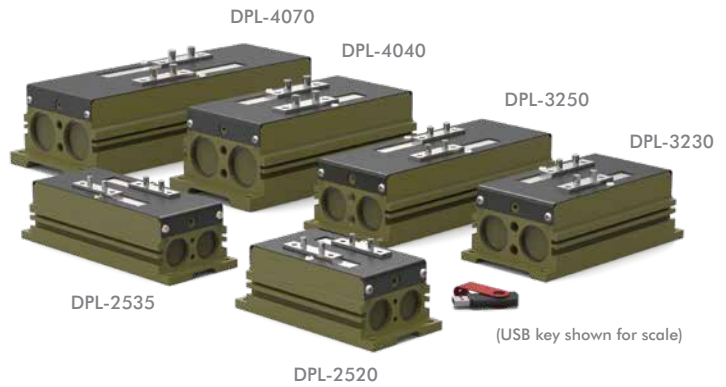


DPL SERIES

2-Jaw Precision Parallel Grippers | Features and Benefits | How To Order

Features:

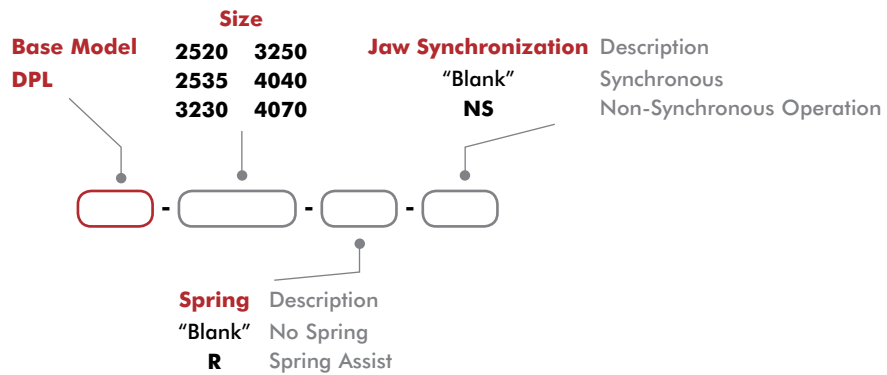
- Robust long stroke, high grip force precision gripper
- Rack and pinion design with double acting pistons
- Shielded design to repel chips and particulates
- Synchronous or non-synchronous jaw operation
- Spring assist option maintains grip in case of air pressure loss
- Multi-position sensing up to 3 locations



Applications:

- Packaging, pick and place applications
- Long finger gripping applications
- Large and heavy part handling

How To Order



Accessories

Sensor Accessories	Model Numbers	Part Number	Qty/Unit
M8 PNP Magneto Resistive Sensor with Quick Disconnect*	All Models	OHSP-017	1-3
M8 NPN Magneto Resistive Sensor with Quick Disconnect*	All Models	OHSN-017	1-3
M8 PNP Magneto Resistive Sensor (90° barrel) w/Qk. Disc.*	All Models	OHSP-011	1-3
M8 NPN Magneto Resistive Sensor (90° barrel) w/Qk. Disc.*	All Models	OHSN-011	1-3
M8 PNP Inductive Sensor with Quick Disconnect*	2520, 2535, 3230, 3250	OISP-011	1-3
M8 NPN Inductive Sensor with Quick Disconnect*	2520, 2535, 3230, 3250	OISN-011	1-3
M12 PNP Inductive Sensor with Quick Disconnect*	4040, 4070	OISP-017	1-3
M12 NPN Inductive Sensor with Quick Disconnect*	4040, 4070	OISN-017	1-3
Inductive Sensor Mounting Kit (3 Holders + 2 Flags)	See Datasheet		1
M8 Quick Disconnect 2 Meter Cable Length*	All Models	CABL-010	1-3
M8 Quick Disconnect 5 Meter Cable Length*	All Models	CABL-013	1-3
M12 Quick Disconnect 2 Meter Cable Length*	4040, 4070	CABL-014	1-3
M12 Quick Disconnect 5 Meter Cable Length*	4040, 4070	CABL-018	1-3

Pneumatic Accessories	Model Numbers	Part Number	Qty/Unit
Fitting Push-in Straight M5 - 6mm O.D. Tube	2520, 2535	PLFT-037	1-2
Fitting Push-in 90° Elbow M5 - 6mm O.D. Tube	2520, 2535	PLFT-041	1-2
Fitting Push-in Straight G1/8 - 6mm O.D. Tube	3230, 3250, 4040, 4070	PLFT-038	1-2
Fitting Push-in 90° Elbow G1/8 - 6mm O.D. Tube	3230, 3250, 4040, 4070	PLFT-042	1-2

*Sensor and cable sold separately.

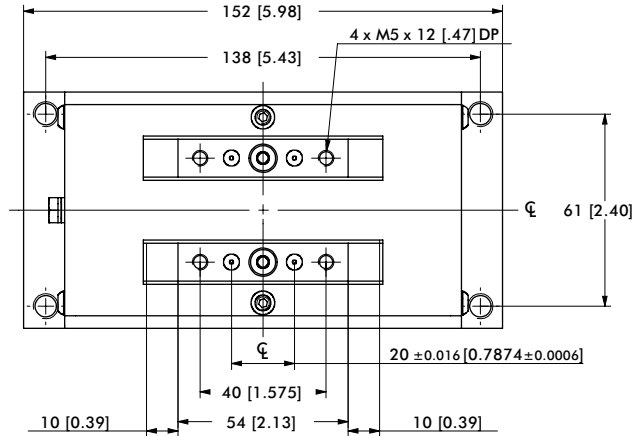
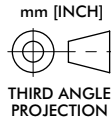
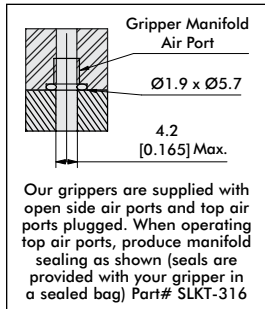
2-Jaw Precision Parallel Grippers | Technical Specifications

Specifications	Units	2520	2535	3230
Total Rated Grip Force F @ 100 psi	N [lb]	811 [182]	768 [173]	1359 [306]
Total Stroke	mm [in]	40 [1.57]	70 [2.76]	60 [2.36]
Weight	kg [lbs]	1.38 [3.04]	1.80 [3.97]	2.26 [4.98]
Pressure Range (without springs)	bar [psi]	2-7 [30-100]		
Pressure Range (with springs)	bar [psi]	4-7 [60-100]		
Ingress Protection Class (IP)		IP54		
Displacement	cm ³ [in ³]	39 [2.38]	68 [4.15]	96 [5.86]
Temperature Range	°C [°F]	-20°~80° [-4°~180°]		
Actuation	sec	0.3	0.4	0.4
Accuracy	mm [in]	±0.08 [±0.003]		
Repeatability	mm [in]	±0.025 [±0.0010]		
Valve to Actuate Single Acting		3-way, 2-position		
Valve to Actuate Double Acting		4-way, 2-position		

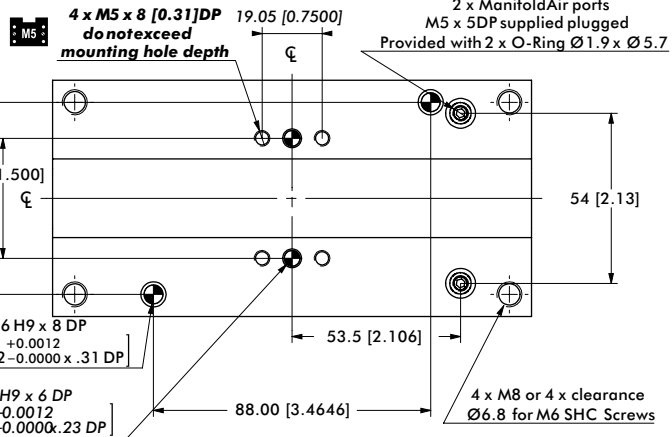
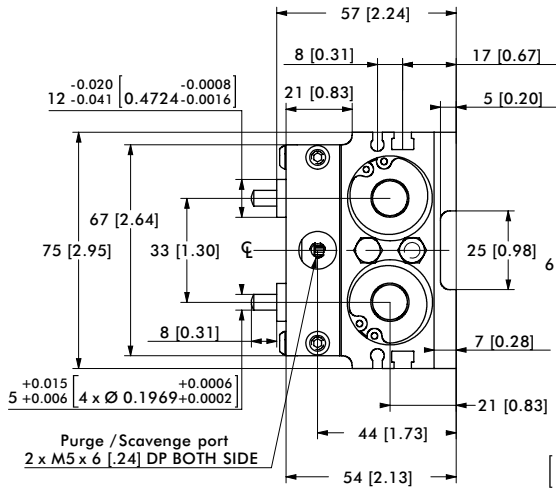
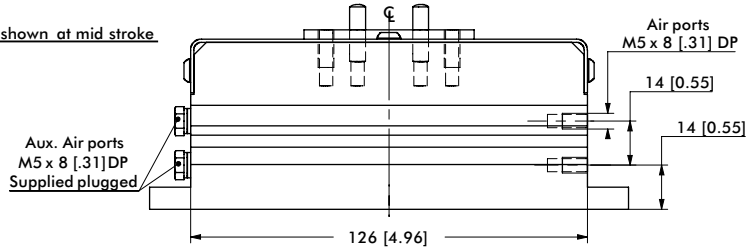
Specifications	Units	3250	4040	4070
Total Rated Grip Force F @ 100 psi	N [lb]	1306 [294]	2035 [457]	2029 [456]
Total Stroke	mm [in]	100 [3.94]	80 [3.15]	140 [5.51]
Weight	kg [lbs]	3.02 [6.66]	4.30 [9.48]	6.00 [13.23]
Pressure Range (without springs)	bar [psi]	2-7 [30-100]		
Pressure Range (with springs)	bar [psi]	4-7 [60-100]		
Ingress Protection Class (IP)		IP54		
Displacement	cm ³ [in ³]	160 [9.96]	200 [12.20]	350 [21.36]
Temperature Range	°C [°F]	-20°~80° [-4°~180°]		
Actuation	sec	0.5	0.5	0.7
Accuracy	mm [in]	±0.08 [±0.003]		
Repeatability	mm [in]	±0.025 [±0.0010]		
Valve to Actuate Single Acting		3-way, 2-position		
Valve to Actuate Double Acting		4-way, 2-position		

2-Jaw Precision Parallel Grippers | Dimensions and Technical Specifications

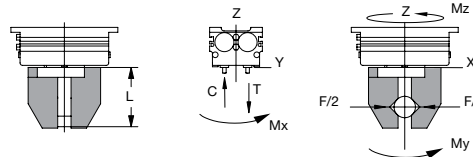
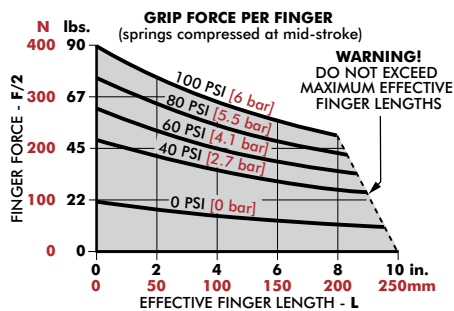
Sensor Accessories	2520
Inductive Sensor Mounting Kit (3 holders + 2 flags)	OSMK-099
Seal Repair Kits	2520
Buna-N Seal Repair Kit	SLKT-233
Rear Inlet Seal Repair Kit	SLKT-316
Mounting Accessories	2520
In-line Jaw Mounting Kit	ODPL-001



Jaws shown at mid stroke



Loading Information

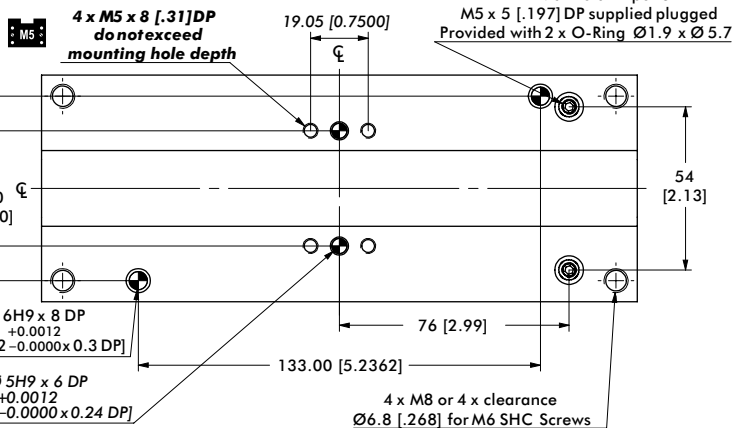
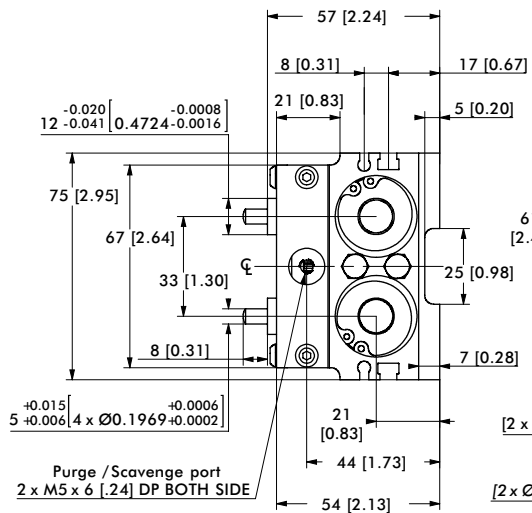
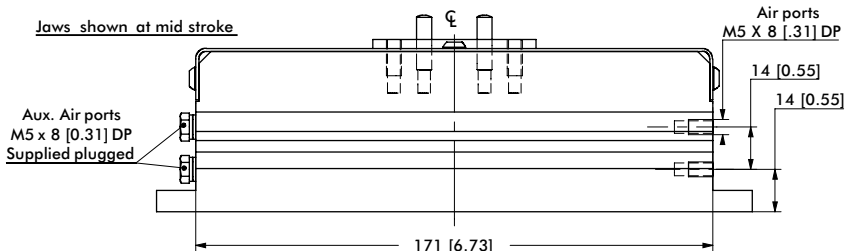
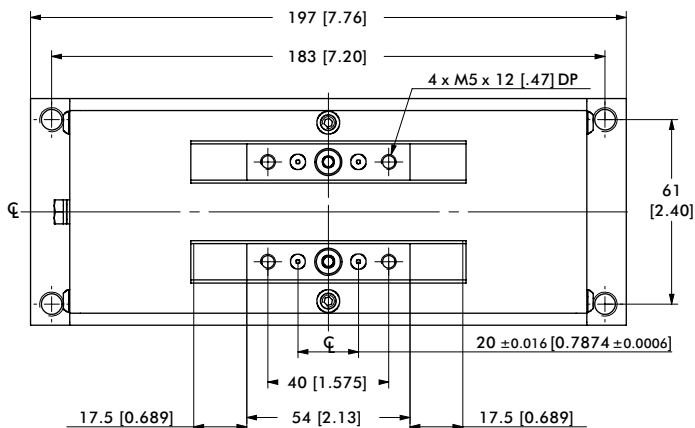
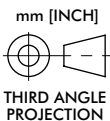
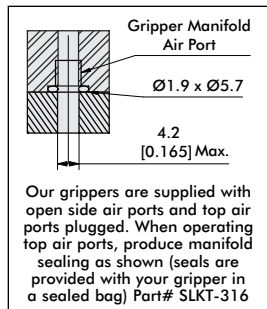


DPL-2520	Static	Dynamic
Maximum Tensile T	222 N [50 lbs]	67 N [15 lbs]
Maximum Compressive C	222 N [50 lbs]	67 N [15 lbs]
Maximum Moment M_x	6 Nm [50 in-lbs]	1 Nm [12 in-lbs]
Maximum Moment M_y	7 Nm [60 in-lbs]	2 Nm [15 in-lbs]
Maximum Moment M_z	6 Nm [50 in-lbs]	1 Nm [12 in-lbs]

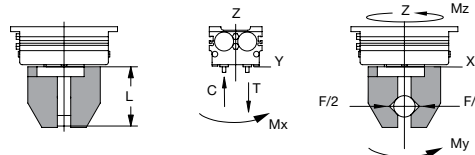
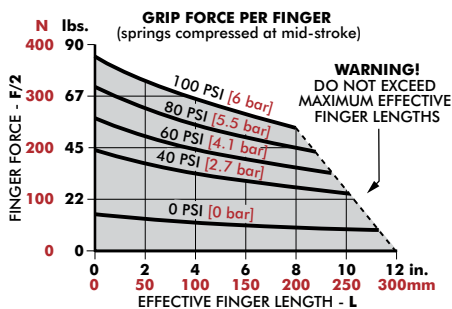
*Capacities are per set of jaws and are not simultaneous

2-Jaw Precision Parallel Grippers | Dimensions and Technical Specifications

Sensor Accessories	2535
Inductive Sensor Mounting Kit (3 holders + 2 flags)	OSMK-099
Seal Repair Kits	2535
Buna-N Seal Repair Kit	SLKT-233
Rear Inlet Seal Repair Kit	SLKT-316
Mounting Accessories	2535
In-line Jaw Mounting Kit	ODPL-002



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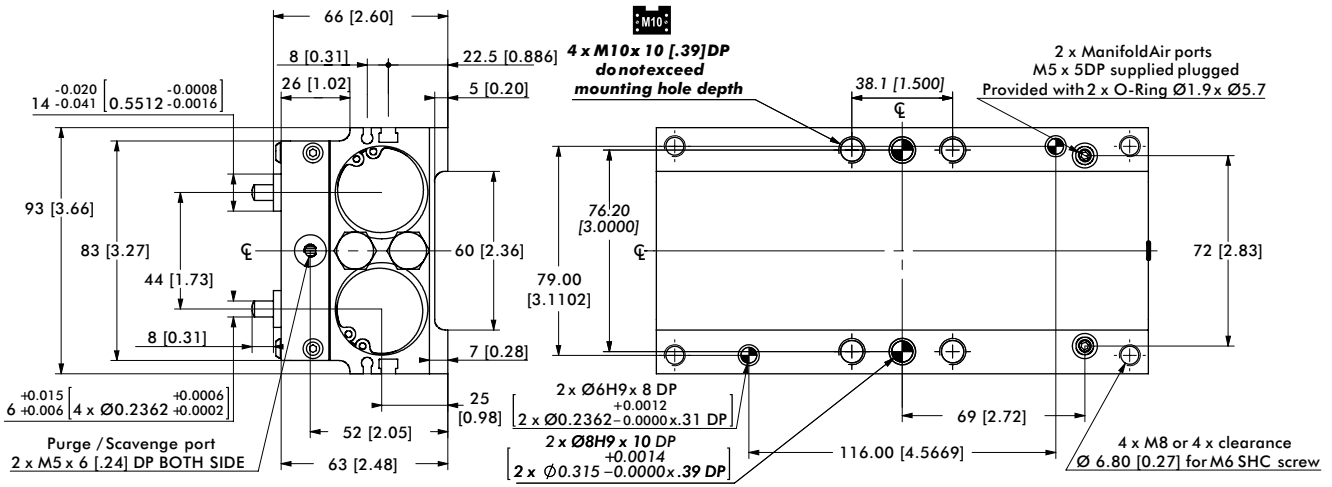
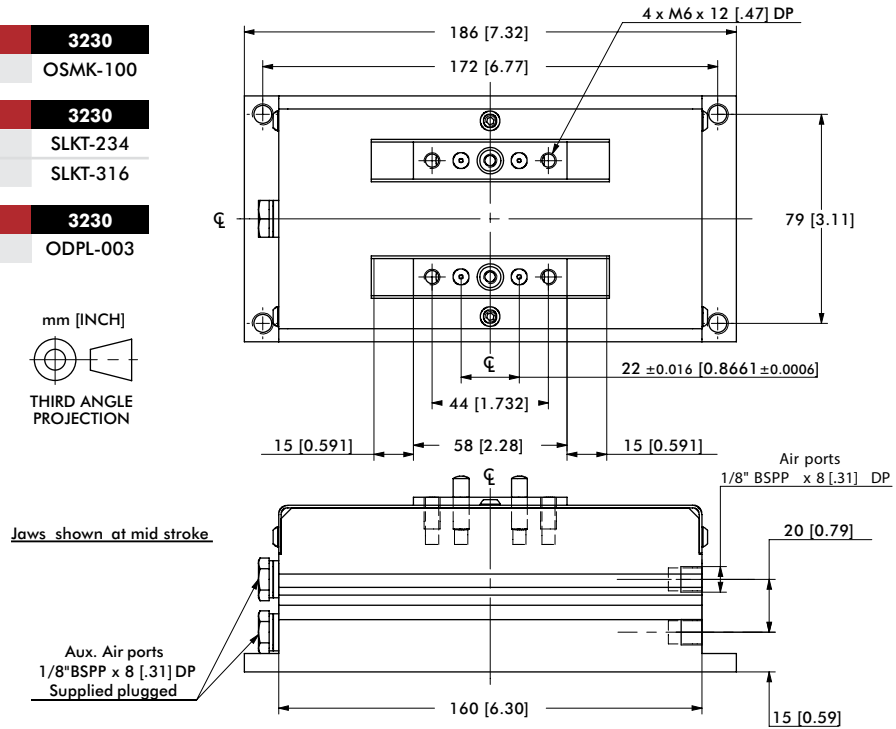
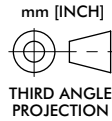
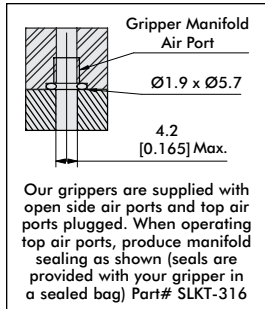


DPL-2335	Static	Dynamic
Maximum Tensile T	267 N [60 lb]	89 N [20 lb]
Maximum Compressive C	267 N [60 lb]	89 N [20 lb]
Maximum Moment M_x	11 Nm [100 in-lb]	3 Nm [25 in-lb]
Maximum Moment M_y	14 Nm [120 in-lb]	3 Nm [30 in-lb]
Maximum Moment M_z	11 Nm [100 in-lb]	3 Nm [25 in-lb]

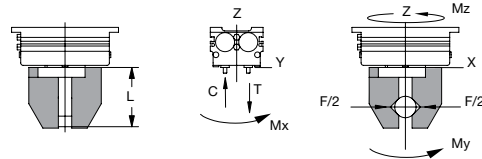
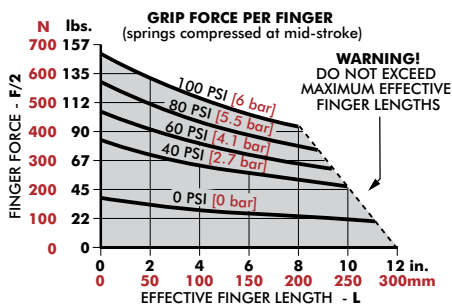
*Capacities are per set of jaws and are not simultaneous

2-Jaw Precision Parallel Grippers | Dimensions and Technical Specifications

Sensor Accessories	3230
Inductive Sensor Mounting Kit (3 holders + 2 flags)	OSMK-100
Seal Repair Kits	3230
Buna-N Seal Repair Kit	SLKT-234
Rear Inlet Seal Repair Kit	SLKT-316
Mounting Accessories	3230
In-line Jaw Mounting Kit	ODPL-003



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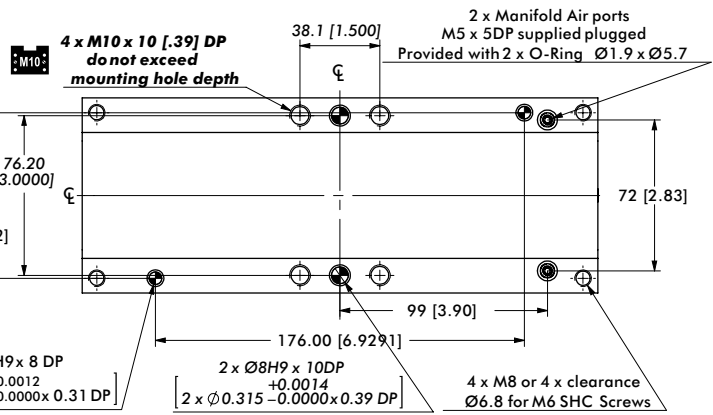
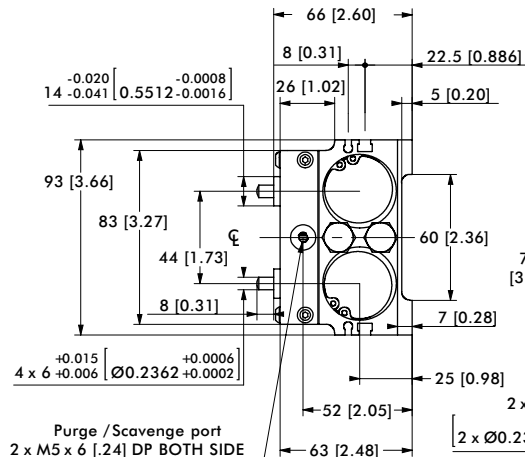
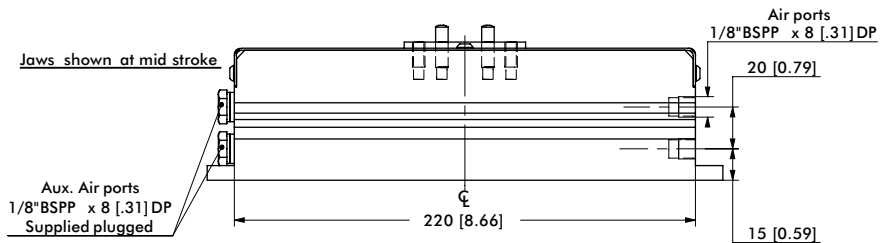
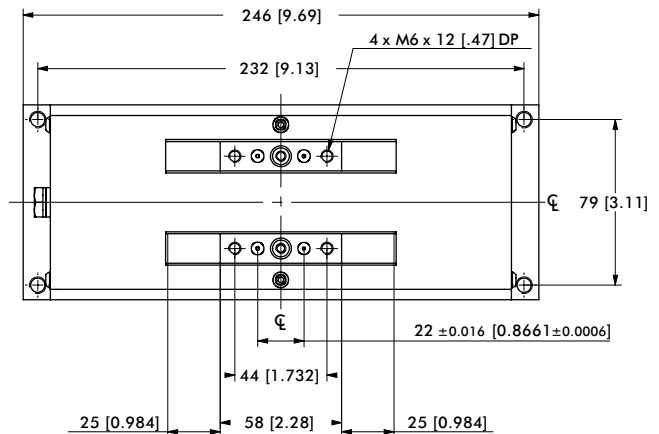
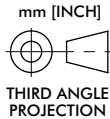
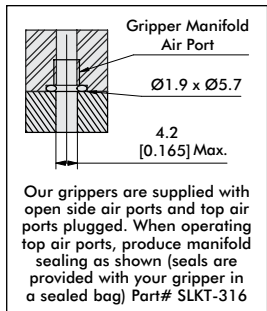


DPL-3230	Static	Dynamic
Maximum Tensile T	1525 N [343 lbs]	270 N [61 lbs]
Maximum Compressive C	1900 N [427 lbs]	270 N [61 lbs]
Maximum Moment M_x	76 Nm [673 in-lbs]	8 Nm [71 in-lbs]
Maximum Moment M_y	227 Nm [2009 in-lbs]	22 Nm [195 in-lbs]
Maximum Moment M_z	120 Nm [1062 in-lbs]	22 Nm [195 in-lbs]

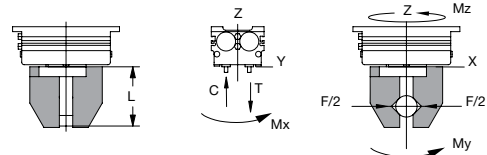
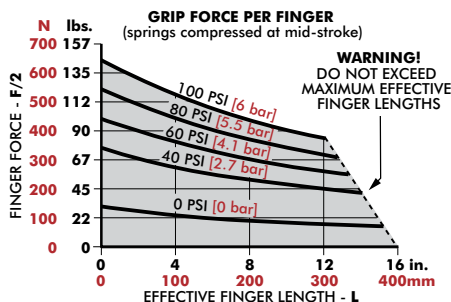
*Capacities are per set of jaws and are not simultaneous

2-Jaw Precision Parallel Grippers | Dimensions and Technical Specifications

Sensor Accessories	3250
Inductive Sensor Mounting Kit (3 holders + 2 flags)	OSMK-100
Seal Repair Kits	3250
Buna-N Seal Repair Kit	SLKT-234
Rear Inlet Seal Repair Kit	SLKT-316
Mounting Accessories	3250
In-line Jaw Mounting Kit	ODPL-004



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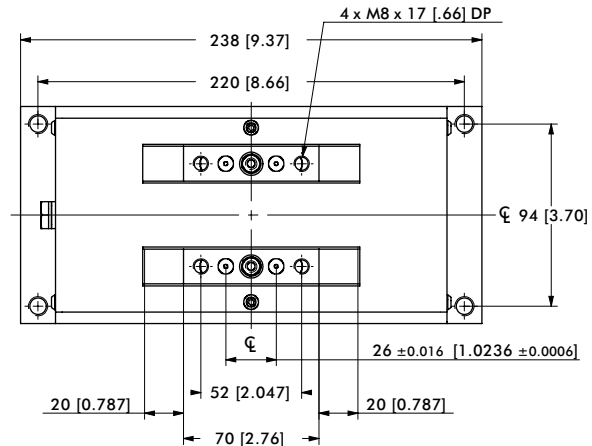
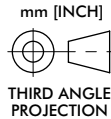
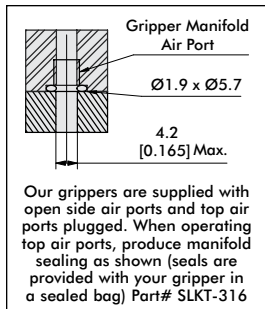


DPL-3250	Static	Dynamic
Maximum Tensile T	1850 N [416 lbs]	260 N [58 lbs]
Maximum Compressive C	2315 N [520 lbs]	260 N [58 lbs]
Maximum Moment M_x	87 Nm [770 in-lbs]	8 Nm [71 in-lbs]
Maximum Moment M_y	350 Nm [3098 in-lbs]	32 Nm [283 in-lbs]
Maximum Moment M_z	190 Nm [1682 in-lbs]	32 Nm [283 in-lbs]

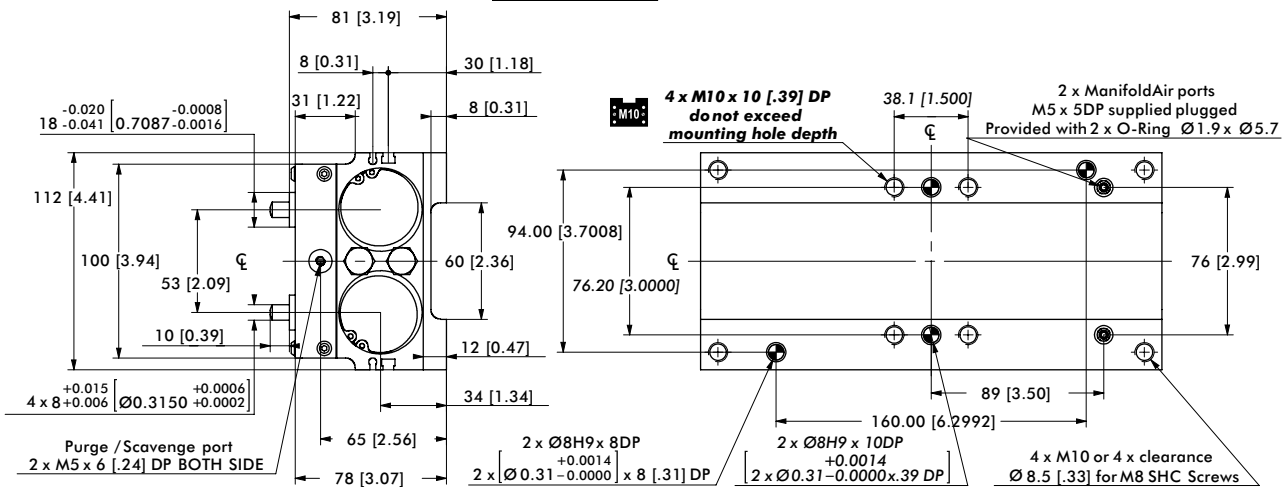
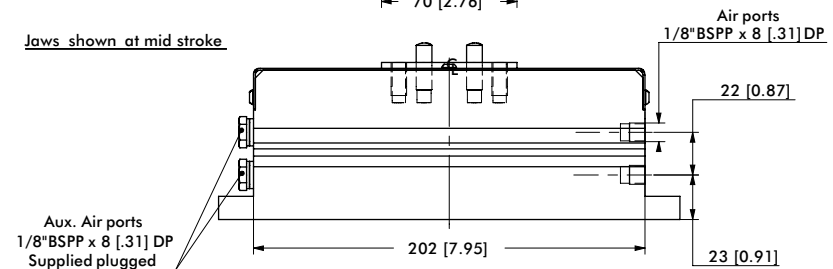
*Capacities are per set of jaws and are not simultaneous

2-Jaw Precision Parallel Grippers | Dimensions and Technical Specifications

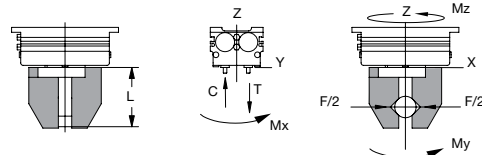
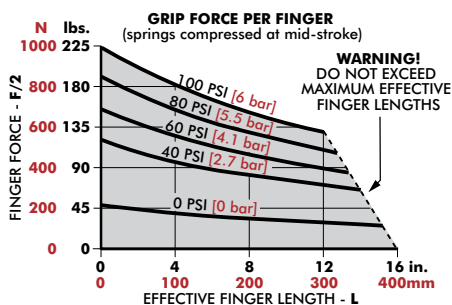
Sensor Accessories	4040
Inductive Sensor Mounting Kit (3 holders + 2 flags)	OSMK-101
Seal Repair Kits	4040
Buna-N Seal Repair Kit	SLKT-235
Rear Inlet Seal Repair Kit	SLKT-316
Mounting Accessories	4040
In-line Jaw Mounting Kit	ODPL-005



Jaws shown at mid stroke



Loading Information

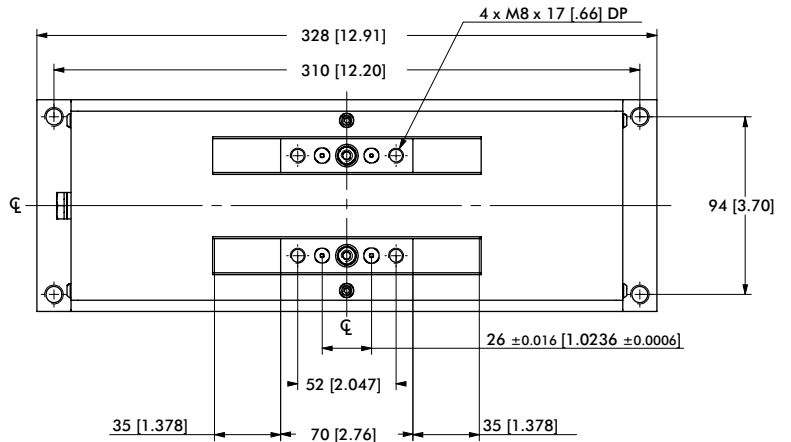
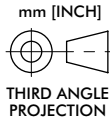
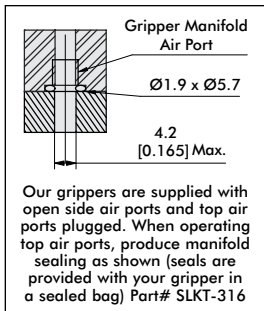


DPL-4040	Static	Dynamic
Maximum Tensile T	2030 N [456 lbs]	400 N [90 lbs]
Maximum Compressive C	2440 N [549 lbs]	400 N [90 lbs]
Maximum Moment M_x	135 Nm [1195 in-lbs]	14 Nm [124 in-lbs]
Maximum Moment M_y	420 Nm [3717 in-lbs]	43 Nm [381 in-lbs]
Maximum Moment M_z	220 Nm [1947 in-lbs]	43 Nm [381 in-lbs]

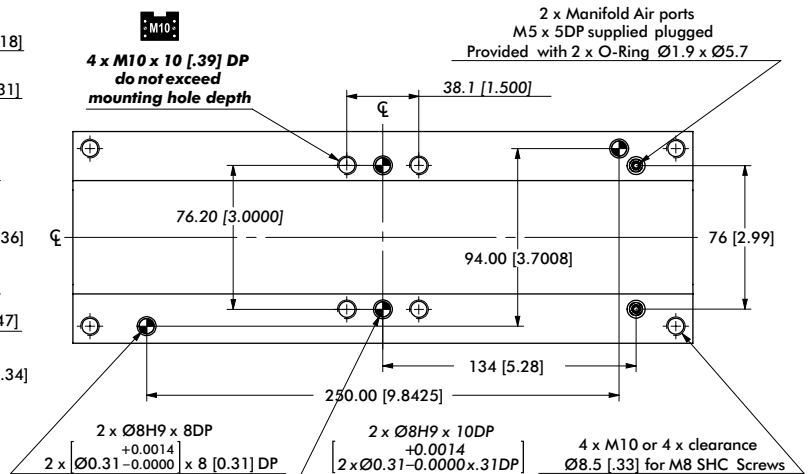
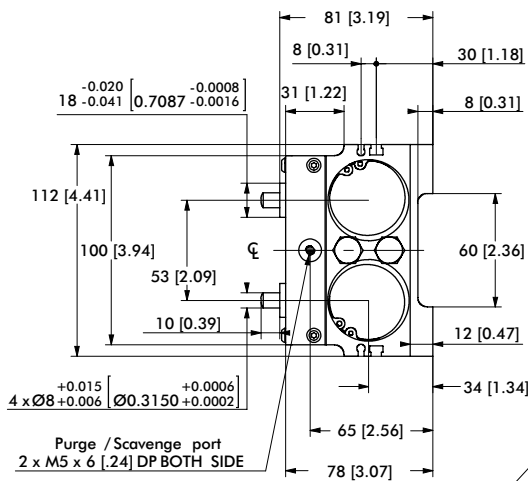
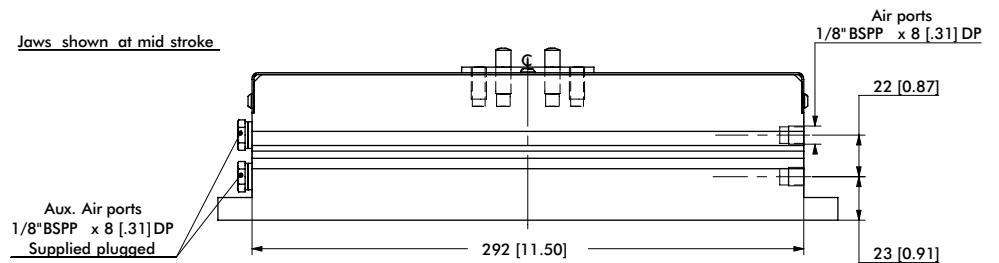
^cCapacities are per set of jaws and are not simultaneous

2-Jaw Precision Parallel Grippers | Dimensions and Technical Specifications

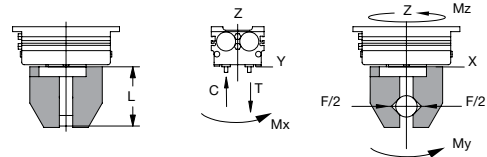
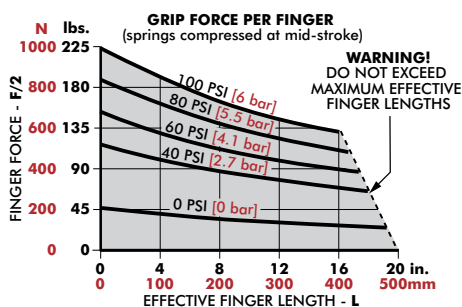
Sensor Accessories	4070
Inductive Sensor Mtg Kit (3 holders + 2 flags)	OSMK-101
Seal Repair Kits	4070
Buna-N Seal Repair Kit	SLKT-235
Rear Inlet Seal Repair Kit	SLKT-316
Mounting Accessories	4070
In-line Jaw Mounting Kit	ODPL-006



Jaws shown at mid stroke



Loading Information



DPL-4070	Static	Dynamic
Maximum Tensile T	2510 N [564 lbs]	400 N [90 lbs]
Maximum Compressive C	3010 N [677 lbs]	400 N [90 lbs]
Maximum Moment M_x	160 Nm [1416 in-lbs]	15 Nm [133 in-lbs]
Maximum Moment M_y	665 Nm [5885 in-lbs]	64 Nm [566 in-lbs]
Maximum Moment M_z	350 Nm [3098 in-lbs]	64 Nm [566 in-lbs]

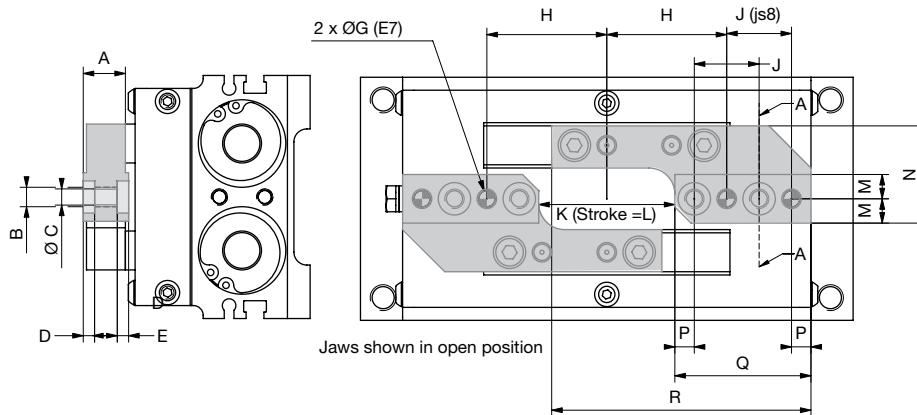
*Capacities are per set of jaws and are not simultaneous

DPL OPTIONS & ACCESSORIES

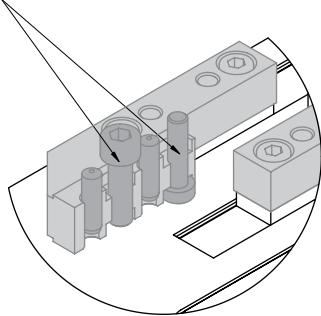
2-Jaw Precision Parallel Grippers | Dimensions and Technical Specifications

In-Line Jaw Adapter:

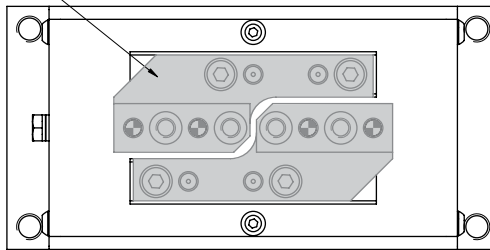
The In-Line Jaw Adapter allows for the simplification of the finger design. It provides for "in-line" alignment of the finger mounting holes. The kit includes 2 interfaces, screws, and dowel kit.



Fingers can be mounted on the accessory from the top (using SHC screws) or from the bottom (using low head SHC screws)



Second direction for mounting the accessory When used with the -R option, it allows to secure for internal or external clamping



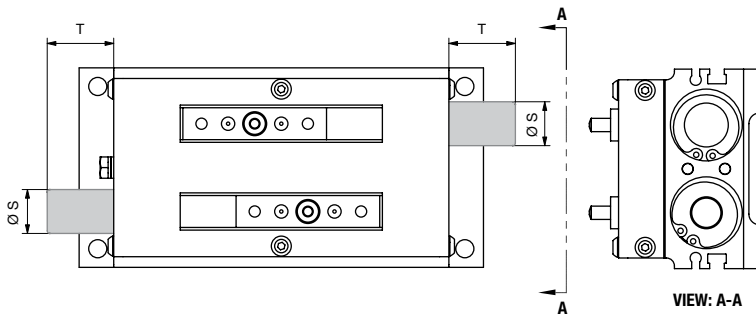
Order #	Use With	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
ODPL-001	DPL-2520	[0.51] 13	M6	[0.20] 5	[0.14] 3.5	[0.28] 7	M5	[0.20] 5	[1.46] 37	[0.79] 20	[1.65] 42	[1.57] 40	[0.30] 7.5	[1.18] 30	[0.24] 6	[1.65] 42	[3.15] 80
ODPL-002	DPL-2535								[2.05] 52		[2.83] 72	[2.76] 70					[3.44] 87.5
ODPL-003	DPL-3230	[0.59] 15	M8	[0.27] 6.8	[0.12] 3	[0.39] 10	M6	[0.24] 6	[1.97] 50	[0.87] 22	[2.44] 62	[2.36] 60	[0.39] 10	[1.54] 39	[0.31] 8	[1.93] 49	[3.70] 94
ODPL-004	DPL-3250								[2.76] 70		[4.02] 102	[3.94] 100					[4.09] 104
ODPL-005	DPL-4040	[0.83] 21	M10	[0.33] 8.5	[0.20] 5	[0.47] 12	M8	[0.31] 8	[2.48] 63	[1.02] 26	[3.23] 82	[3.15] 80	[0.47] 12	[1.87] 47.5	[0.35] 9	[2.24] 57	[4.45] 113
ODPL-006	DPL-4070								[3.66] 93		[5.59] 142	[5.51] 140					[5.04] 128

DPL OPTIONS & ACCESSORIES

2-Jaw Precision Parallel Grippers | Dimensions and Technical Specifications

Optional Spring Assist (-R):

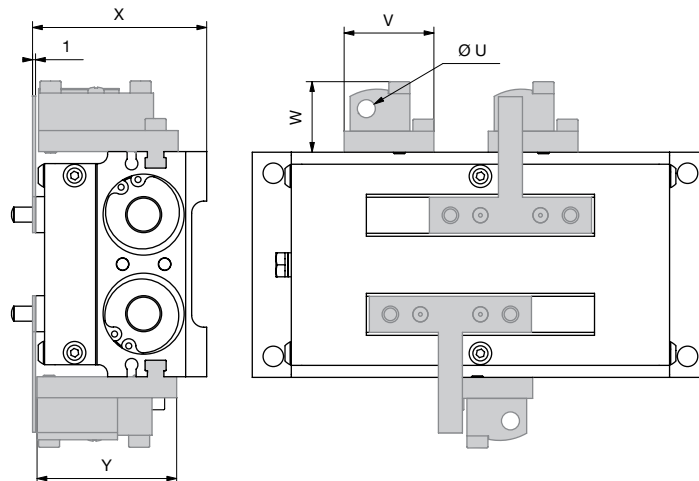
The safety spring allows the gripper to retain the part should the air supply fail or allows the gripper to be used in single acting mode. The -R option is ideal for internal (ID) or external gripping (OD). The ID or OD will depend on the finger design. The fingers will face towards center of gripper for OD gripping or will face outward for ID gripping.



Model #	S	T
DPL-2520-R	[0.65] 16.5	[0.98] 25
DPL-2535-R		[1.18] 30
DPL-3230-R	[0.98] 25	[0.76] 19.3
DPL-3250-R		[0.96] 24.3
DPL-4040-R	[1.10] 28	[1.69] 42.8
DPL-4070-R	[1.16] 29.5	[0.98] 24.8

Inductive Sensors Holder:

Sense up to 3 jaw positions; open jaws, closed jaws, and part present. The kit includes 3 sensor holders and 2 flags. Sensors are not included.



Order #	Use With	U	V	W	X	Y
OSMK-099	DPL-2520	[0.31] 8	[1.18] 30	[0.95] 24	[2.28] 58	[1.83] 46.5
	DPL-2535					
OSMK-100	DPL-3230		[0.87] 22	[0.95] 24	[2.64] 67	[1.97] 50
	DPL-3250					
OSMK-101	DPL-4040	[0.47] 12	[0.87] 22	[1.06] 27	[3.23] 82	[2.26] 57.5
	DPL-4070					