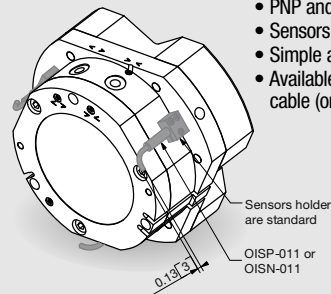
Magneto Resistive Sensors

- PNP and NPN Magneto Resistive available
- Sensors are slot mounted, no mounting kits required
- Simple adjustment with slotted screw driver
- Built in LED for ease of positioning and troubleshooting
- Available with 2M or 5M Quick Disconnect mating cable (order separately)



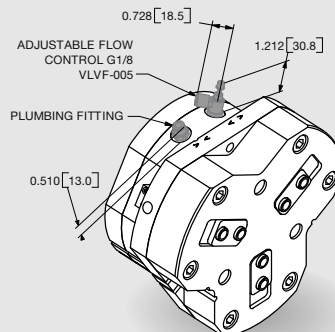
Manifold O-Ring seals

- Used to seal top air ports and purge/scavenge port
- No C'bore holes in customer's mounting plate required (C'bore are machined in the gripper's body)
- Seals in manifold kit are Buna-N (Viton® seal kit SLKT-365V)



Inductive Sensors

- PNP and NPN Magneto Resistive available
- Sensors holders and targets are standard mounted
- Simple adjustment of the target with screw driver
- Available with 2M or 5M Quick Disconnect mating cable (order separately)

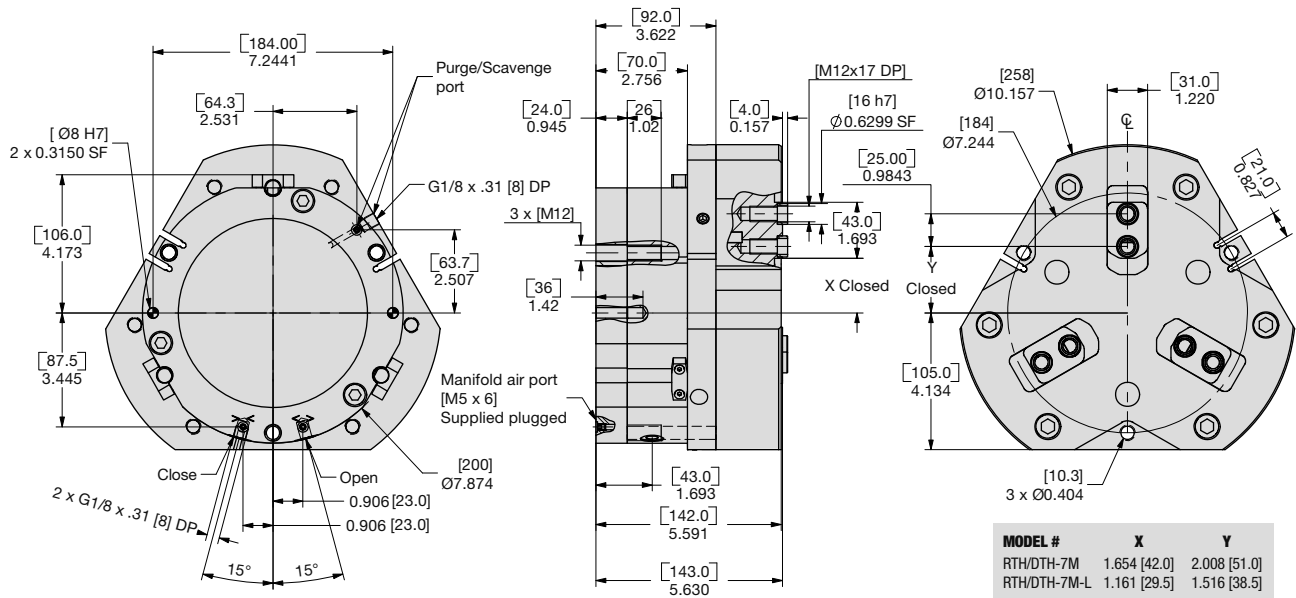


Plumbing Fittings

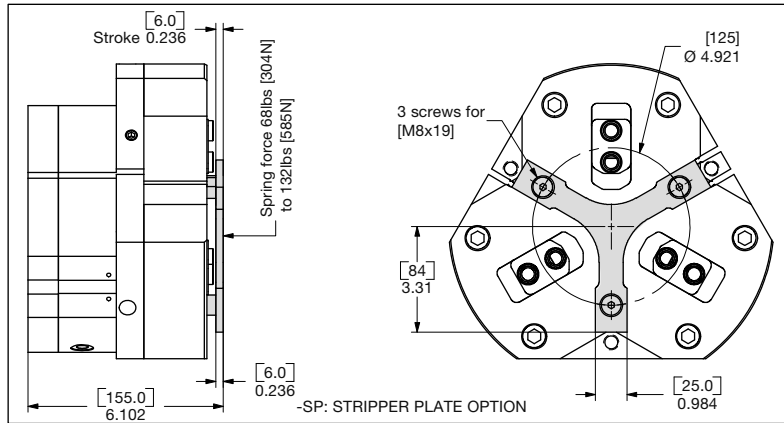
- Adjustable flow controls:
 - Have thumb screw adjust with locking nut for adjusting actuation time
 - Available for 6mm OD tubing
- Plumbing fittings:
 - For side air port location
 - Top air port are plugged as standard

PARALLEL GRIPPER RTH-7M 3-JAW CENTERING SERIES

1.244



MODEL #	X	Y
RTH/DTH-7M	1.654 [42.0]	2.008 [51.0]
RTH/DTH-7M-L	1.161 [29.5]	1.516 [38.5]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Symbol	Imperial in.	Metric [mm]
	0.00 = ±.01	[0.] = [±.25]
	0.000 = ±.005	[0.0] = [±.13]
	0.0000 = ±.0005	[0.00] = [±.013]

NOTE: DIRECTCONNECT™ DIMENSIONS ARE SHOWN IN BLUE

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

BASIC MODEL **SIZE** **METRIC** **SPRING ASSIST**

RTH - 7 M - L - SP - V

EXTENDED STROKE **STRIPPER PLATE**

BASIC MODEL	RTH	Without DIRECTCONNECT Mounting Pattern
SIZE	7	
METRIC	M	
EXTENDED STROKE	L	0.98" [25mm] Leave Blank (standard) 1.97" [50mm]
SPRING	C	Spring Closed
	O	Spring Open
		Leave Blank. No Spring Option (standard)
STRIPPER PLATE	SP	
VITON® SEALS	V	High Temperature Viton® Seals

SENSOR ACCESSORIES*

12mm NPN Inductive Sensor M12 w/Quick Disconnect*	OISN-017	1, 2 or 3
12mm PNP Inductive Sensor M12 w/Quick Disconnect*	OISP-017	1, 2 or 3
PNP Magneto Resistive Sensor M8 w/Qk Disc*	OHSN-017	1, 2 or 3
NPN Magneto Resistive Sensor M8 w/Qk Disc*	OHSN-017	1, 2 or 3
PNP Magneto Resistive Sensor (90° barrel) M8 w/Qk. Disc*	OHSN-011	1, 2 or 3
NPN Magneto Resistive Sensor (90° barrel) M8 w/Qk. Disc*	OHSN-011	1, 2 or 3
M8 Quick Disconnect 2 Meter Cable Length*	CABL-010	1, 2 or 3
M8 Quick Disconnect 5 Meter Cable Length*	CABL-013	1, 2 or 3
M12 Quick Disconnect 2 Meter Cable Length*	CABL-014	1, 2 or 3
M12 Quick Disconnect 5 Meter Cable Length*	CABL-018	1, 2 or 3

PNEUMATIC ACCESSORIES

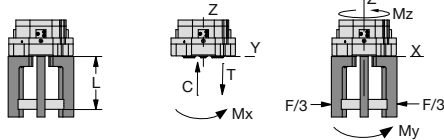
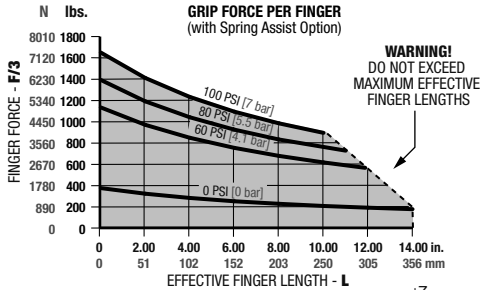
Buna-N Seal Repair Kit	SLKT-353	1
Buna-N Rear Inlet Seal Repair Kit	SLKT-365	1
Viton® Seal Repair Kit	SLKT-353V	1
Viton® Rear Inlet Seal Repair Kit	SLKT-365V	1
G 1/8" Adjustable Flow Control	VLVF-005	1 or 2

*Sensor and cable sold separately.

SAMPLE ORDER: RTH-7M-L-C-SP-V

Ex: RTH-7M Parallel Gripper, Metric, 50mm Extended Stroke, Spring Closed, Stripper Plate, Viton® Seals

RTH/DTH-7M Loading Information

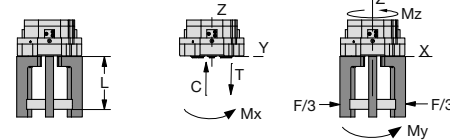
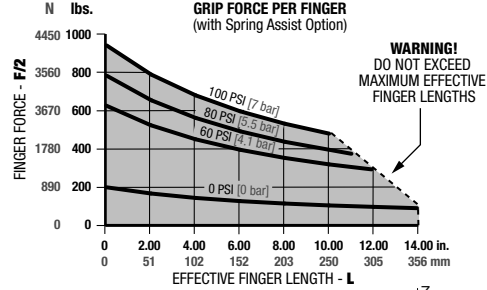


Loading Capacity†

	Static	Dynamic
Maximum Tensile T	1214 lbs. [5400 N]	396 lbs. [1763 N]
Maximum Compressive C	1601 lbs. [7120 N]	396 lbs. [1763 N]
Maximum Moment M_x	1903 in.-lbs. [215 Nm]	531 in.-lbs. [60 Nm]
Maximum Moment M_y	2699 in.-lbs. [305 Nm]	761 in.-lbs. [86 Nm]
Maximum Moment M_z	1841 in.-lbs. [208 Nm]	761 in.-lbs. [86 Nm]

†Capacities are per set of jaws and are not simultaneous

RTH/DTH-7M-L Loading Information



Loading Capacity†

	Static	Dynamic
Maximum Tensile T	1054 lbs. [4690 N]	257 lbs. [1141 N]
Maximum Compressive C	1389 lbs. [6180 N]	257 lbs. [1141 N]
Maximum Moment M_x	1646 in.-lbs. [186 Nm]	345 in.-lbs. [39 Nm]
Maximum Moment M_y	2036 in.-lbs. [230 Nm]	425 in.-lbs. [48 Nm]
Maximum Moment M_z	1381 in.-lbs. [156 Nm]	425 in.-lbs. [48 Nm]

†Capacities are per set of jaws and are not simultaneous

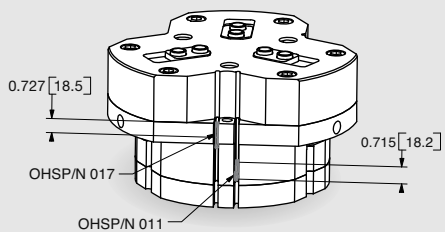
Specifications

Total Rated Grip Force, F @ 100 psi [7 bar]:		
Without Spring Assist	3859 lbs.	17165 N
Without Spring Assist -L	2496 lbs.	11102 N
With Spring Assist	4967 lbs.	22093 N
With Spring Assist -L	3222 lbs.	14322 N
Total Stroke:		
Standard	0.98 in.	25 mm
Extended -L	1.97 in.	50 mm
Weight	34.6 lbs.	15.7 Kg
Pressure Range without Spring	30-100 psi	2-7 Bar
Pressure Range with Spring	55-100 psi	4-7 Bar

Specifications (cont.)

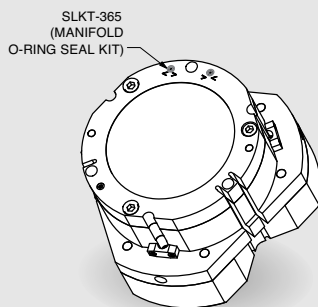
Max. Vacuum for Scavenge Port	8 in. Hg	20 mm Hg
Max. Pressure for Purge Port	30 psi	2.1 Bar
Cylinder Bore \varnothing	6.15 in.	156 mm
Displacement	37 in ³	940 cm ³
Temperature Range	-20°~300° F	-30°~150° C
Actuation (open/close)	0.85 sec./0.85 sec.	
Accuracy	±0.004 in.	±0.1 mm
Repeatability	±0.002 in.	±0.05 mm
Valve required to actuate single acting		3-way, 2-position
Valve required to actuate double acting		4-way, 2-position

Accessory Mounting Technical Data



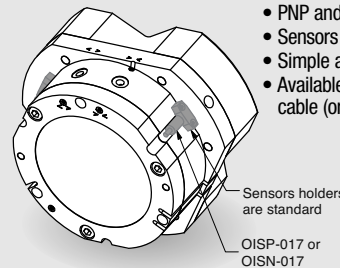
Magneto Resistive Sensors

- PNP and NPN Magneto Resistive available
- Sensors are slot mounted, no mounting kits required
- Simple adjustment with slotted screw driver
- Built in LED for ease of positioning and troubleshooting
- Available with 2M or 5M Quick Disconnect mating cable (order separately)



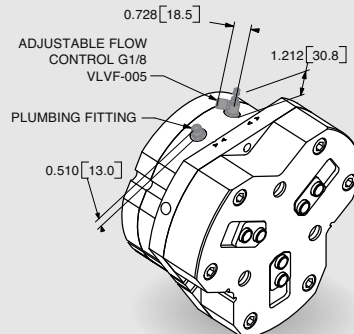
Manifold O-Ring seals

- Used to seal top air ports and purge/scavenge port
- No C'bore holes in customer's mounting plate required (C'bore are machined in the gripper's body)
- Seals in manifold kit are Buna-N (Viton® seal kit SLKT-365V)



Inductive Sensors

- PNP and NPN Magneto Resistive available
- Sensors holders and targets are standard mounted
- Simple adjustment of the target with screw driver
- Available with 2M or 5M Quick Disconnect mating cable (order separately)

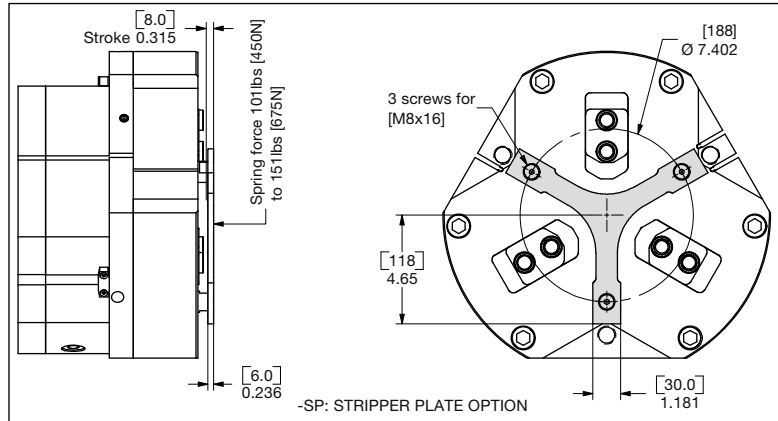
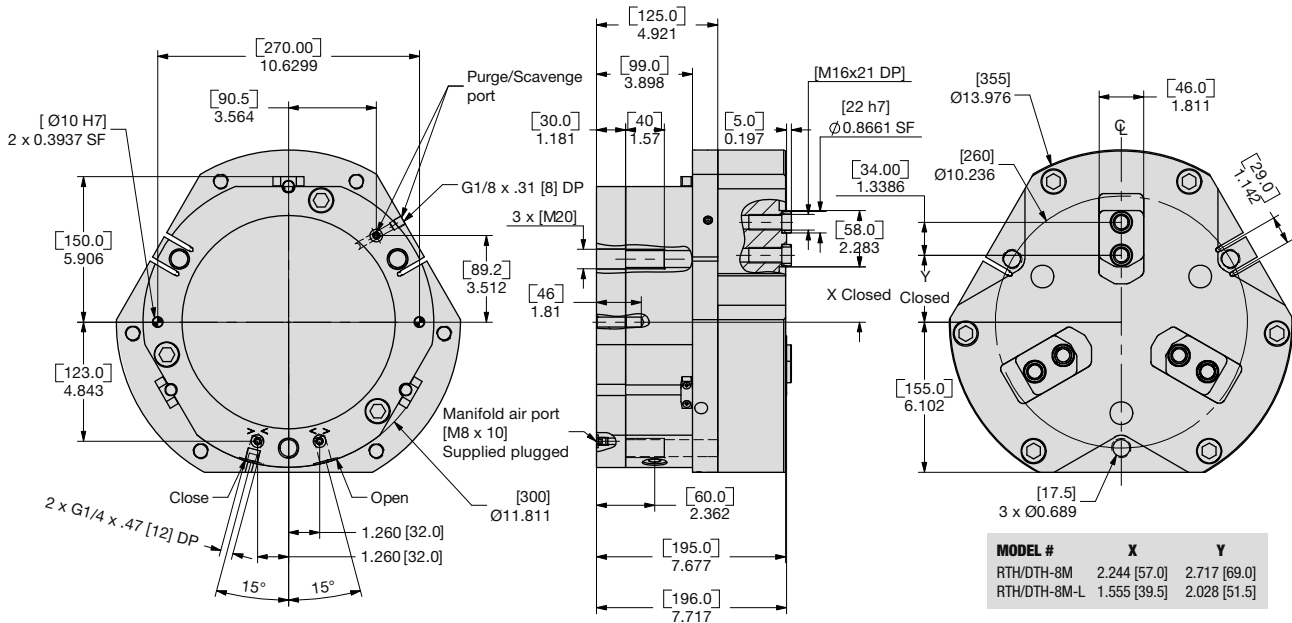


Plumbing Fittings

- Adjustable flow controls:
 - Have thumb screw adjust with locking nut for adjusting actuation time
 - Available for 6mm OD tubing
- Plumbing fittings:
 - For side air port location
 - Top air port are plugged as standard

PARALLEL GRIPPER RTH-8M 3-JAW CENTERING SERIES

1.246



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

				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	0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	[0.] = [±.25] [0.0] = [±.13] [0.00] = [±.013]

NOTE: DIRECTCONNECT™ DIMENSIONS ARE SHOWN IN BLUE

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

BASIC MODEL **SIZE** **METRIC** **SPRING ASSIST**

RTH - 8 M - L - SP - V

EXTENDED STROKE **STRIPPER PLATE**

BASIC MODEL	RTH	Without DIRECTCONNECT Mounting Pattern
SIZE	8	
METRIC	M	
EXTENDED STROKE	L	1.38" [35mm] Leave Blank (standard) 2.76" [70mm]
SPRING	C	Spring Closed
	O	Spring Open
		Leave Blank. No Spring Option (standard)
STRIPPER PLATE	SP	
VITON® SEALS	V	High Temperature Viton® Seals

SENSOR ACCESSORIES*

12mm NPN Inductive Sensor M12 w/Quick Disconnect*	OISN-017	1, 2 or 3
12mm PNP Inductive Sensor M12 w/Quick Disconnect*	OISP-017	1, 2 or 3
PNP Magneto Resistive Sensor M8 w/Qk Disc*	OHSN-017	1, 2 or 3
NPN Magneto Resistive Sensor M8 w/Qk Disc*	OHSN-017	1, 2 or 3
PNP Magneto Resistive Sensor (90° barrel) M8 w/Qk. Disc*	OHSN-011	1, 2 or 3
NPN Magneto Resistive Sensor (90° barrel) M8 w/Qk. Disc*	OHSN-011	1, 2 or 3
M8 Quick Disconnect 2 Meter Cable Length*	CABL-010	1, 2 or 3
M8 Quick Disconnect 5 Meter Cable Length*	CABL-013	1, 2 or 3
M12 Quick Disconnect 2 Meter Cable Length*	CABL-014	1, 2 or 3
M12 Quick Disconnect 5 Meter Cable Length*	CABL-018	1, 2 or 3

PNEUMATIC ACCESSORIES

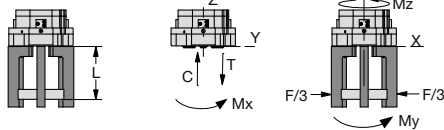
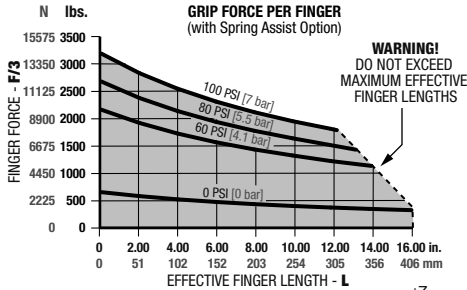
Buna-N Seal Repair Kit	SLKT-354	1
Buna-N Rear Inlet Seal Repair Kit	SLKT-366	1
Viton® Seal Repair Kit	SLKT-354V	1
Viton® Rear Inlet Seal Repair Kit	SLKT-366V	1
G 1/4" Adjustable Flow Control	VLVF-010	1 or 2
Adapter G 1/4 Male to 1/4 NPT Female	PLFT-024	1 or 2

*Sensor and cable sold separately.

SAMPLE ORDER: RTH-8M-L-C-SP-V

Ex: RTH-8M Parallel Gripper, Metric, 70mm Extended Stroke, Spring Closed, Stripper Plate, Viton® Seals

RTH/DTH-8M Loading Information

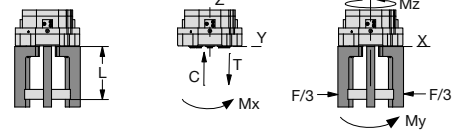
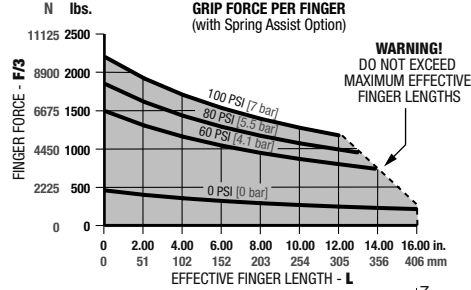


Loading Capacity†

	Static	Dynamic
Maximum Tensile T	1850 lbs. [8230 N]	614 lbs. [2733 N]
Maximum Compressive C	2405 lbs. [10700 N]	614 lbs. [2733 N]
Maximum Moment M_x	4027 in.-lbs. [455 Nm]	1159 in.-lbs. [131 Nm]
Maximum Moment M_y	5116 in.-lbs. [578 Nm]	1478 in.-lbs. [167 Nm]
Maximum Moment M_z	3204 in.-lbs. [362 Nm]	1478 in.-lbs. [167 Nm]

†Capacities are per set of jaws and are not simultaneous

RTH/DTH-8M-L Loading Information



Loading Capacity†

	Static	Dynamic
Maximum Tensile T	1592 lbs. [7080 N]	398 lbs. [1772 N]
Maximum Compressive C	2070 lbs. [9210 N]	398 lbs. [1772 N]
Maximum Moment M_x	3461 in.-lbs. [391 Nm]	752 in.-lbs. [85 Nm]
Maximum Moment M_y	3788 in.-lbs. [428 Nm]	823 in.-lbs. [93 Nm]
Maximum Moment M_z	2372 in.-lbs. [268 Nm]	823 in.-lbs. [93 Nm]

†Capacities are per set of jaws and are not simultaneous

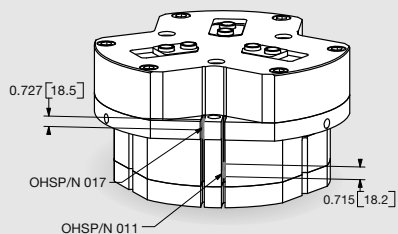
Specifications

Total Rated Grip Force, F @ 100 psi [7 bar]:		
Without Spring Assist	7933 lbs.	35288 N
Without Spring Assist -L	5122 lbs.	22784 N
With Spring Assist	9971 lbs.	44354 N
With Spring Assist -L	6450 lbs.	28690 N
Total Stroke:		
Standard	1.38 in.	35 mm
Extended -L	2.76 in.	70 mm
Weight	96.8 lbs.	43.9 Kg
Pressure Range without Spring	30-100 psi	2-7 Bar
Pressure Range with Spring	50-100 psi	3.5-7 Bar

Specifications (cont.)

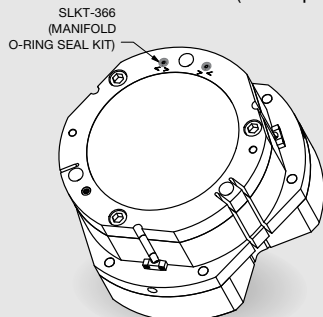
Max. Vacuum for Scavenge Port	8 in. Hg	20 mm Hg
Max. Pressure for Purge Port	30 psi	2.1 Bar
Cylinder Bore Ø	8.86 in.	225 mm
Displacement	166 in. ³	2720 cm ³
Temperature Range	-20°~300° F	-30°~150° C
Actuation (open/close)	1.7 sec./1.7 sec.	
Accuracy	±0.004 in.	±0.01 mm
Repeatability	±0.002 in.	±0.05 mm
Valve required to actuate single acting	3-way, 2-position	
Valve required to actuate double acting	4-way, 2-position	

Accessory Mounting Technical Data



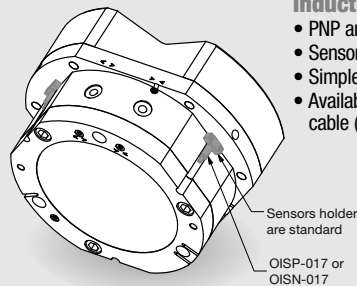
Magneto Resistive Sensors

- PNP and NPN Magneto Resistive available
- Sensors are slot mounted, no mounting kits required
- Simple adjustment with slotted screw driver
- Built in LED for ease of positioning and troubleshooting
- Available with 2M or 5M Quick Disconnect mating cable (order separately)



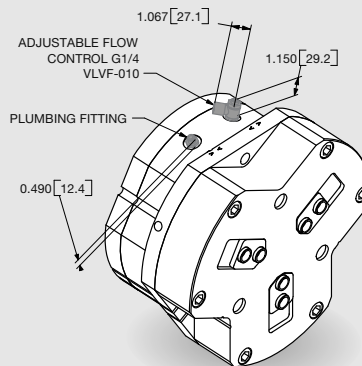
Manifold O-Ring seals

- Used to seal top air ports and purge/scavenge port
- No C' bore holes in customer's mounting plate required (C' bore are machined in the gripper's body)
- Seals in manifold kit are Buna-N (Viton® seal kit SLKT-366V)



Inductive Sensors

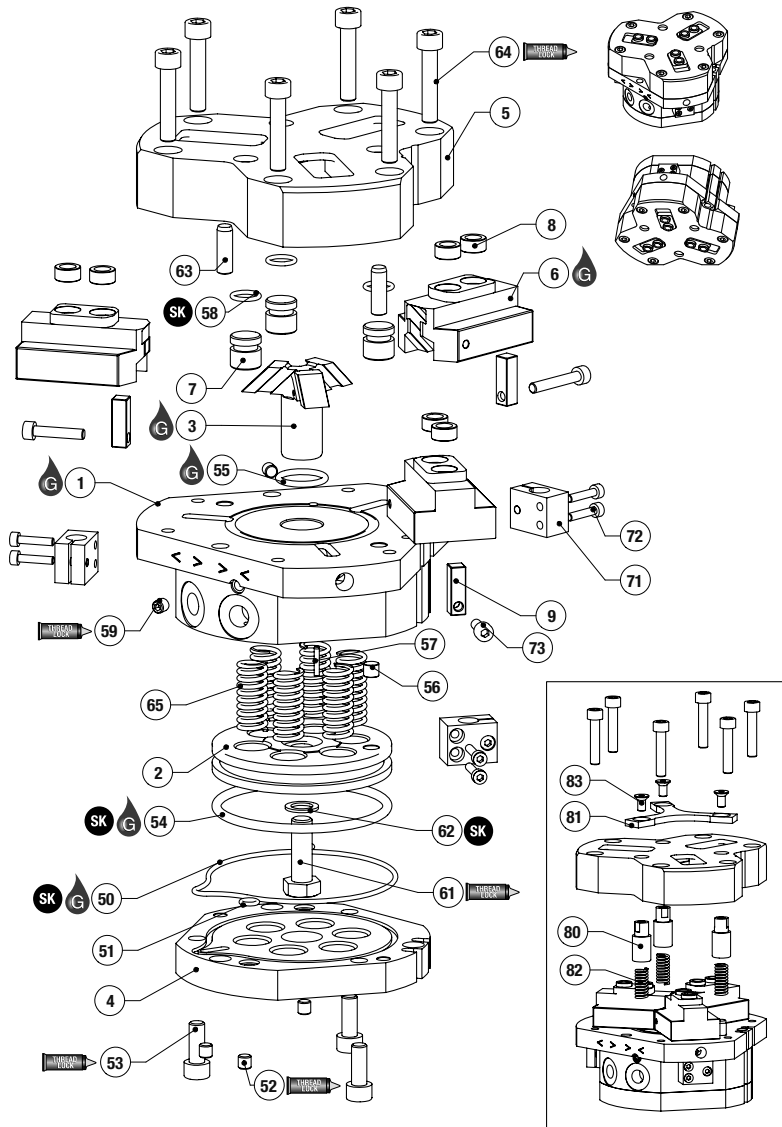
- PNP and NPN Magneto Resistive available
- Sensors holders and targets are standard mounted
- Simple adjustment of the target with screw driver
- Available with 2M or 5M Quick Disconnect mating cable (order separately)



Plumbing Fittings

- Adjustable flow controls:
 - Have thumb screw adjust with locking nut for adjusting actuation time
 - Available for 6mm OD tubing
- Plumbing fittings:
 - For side air port location
 - Top air port are plugged as standard

RTH/DTH Series Exploded View



Item	Qty	Name
01	1	Body
02	1	Piston
03	1	Triple wedge
04	1	Cap
05	1	Bottom Case
06	3	Jaws
07	3	Plug
08	6	Locating sleeve
09	3	Sensing nut
50	1	Cap, O-ring
51	2	Cap, O-ring
52	3	Cap, SS screw
53	3	Cap, SHC screw
54	1	Piston, O-ring
55	1	Body, O-ring
56	1	Piston, Magnet
57	1	Piston, Pin
58	3	Plug, O-Ring
59	2	Body, SS screw
61	1	Triple wedge, HH screw
62	1	Triple wedge, Seal
63	2	Slide, Pin
64	6	Slide, SHC Screw
65	6	Spring
71	3	Sensor holder
72	6	Sensor holder, SHC screw
73	3	Sensing nut, SHC screw
80	3	Stud
81	1	Pressure plate
82	3	Springs
83	3	Stud, screw

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

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

Assembly Procedure

- Lubricate and install seals #55 into the body #1
- Install #59 SS screws with thread locker into the body #1
- Sub assemble the sensing nuts #9 into the jaws #6
- Sub assemble the jaws #6 on either side of the triple wedge #3 with lubrication
- Insert the jaws and triple wedge sub assembly into the body. To ensure a good positioning of the magnet, the dowel hole of the triple wedge (on tapped hole side) has to be positioned on the opposite side of the air ports (except size 1). For size 1, it has to be positioned between the sensor slots of the body.
- Install seals #58 into the plugs #7
- Insert the plugs #7 into the bottom case #5
- Install bottom case #5 with pressed-in pins #63 onto the body and fasten with #64 screws with thread locker
- Lubricate and install seals #54 into the piston #2
- Mount magnet #56 to piston #2 with thread locker
- For **-C** option, insert the spring #65 into the body counterbore holes
- Insert the piston #2 with pressed-in pin #57 onto the triple wedge #3 and fasten with screw #61 and washer #62. Face mount the piston counterbore holes to the body counterbore holes for **-C** option. Opposite mount for **-O** option. For **-O** option, insert the spring #65 into the piston counterbore holes
- Install #52 air ports plugs with thread locker onto the cap #4
- Install seals #50 and #51 into the cap #4
- Insert the cap into the body and locate it using cap dowel pin holes

- Fasten the cap with #53 screws with thread locker
- Install the sensor holder #71 onto the body and fasten with screw #72
- Insert screw #73 into the sensing nuts #9 from the body holes
- Insert locating sleeves #8 into the jaws

-SP Assembly Procedure

- Disassemble bottom case #5 unfastening #64 screws
- Sub assemble springs #82 into the stud #70
- Insert the spring and stud sub assembly into the bottom case
- Install bottom case #5 onto the body and fasten with #64 screws with thread locker
- Install pressure plate #8 onto the studs and fasten with #83 screws



Seal Kit Items



Thread Locker



Krytox™ Lubricant



Lightweight Machine Oil



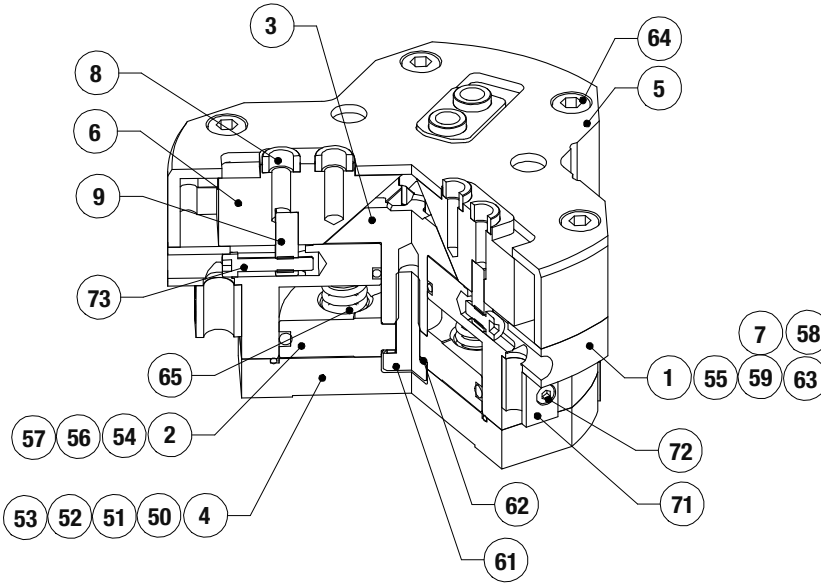
Teflon® Based Grease



Super Bonder



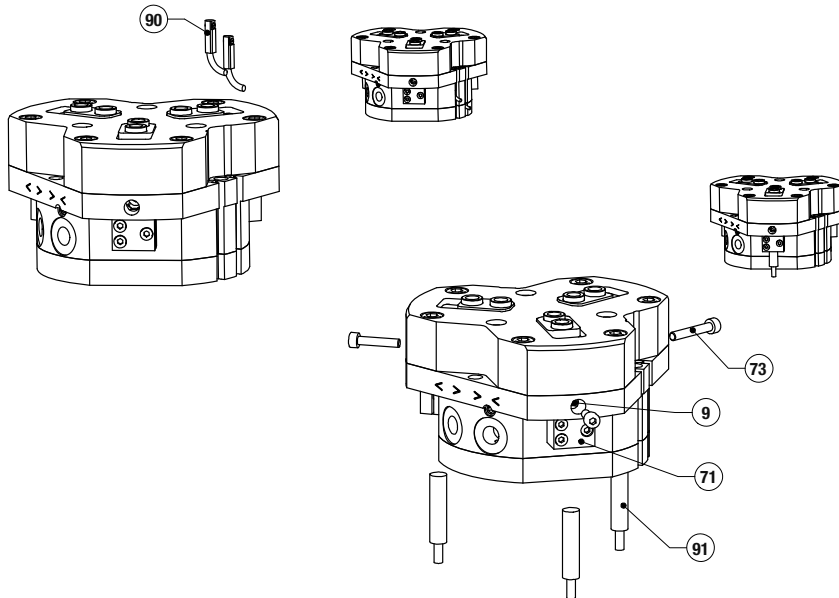
Third Angle Projection



Item	Qty	Name
01	1	Body
02	1	Piston
03	1	Triple wedge
04	1	Cap
05	1	Bottom Case
06	3	Jaws
07	3	Plug
08	6	Locating sleeve
09	3	Sensing nut
50	1	Cap, O-ring
51	2	Cap, O-ring
52	3	Cap, SS screw
53	3	Cap, SHC screw
54	1	Piston, O-ring
55	1	Body, O-ring
56	1	Piston, Magnet
57	1	Piston, Pin
58	3	Plug, O-Ring
59	2	Body, SS screw
61	1	Triple wedge, HH screw
62	1	Triple wedge, Seal
63	2	Slide, Pin
64	6	Slide, SHC Screw
65	6	Spring
71	3	Sensor holder
72	6	Sensor holder, SHC screw
73	3	Sensing nut, SHC screw

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

Accessory Installation & Adjustment Instructions



Magneto Resistive Sensor

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

Inductive Sensor

- 1) Insert sensors #91 into the sensor holder #72
- 2) Tighten the sensor using the SHC screw onto the sensor holder #72
- 3) Insert the SHC screw #73 into the sensing nuts #9. The SHC screws are the targets to be adjusted in front of the sensor. Depending on the position to sense, use different length for the SHC screw #73 (shortest screw for open position, longest screw for close position). The sensing nut #9 has a thread insert that prevents the target from loosening. This may make the target harder to tighten into the nut.



Seal Kit Items



Thread Locker



Krytox™ Lubricant



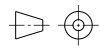
Lightweight Machine Oil



Teflon® Based Grease



Super Bonder

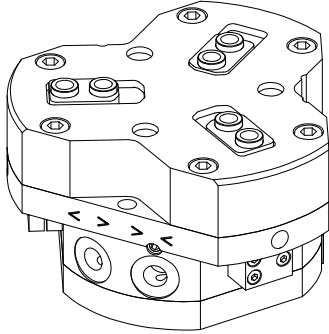


Third Angle Projection

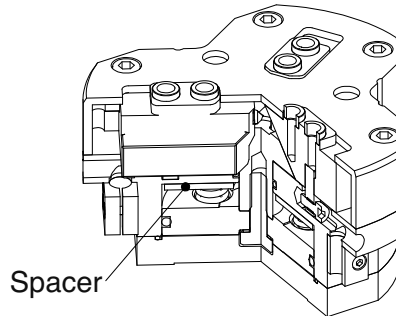
RTH/DTH SERIES SPECIALS

Fixed Jaws, Food-Grade Grease, Stroke Limiters, Custom Fingers and Jaws, Stainless Steel Components and more...

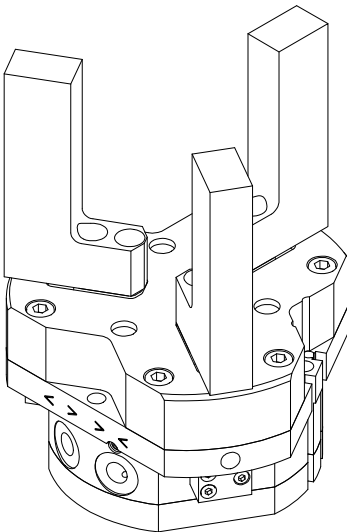
Drawings are for concept only. Contact Robohand Tech Support with project requirements.



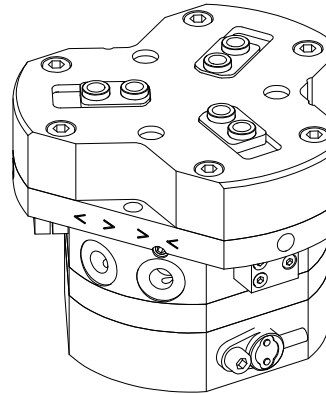
Fixed Jaws



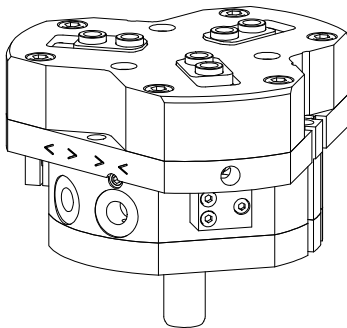
Stroke Limiter



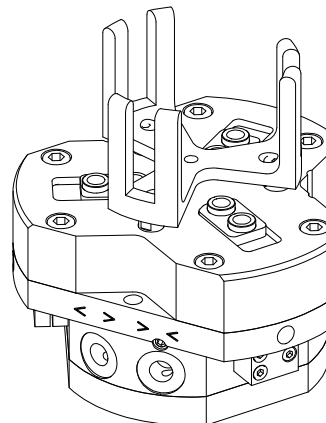
Custom Fingers and Jaws



**Built-in Sensor with 2 Sensing Faces
2 or 3 Wire Technology**



Shaft Output



Custom Stripper Plate