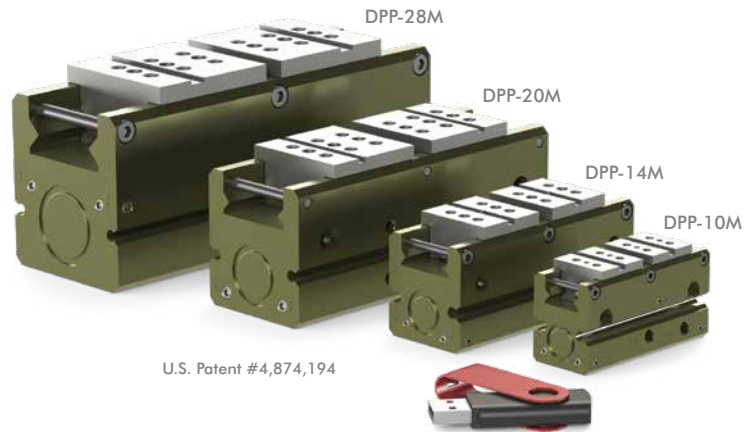


# DPP SERIES

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

### Features:

- Highest precision gripper with excellent part position repeatability
- Zero side play and smooth operation with shielded Dual-V roller bearing design
- Spring assist closed option for increased grip force or maintain grip upon air loss.
- Multiple air port locations simplifies air line routing
- Supports up to four sensing positions of jaws
- Synchronous or non-synchronous jaw operation
- Long life supported with shielded design
- Purge/scavenge ports for clean & harsh environments



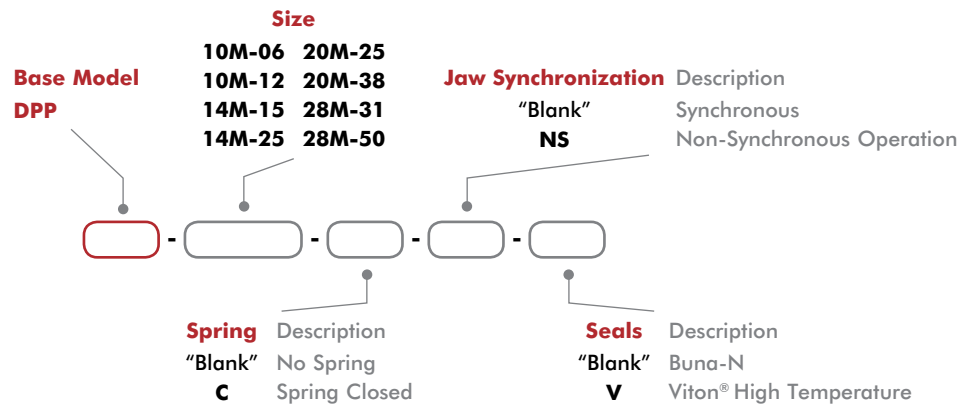
U.S. Patent #4,874,194

(USB key shown for scale)

### Applications:

- Delicate part handling, low friction, low pressure applications
- Long finger gripping applications
- Non-synchronous applications requiring independent jaw motion

### How To Order



### Accessories

Sensor Accessories	Model Numbers	Part Number	Qty/Unit
Inductive Sensor Mounting Kit (Mounts 2 sensors)	10M, 14M	OSMK-119	1-2
Inductive Sensor Mounting Kit (Mounts 2 sensors)	20M, 28M	OSMK-120	1-2
NPN Inductive Sensor (with Qk. Disc.)*	All Models	OISN-014	1-4
PNP Inductive Sensor (with Qk. Disc.)*	All Models	OISP-014	1-4
NPN Magneto Resistive Sensor (with Qk. Disc.)*†	All Models	OHSN-017	1-4
PNP Magneto Resistive Sensor (with Qk. Disc.)*†	All Models	OHSP-017	1-4
NPN Magneto Resistive Sensor 90° (with Qk. Disc.)*†	All Models	OHSN-011	1-4
PNP Magneto Resistive Sensor 90° (with Qk. Disc.)*†	All Models	OHSP-011	1-4
Quick Disconnect Cable (2 meters long)*	All Models	CABL-010	1-4
Quick Disconnect Cable (5 meters long)*	All Models	CABL-013	1-4
Pneumatic Accessories	Model Numbers	Part Number	Qty/Unit
Adjustable Flow Control-M3 Elbow-3MM OD Tube Push-in Style	10M, 14M	VLVF-018	1-2
Adjustable Flow Control-M5 Elbow-6MM OD Tube Push-in Style	20M, 28M	VLVF-008	1-2
Fail Safe Valve - M5	All Models	OFSV-004	1

\*Sensor and cable sold separately. †Piston magnet standard.

# DPP SERIES

## 2-Jaw Precision Parallel Grippers | Technical Specifications

Specifications	Units	10M-6	10M-12	14M-15	14M-25
Total Rated Grip Force <b>F</b> @ 100 psi [7 bar]*	N [lb]	120 [27]		227 [51]	214 [48]
Total Stroke	mm [in]	6.4 [0.25]	12.7 [0.50]	15.9 [0.63]	25.4 [1.00]
Weight	kg [lbs]	0.16 [0.35]	0.20 [0.45]	0.48 [1.05]	0.57 [1.25]
Pressure Range (without spring)	bar [psi]	0.3-7 [5-100]			
Pressure Range (with spring)	bar [psi]	1.4-7 [20-100]		3.4-7 [50-100]	
Ingress Protection Class (IP)		IP43			
Displacement	cm <sup>3</sup> [in <sup>3</sup> ]	0.5 [0.032]	1.1 [0.065]	2.5 [0.156]	4.1 [0.249]
Temperature Range (Buna-N seals)	°C [°F]	-35°~80° [-30°~180°]			
Temperature Range (Viton® seals)	°C [°F]	-30°~120° [-20°~250°]			
Actuation (without spring)	sec	0.10	0.11	0.15	0.19
Actuation (with spring)	sec	0.11	0.12	0.16	0.20
Accuracy	mm [in]	±0.03 [±0.001]			
Repeatability	mm [in]	±0.01 [±0.0005]			
Valve to Actuate Single Acting		3-way, 2-position			
Valve to Actuate Double Acting		4-way, 2-position			

\*With springs

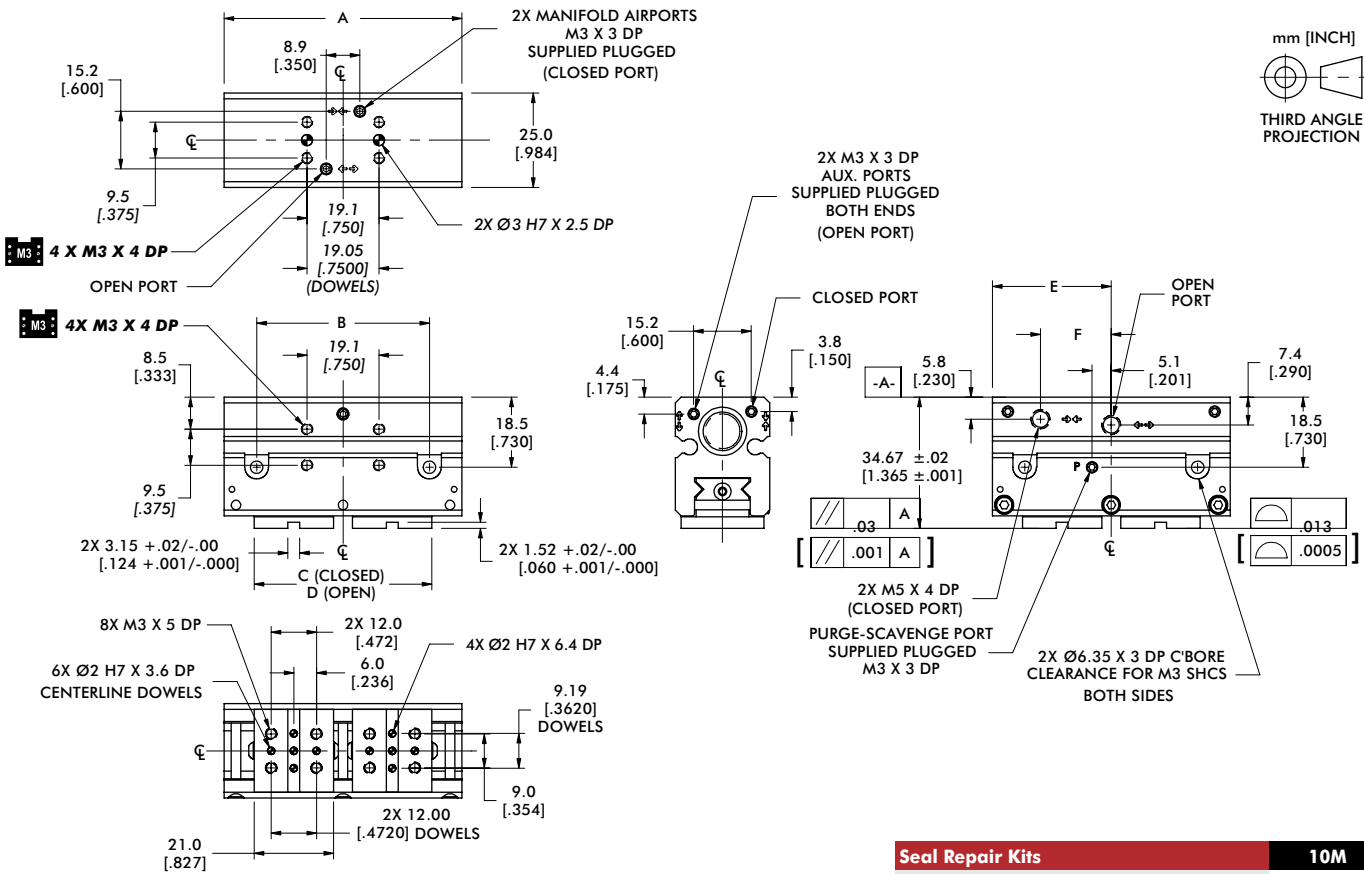
Specifications	Units	20M-25	20M-38	28M-31	28M-50
Total Rated Grip Force <b>F</b> @ 100 psi [7 bar]*	N [lb]	458 [103]	449 [101]	912 [205]	934 [210]
Total Stroke	mm [in]	25.4 [1.00]	38.1 [1.50]	31.8 [1.50]	50.8 [2.00]
Weight	kg [lbs]	1.02 [2.25]	1.41 [3.10]	2.06 [4.55]	2.83 [6.25]
Pressure Range (without spring)	bar [psi]	0.3-7 [5-100]			
Pressure Range (with spring)	bar [psi]	2.8-7 [40-100]	2.1-7 [30-100]	2.1-7 [30-100]	2.8-7 [40-100]
Ingress Protection Class (IP)		IP43			
Displacement	cm <sup>3</sup> [in <sup>3</sup> ]	8.5 [0.519]	12.8 [0.779]	20.4 [1.243]	32.6 [1.998]
Temperature Range (Buna-N seals)	°C [°F]	-35°~80° [-30°~180°]			
Temperature Range (Viton® seals)	°C [°F]	-30°~120° [-20°~250°]			
Actuation (without spring)		0.20	0.24	0.19	0.23
Actuation (with spring)		0.22	0.29	0.25	0.30
Accuracy	mm [in]	±0.03 [±0.001]			
Repeatability	mm [in]	±0.01 [±0.0005]			
Valve to Actuate Single Acting		3-way, 2-position			
Valve to Actuate Double Acting		4-way, 2-position			

\*With springs

# DPP-10M-06, 10M-12



## 2-Jaw Precision Parallel Grippers | Dimensions and Technical Specifications

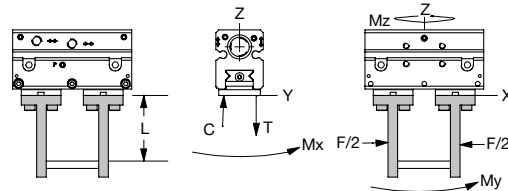
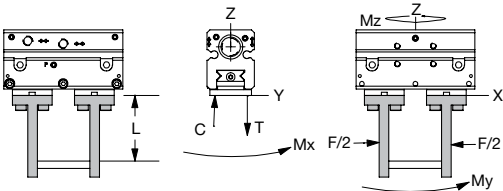
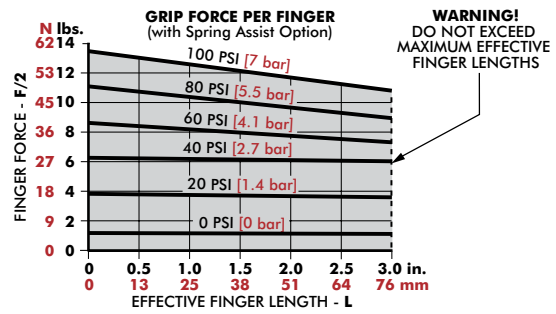
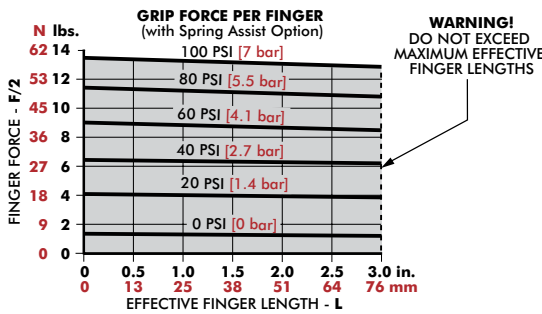


Model	A	B	C	D	E	F
DPP-10M-06	62.9 [2.475]	45.7 [1.800]	47 [1.85]	53 [2.10]	31.4 [1.238]	18.7 [0.738]
DPP-10M-12	73.7 [2.900]	53.3 [2.100]	49 [1.93]	62 [2.43]	36.8 [1.450]	24.1 [0.950]

Dimensions in mm [in]

Seal Repair Kits	10M
Buna-N Seal Repair Kit	SLKT-343
Viton® Seal Repair Kit	SLKT-343V
Manifold Seal Kit (Viton® only)	SLKT-241V

## Loading Information



DPP-10M-06	Static	Dynamic
Maximum Tensile <b>T</b>	267 N [60 lbs]	89 N [20 lbs]
Maximum Compressive <b>C</b>	267 N [60 lbs]	89 N [20 lbs]
Maximum Moment <b>M<sub>x</sub></b>	4.0 Nm [35 in-lbs]	1.4 Nm [12 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	5.6 Nm [50 in-lbs]	1.9 Nm [17 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	4.0 Nm [35 in-lbs]	1.4 Nm [12 in-lbs]

DPP-10M-12	Static	Dynamic
Maximum Tensile <b>T</b>	311 N [70 lbs]	102 N [23 lbs]
Maximum Compressive <b>C</b>	311 N [70 lbs]	102 N [23 lbs]
Maximum Moment <b>M<sub>x</sub></b>	5.6 Nm [50 in-lbs]	1.9 Nm [17 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	7.3 Nm [65 in-lbs]	2.5 Nm [22 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	5.6 Nm [50 in-lbs]	1.9 Nm [17 in-lbs]

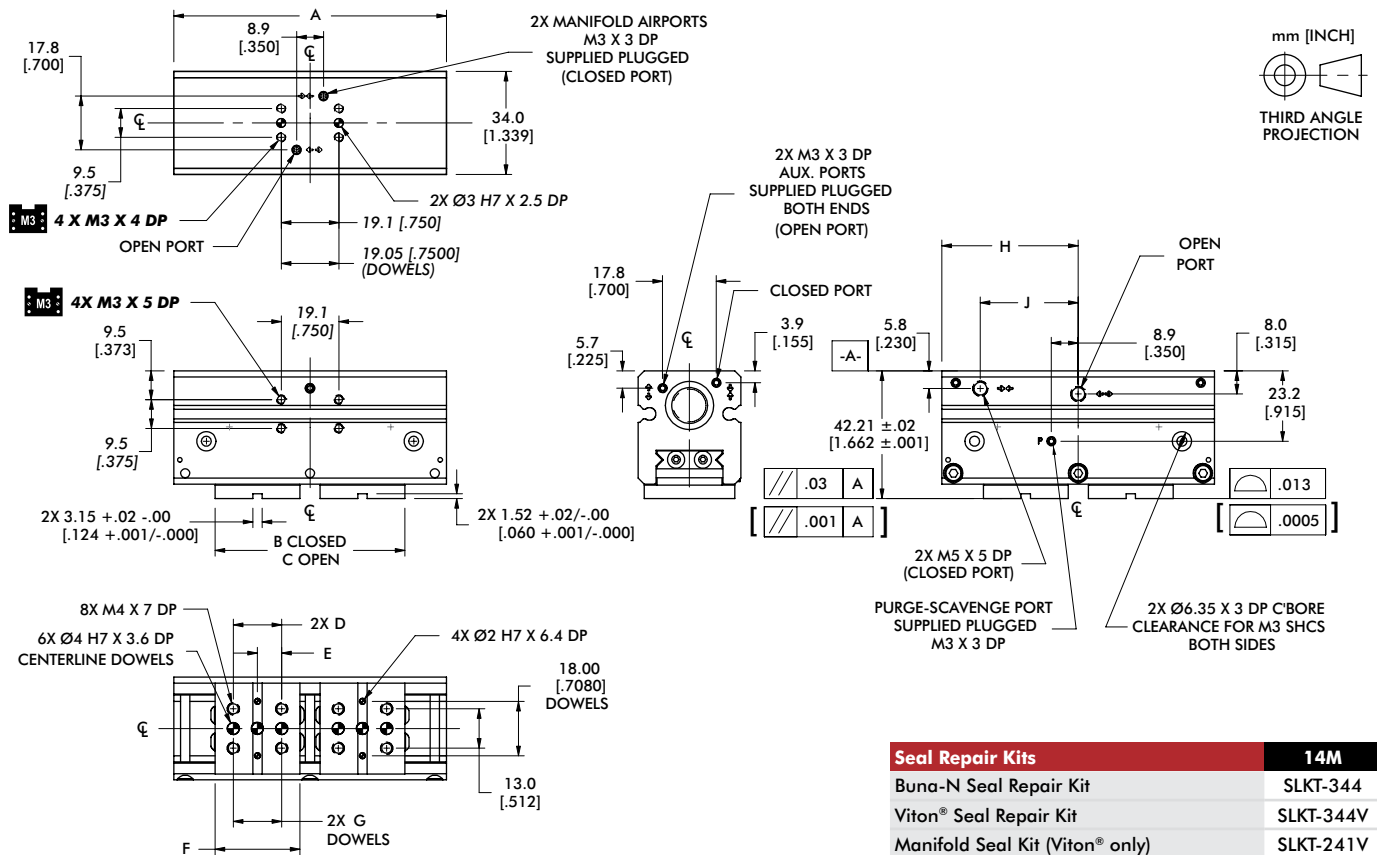
\*Capacities are per set of jaws and are not simultaneous

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



# DPP-14M-15, 14M-25

## 2-Jaw Precision Parallel Grippers | Dimensions and Technical Specifications

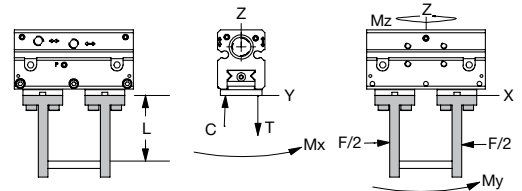
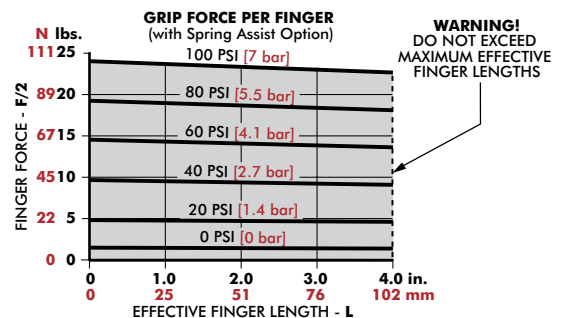
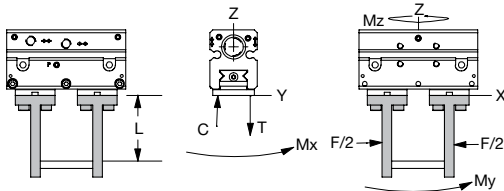
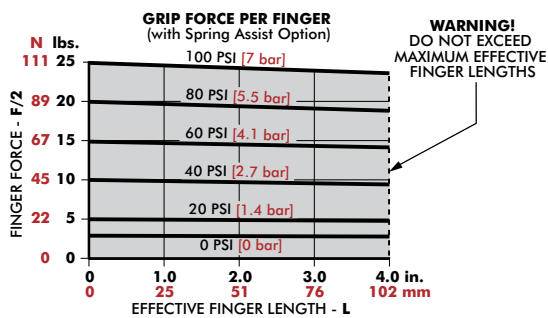


Seal Repair Kits	14M
Buna-N Seal Repair Kit	SLKT-344
Viton® Seal Repair Kit	SLKT-344V
Manifold Seal Kit (Viton® only)	SLKT-241V

Model	A	B	C	D	E	F	G	H	J
DPP-14M-15	90.2 [3.550]	63 [2.47]	79 [3.10]	16.0 [0.630]	8.0 [0.315]	28 [1.102]	16.00 [0.6300]	45.1 [1.775]	32.4 [1.275]
DPP-14M-25	118.7 [4.675]	82 [3.23]	107 [4.23]	11.0 [0.433]	5.5 [0.217]	37.5 [1.476]	11.00 [0.4330]	59.4 [2.338]	46.7 [1.838]

Dimensions in mm [in]

## Loading Information



DPP-14M-15	Static	Dynamic
Maximum Tensile <b>T</b>	556 N [125 lbs]	187 N [42 lbs]
Maximum Compressive <b>C</b>	556 N [125 lbs]	187 N [42 lbs]
Maximum Moment <b>M<sub>x</sub></b>	9.0 Nm [80 in-lbs]	3.1 Nm [27 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	12 Nm [105 in-lbs]	4.0 Nm [35 in-lbs]
Maximum Moment <b>M<sub>x</sub></b>	9.0 Nm [80 in-lbs]	3.1 Nm [27 in-lbs]

Capacities are per set of jaws and are not simultaneous

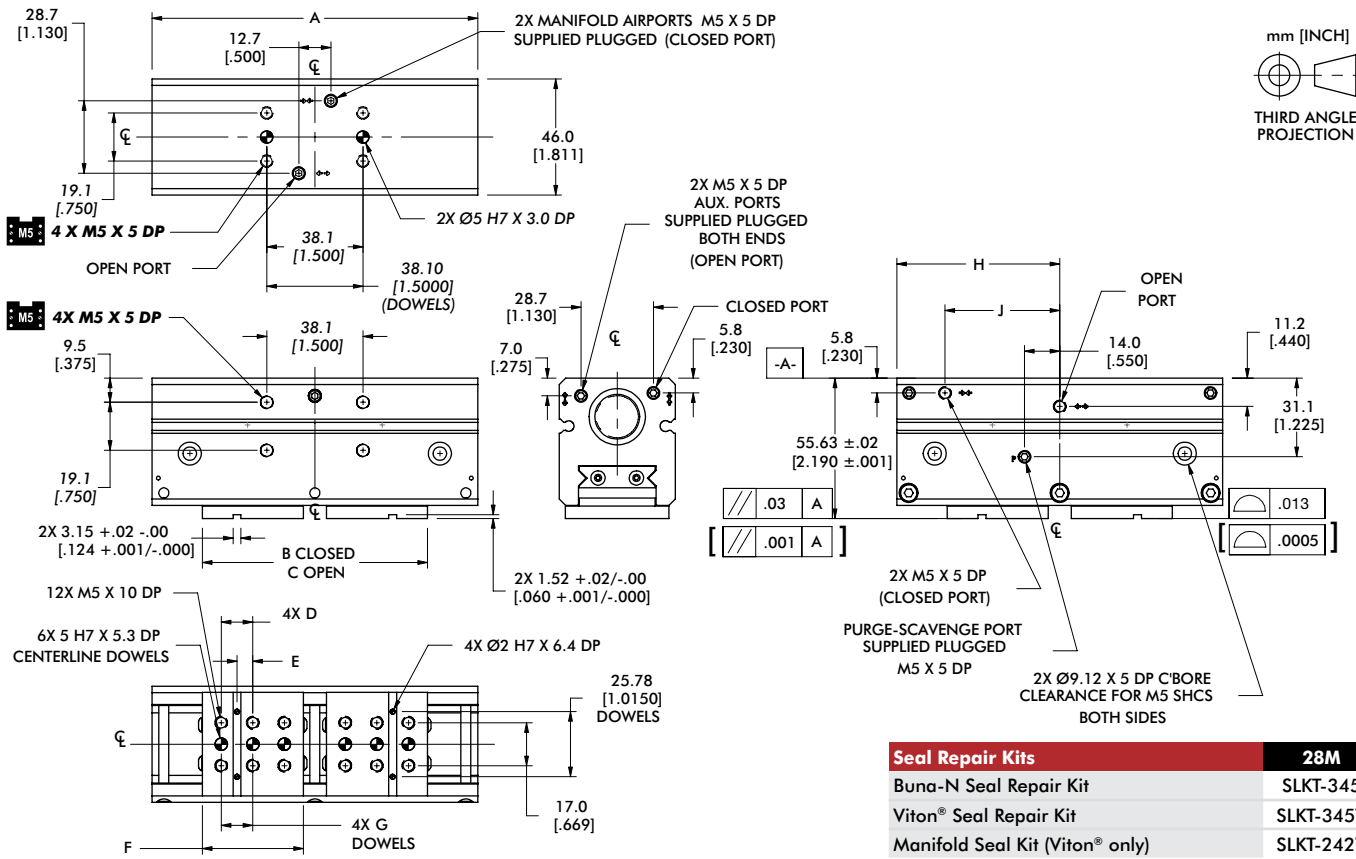
DPP-14M-25	Static	Dynamic
Maximum Tensile <b>T</b>	734 N [165 lbs]	245 N [55 lbs]
Maximum Compressive <b>C</b>	734 N [165 lbs]	245 N [55 lbs]
Maximum Moment <b>M<sub>x</sub></b>	11 Nm [100 in-lbs]	3.7 Nm [33 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	14 Nm [125 in-lbs]	4.7 Nm [42 in-lbs]
Maximum Moment <b>M<sub>x</sub></b>	11 Nm [100 in-lbs]	3.7 Nm [33 in-lbs]

Capacities are per set of jaws and are not simultaneous

# DPP-20M-25, 20M-38



## 2-Jaw Precision Parallel Grippers | Dimensions and Technical Specifications

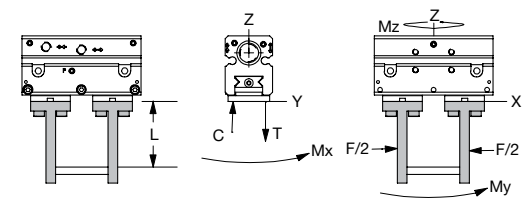
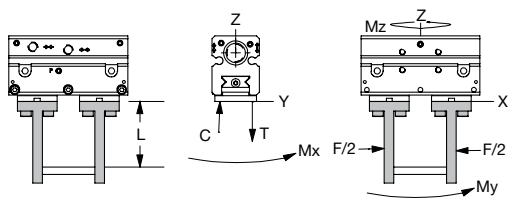
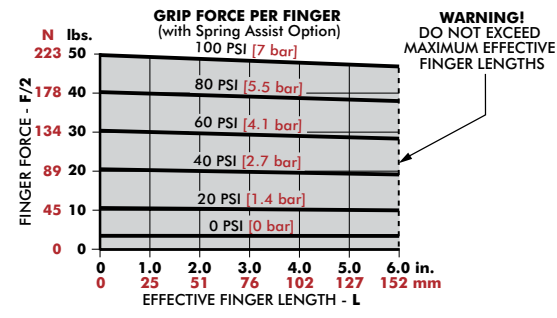
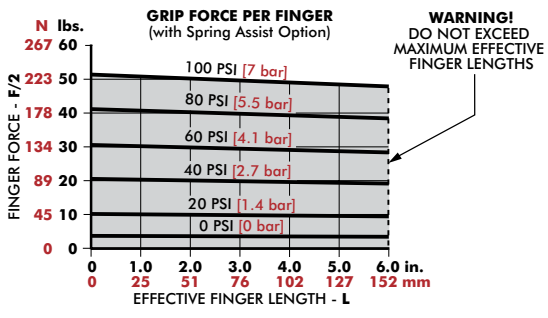


Seal Repair Kits	28M
Buna-N Seal Repair Kit	SLKT-345
Viton® Seal Repair Kit	SLKT-345V
Manifold Seal Kit (Viton® only)	SLKT-242V

Model	A	B	C	D	E	F	G	H	J
DPP-20M-25	129.0 [5.080]	89 [3.51]	115 [4.51]	12.5 [0.492]	6.2 [0.246]	40.0 [1.575]	12.50 [0.4920]	64.5 [2.540]	45.5 [1.790]
DPP-20M-38	175.5 [6.910]	123 [4.85]	161 [6.35]	16.0 [0.630]	8.0 [0.315]	58.0 [2.283]	16.00 [0.6300]	87.8 [3.455]	68.7 [2.705]

Dimensions in mm [in]

### Loading Information



DPP-20M-25	Static	Dynamic
Maximum Tensile <b>T</b>	667 N [150 lbs]	222 N [50 lbs]
Maximum Compressive <b>C</b>	667 N [150 lbs]	222 N [50 lbs]
Maximum Moment <b>M<sub>x</sub></b>	34 Nm [300 in-lbs]	11 Nm [100 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	40 Nm [350 in-lbs]	13 Nm [117 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	34 Nm [300 in-lbs]	11 Nm [100 in-lbs]

DPP-20M-38	Static	Dynamic
Maximum Tensile <b>T</b>	890 N [200 lbs]	298 N [67 lbs]
Maximum Compressive <b>C</b>	890 N [200 lbs]	298 N [67 lbs]
Maximum Moment <b>M<sub>x</sub></b>	45 Nm [400 in-lbs]	15 Nm [133 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	51 Nm [450 in-lbs]	17 Nm [150 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	45 Nm [400 in-lbs]	15 Nm [133 in-lbs]

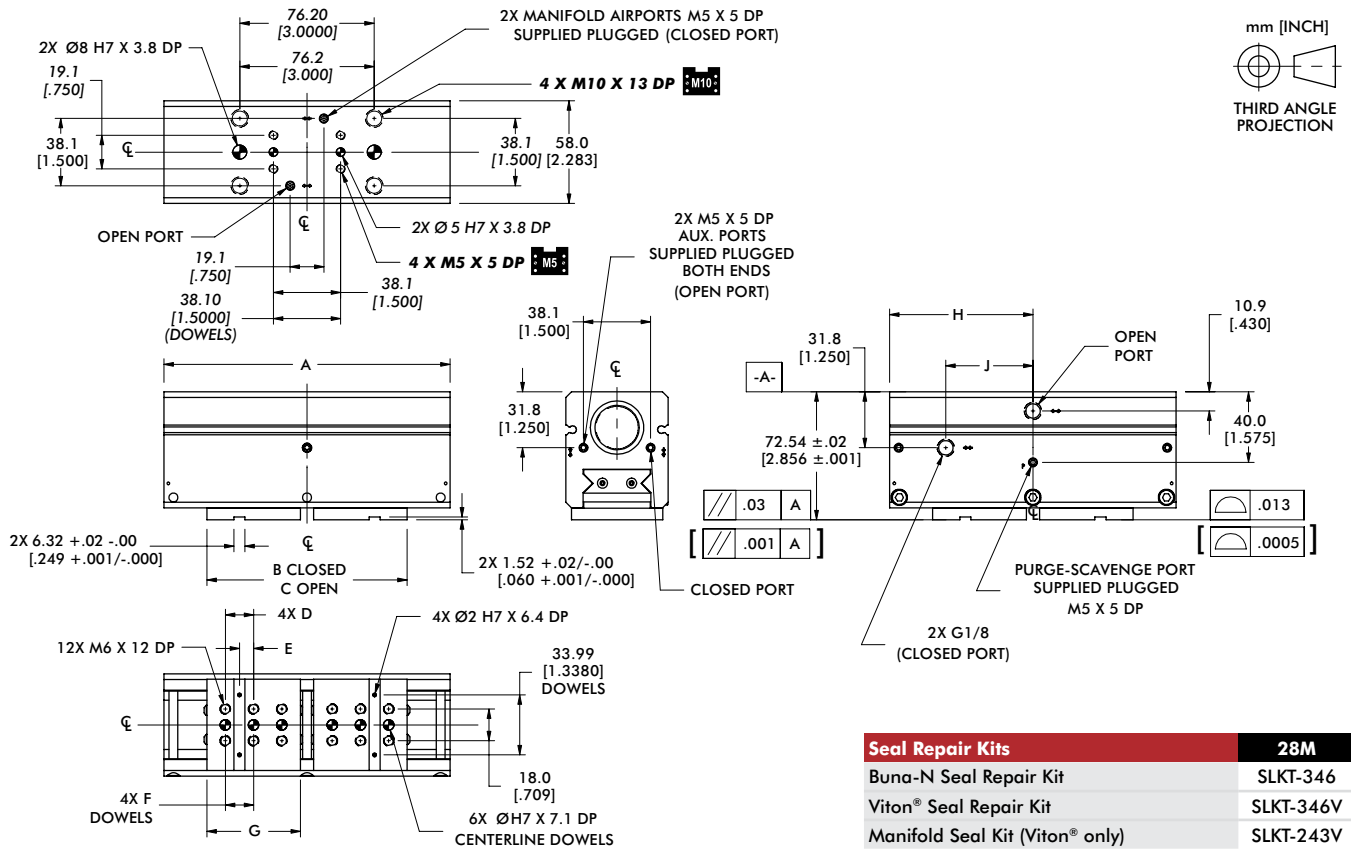
<sup>†</sup>Capacities are per set of jaws and are not simultaneous

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# DPP-28M-31, 28M-50

## 2-Jaw Precision Parallel Grippers | Dimensions and Technical Specifications

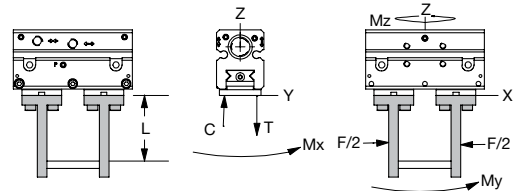
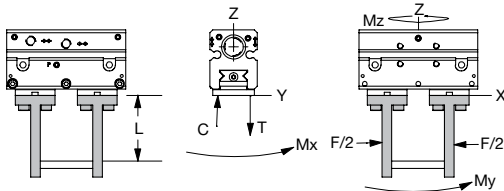
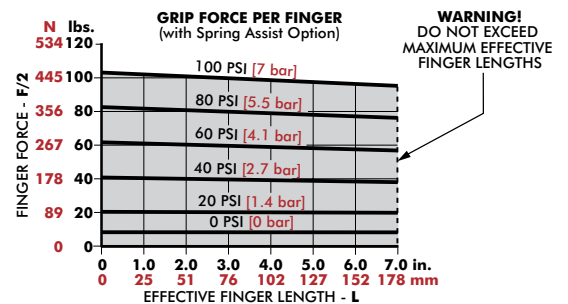
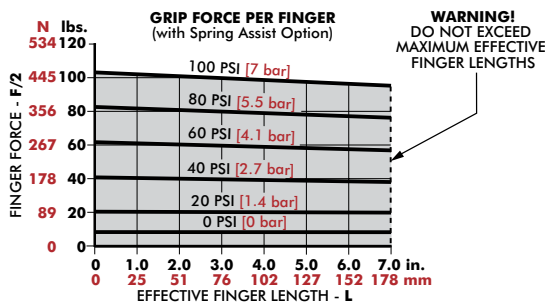


Seal Repair Kits	28M
Buna-N Seal Repair Kit	SLKT-346
Viton® Seal Repair Kit	SLKT-346V
Manifold Seal Kit (Viton® only)	SLKT-243V

Model	A	B	C	D	E	F	G	H	J
DPP-28M-31	162.3 [6.390]	114 [4.47]	145 [5.72]	16.0 [0.630]	8.0 [0.315]	16.00 [0.6300]	53.0 [2.087]	81.2 [3.195]	49.4 [1.945]
DPP-28M-50	221.5 [8.720]	153 [6.04]	204 [8.04]	25.0 [0.984]	12.5 [0.492]	25.00 [0.9840]	73.0 [2.874]	110.7 [4.360]	79.0 [3.110]

Dimensions in mm [in]

### Loading Information



DPP-28M-31	Static	Dynamic
Maximum Tensile <b>T</b>	1001 N [225 lbs]	334 N [75 lbs]
Maximum Compressive <b>C</b>	1001 N [225 lbs]	334 N [75 lbs]
Maximum Moment <b>M<sub>x</sub></b>	64 Nm [570 in-lbs]	21 Nm [190 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	77 Nm [685 in-lbs]	26 Nm [228 in-lbs]
Maximum Moment <b>M<sub>x</sub></b>	64 Nm [570 in-lbs]	21 Nm [190 in-lbs]

DPP-28M-50	Static	Dynamic
Maximum Tensile <b>T</b>	1379 N [310 lbs]	458 N [103 lbs]
Maximum Compressive <b>C</b>	1379 N [310 lbs]	458 N [103 lbs]
Maximum Moment <b>M<sub>x</sub></b>	89 Nm [785 in-lbs]	30 Nm [262 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	106 Nm [940 in-lbs]	35 Nm [313 in-lbs]
Maximum Moment <b>M<sub>x</sub></b>	89 Nm [785 in-lbs]	30 Nm [262 in-lbs]

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

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