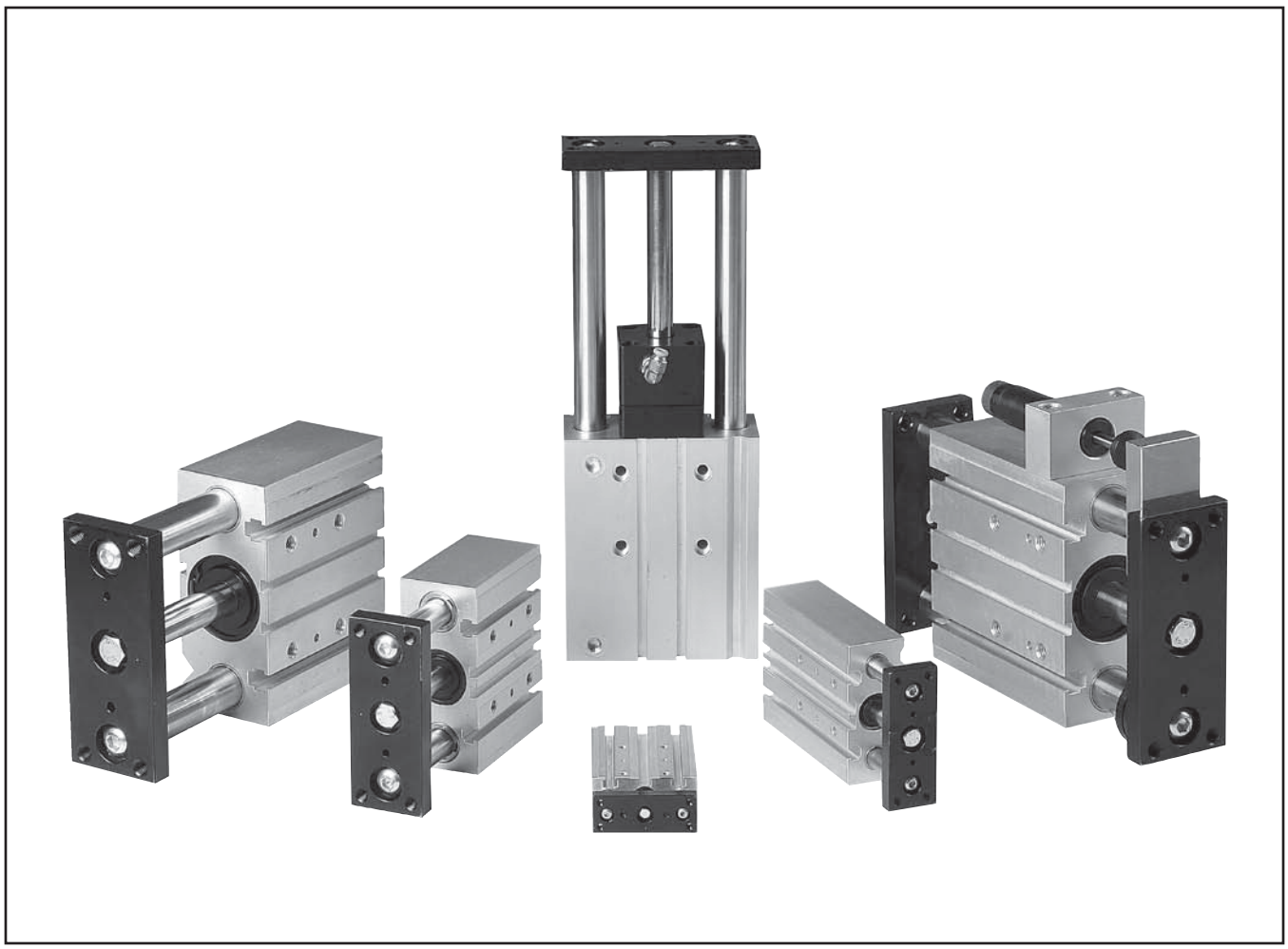
P5T2 Series

Short Stroke Thruster



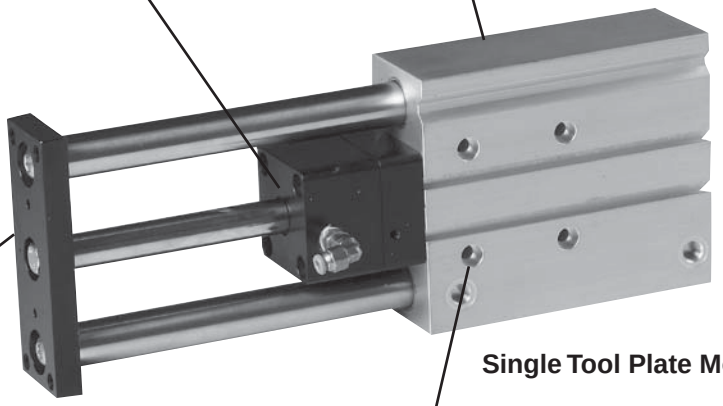
Contents

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

A074

Rod Lock
True rod-lock mechanism stops unit in current position upon loss of air pressure.

Compact, One-Piece Body
The housing provides a small and economical package by integrating a low profile cylinder and support shafts into a single clear anodized body.



Porting
Top porting is standard. Rear and side porting are available.

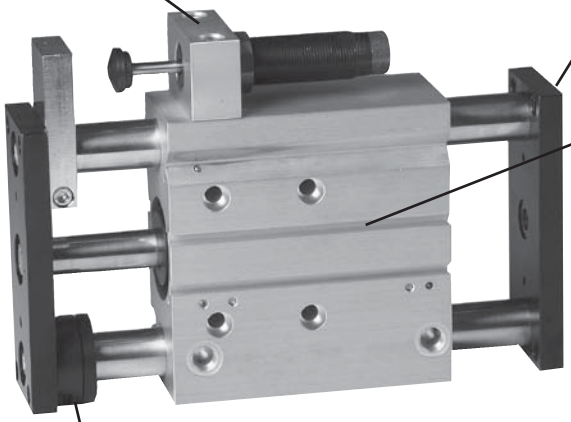
Tool Plate
A precision machined steel tool plate provides a rigid, durable connection.

Single Tool Plate Model

Through-Hole Mounting
Standard through-hole mounting patterns ensure drop-in capabilities for a variety of installations.

Air Cushions
Fully adjustable air cushions allow for superior energy absorption compared to rubber bumpers alone.

Shock Absorbers
Adjustable external mounted shock absorbers provide excellent impact dampening in aggressive applications.



Dual Tool Plate

Sensor Grooves
The global sensors are mounted flush to the outside of the housing. Both reed and solid state are available. Magnetic piston is standard. A new low-profile proximity sensor is also available which mounts in the same groove.

Dual Tool Plate Model

Bumpers and Stop Collars
Bumpers and stop collars allow for adjustable retract and extend strokes.

Composite Bushings or Linear Ball Bearings
A PTFE impregnated **composite bushing** is standard. This bushing provides high load carrying capabilities with excellent resistance to shock loading. Optional **linear ball bearings** provide precision operation with very low friction and wear.

3D CAD FILES
available for download at
parker.com/pneumatics

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

Model Code and Ordering Information

Example: P5T2A032J1KN1BGR025A

P5T2	A	032	J1	K	N	1	B	G	J	025	A

Construction

A	Standard, Metric Mounting Threads
E	Cushions [6], Metric Mounting Threads

Bore Size

012	12mm
016	16mm
020	20mm
025	25mm
032	32mm
040	40mm
050	50mm
063	63mm
080	80mm
100	100mm

Bearings / Shaft

J1	Composite Bushings, Chrome Plated Rod
J3	Composite Bushings, Stainless Steel Rod
K1	Composite High Load Bearings, Chrome Plated Rod [7]
K3	Composite High Load Bearings, Stainless Steel Rod [7]
H3	Linear Ball Bearings, Stainless Steel Rod
L3	Linear Ball High Load Bearings, Stainless Steel Rod [7]

Extend Options

A	Shock Absorber [1, 9]
K	Bumpers and Adjustable Stop Collars [2]
L	Bumpers and Shock Absorbers [3, 9]
N	None

Retract Options

A	Shock Absorber [4, 9]
K	Bumpers and Adjustable Stop Collars [4]
L	Bumpers and Shock Absorber [4, 9]
R	Rod Lock (Sizes 32-100 only)
N	None

Port Location

1	Top
2	Side
3	Rear

Ports / Flow Controls

Ports	Flow Controls [5]		
	None	**Prestolok**	**Threaded**
NPTF	**A**	**E**	**P**
BSPP or M5	**B**	**F**	**R**

Other Options

Tool Plate	Seals	
	Buna-N	**Fluorocarbon**
Front	**G**	**L**
Front & Rear [5]	**H**	**M**

Gross Stroke

Order standard stroke from tables below using 3 digits, i.e. 025 = 25mm

Type	Connection	Sensor Option			
		Proximity Sensor [8]			None
		Extend	Retract	Extend & Retract	
PNP	Lead Type	U	A	E	N
	Plug in	V	B	F	
NPN	Lead Type	W	C	J	
	Plug in	Y	D	K	

Solid state and reed sensors can be ordered separately from pages M2-M4.

NOTES:

1. Not available with rear or side port; not available with Retract Option L; not available on 100mm size with 25mm stroke.
2. Not available with rear ports.
3. Not available with rear or side ports; not available with Retract Option A.
4. Not available with Rod Lock.
5. Not available with rear ports.
6. Cushions not available on Sizes 12 &16. Cushions may not be effective in combination with shocks or bumpers/stop collars.
7. High load bearings option only available with 50mm and greater strokes.
8. Consult factory for retract proximity sensors on rodlock unit.
9. Shock absorbers not available on Sizes 12 & 16.

Standard Strokes, Basic Units*

Bore Size	10	20	25	30	40	50	75	100	125	150	175	200
12 - 16	●	●		●	●	●	●	●	●	●	●	●
20 - 25		●		●	●	●	●	●	●	●	●	●
32 - 100			●			●	●	●	●	●	●	●

Standard Strokes, Cushioned Units*

Bore Size	10	20	25	30	40	50	75	100	125	150	175	200
20 - 63			●			●	●	●	●	●	●	●
80 - 100						●	●	●	●	●	●	●

*Consult factory for special stroke lengths.

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

A074

Specifications

- Maximum operating pressure: 1 MPa (10 bar/145 psi)
- Operating characteristics: Double acting
- Support rod sizes: ∅8 to 35mm
- Mounting: Unrestricted
- Operating temperature range (cylinder):
  - Nitrile seals (standard) -18° to 74°C (0° to 165°F)
  - Fluorocarbon seals* -18° to 121°C (0° to 250°F)
- Filtration requirement: 40 micron, filtered dry air

* See Fluorocarbon seal option for high temperature applications.

Construction

Body .....Aluminum
End Caps.....Aluminum
Tool Plate..... Steel
Piston Rod..... Stainless Steel
Support Rods ..... Steel
Rod Bolts..... Steel

F

Mounting Bolts

Bore Size	Bottom Hole Threads	Thru Hole Socket Head Cap Screw	
		Screw Size	Minimum Length (1.5 x dia. screw engagement)
12	M5 x 0.8	M4	28mm
16	M5 x 0.9	M4	32mm
20	M6 x 1.0	M5	38mm
25	M6 x 1.0	M5	44mm
32	M8 x 1.25	M6	50mm
40	M8 x 1.25	M6	56mm
50	M10 x 1.5	M8	68mm
63	M10 x 1.5	M8	82mm
80	M12 x 1.75	M10	100mm
100	M14 x 2.0	M12	96mm

Note: *When the P5T2 is used as an impact stopping system, mounting bolt thread engagement should be 1.5 times bolt diameter.*

Quick Reference Data

Model Bore	Piston Rod Diameter (mm)	Bushings	Support Rods (mm)	Force Output on Extension at 75 PSI		Force Output on Retraction at 75 PSI	
				N	lbs	N	lbs
12	6	Ball	6	59	13	44	10
		Composite	8				
16	8	Ball	8	102	23	78	18
		Composite	10				
20	10	Ball	10	165	37	120	27
		Composite	12				
25	10	Ball	12	254	57	214	48
		Composite	16				
32	12	Ball	16	414	93	356	80
		Composite	20				
40	16	Ball	16	650	146	547	123
		Composite	20				
50	20	Ball	20	1015	228	854	192
		Composite	25				
63	20	Ball	20	1611	362	1451	326
		Composite	25				
80	25	Ball	25	2599	584	2345	527
		Composite	30				
100	25	Ball	30	4063	913	3809	856
		Composite	35				

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

Weights

Basic Units with Single Tool Plate

Model Bore	Support Rod Diameter	Standard Unit Weight				Cushioned Unit Weight			
		Base Weight (zero stroke)		Stroke Multiplier (per 5mm)		Base Weight (zero stroke)		Stroke Multiplier (per 5mm)	
		kg	lbs	kg	lbs	kg	lbs	kg	lbs
12	6	0.18	0.39	0.02	0.04	NA	NA	NA	NA
	8	0.18	0.39	0.02	0.04	NA	NA	NA	NA
16	8	0.27	0.59	0.02	0.05	NA	NA	NA	NA
	10	0.27	0.58	0.03	0.06	NA	NA	NA	NA
20	10	0.45	0.98	0.04	0.08	0.65	1.42	0.03	0.08
	12	0.47	1.03	0.04	0.09	0.69	1.52	0.04	0.09
25	12	0.80	1.76	0.04	0.10	0.90	1.99	0.04	0.10
	16	0.78	1.72	0.05	0.12	0.94	2.08	0.05	0.11
32	16	1.32	2.91	0.06	0.13	1.46	3.21	0.06	0.13
	20	1.33	2.93	0.07	0.15	1.53	3.38	0.07	0.15
40	16	1.45	3.21	0.07	0.16	1.75	3.85	0.08	0.17
	20	1.58	3.48	0.08	0.18	1.80	3.97	0.08	0.19
50	20	2.35	5.17	0.11	0.24	2.82	6.22	0.11	0.24
	25	2.57	5.67	0.12	0.27	3.02	6.64	0.12	0.27
63	20	3.01	6.64	0.13	0.28	3.69	8.12	0.13	0.28
	25	3.18	7.01	0.14	0.31	4.02	8.87	0.14	0.31
80	25	5.90	13.00	0.20	0.43	7.38	16.26	0.20	0.43
	30	6.11	13.47	0.21	0.47	7.72	17.02	0.21	0.47
100	30	8.79	19.37	0.20	0.44	10.71	23.60	0.21	0.45
	35	8.98	19.79	0.22	0.48	11.13	24.52	0.23	0.50

See example below

Example:

P5T2 size 40 cushioned unit, 20mm support rod with a 75mm stroke.

Base Weight = 3.97 lbs
Stroke Multiplier: 75mm ÷ 5 = 15
Stroke Weight = 15 × 0.19 lbs = 2.85 lbs

Total Weight = 3.97 lbs + 2.85 lbs = 6.82 lbs

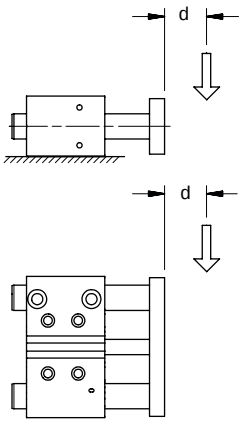
Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

Horizontal Load Capacity with Standard Bearings (J1, J3, H3)

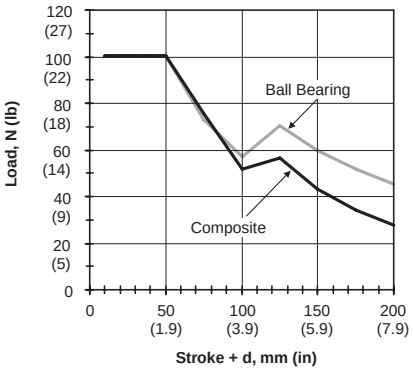
P5T2 Series units will have the same load capacity regardless of orientation. The graphs below show maximum load capacity based on a unit life of 10 million cycles.

These load curves illustrate load ratings based on the bearing system of the product. Load rating is a key selection criterion but is not the only one to consider in the selection of a product.

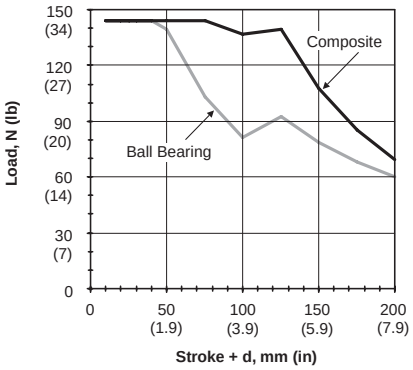
EXAMPLE: A P5T2-016 with "stroke + d" of 100mm and linear ball bearings would have a load capacity of 80 N. The capacity would be 135 N with composite bushings.



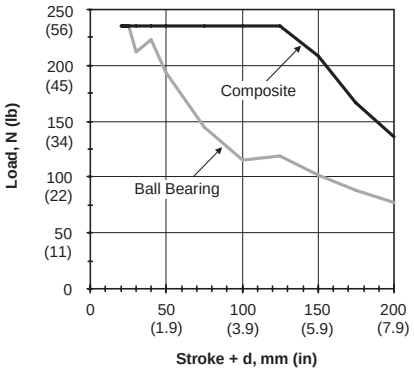
12mm Bore Size



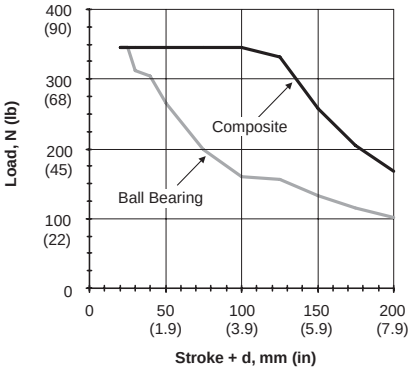
16mm Bore Size



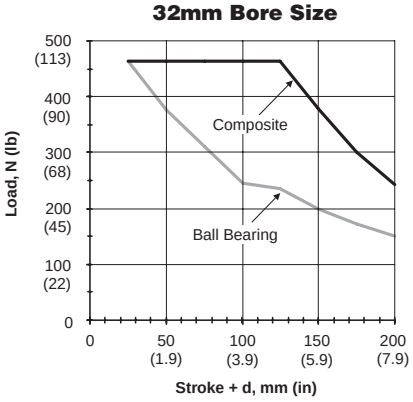
20mm Bore Size



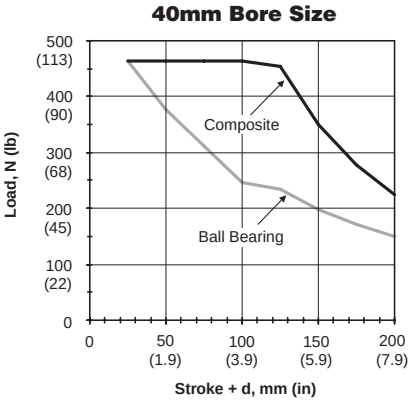
25mm Bore Size



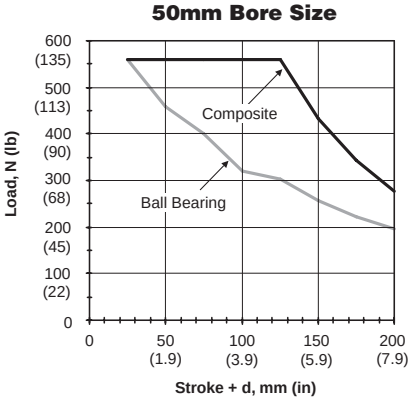
32mm Bore Size



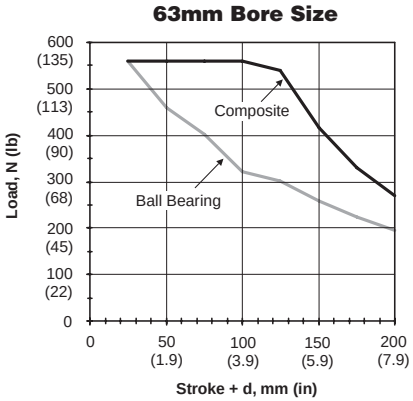
40mm Bore Size



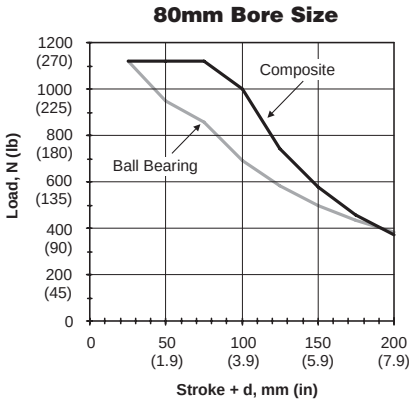
50mm Bore Size



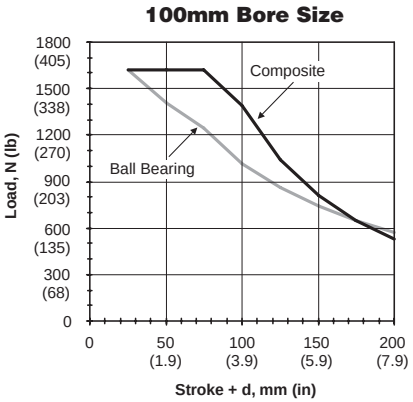
63mm Bore Size



80mm Bore Size



100mm Bore Size



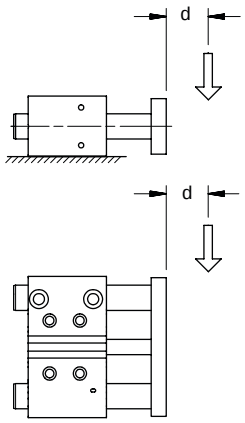
Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

Horizontal Load Capacity with High Load Bearings (K1, K3, L3)

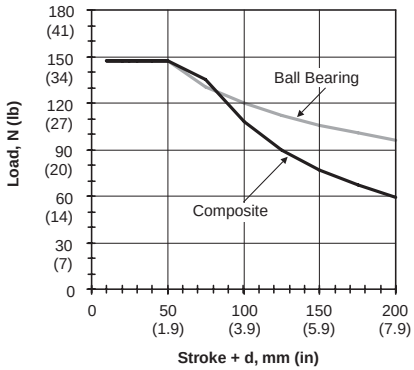
P5T2 Series units will have the same load capacity regardless of orientation. The graphs below show maximum load capacity based on a unit life of 10 million cycles.

These load curves illustrate load ratings based on the bearing system of the product. Load rating is a key selection criterion but is not the only one to consider in the selection of a product.

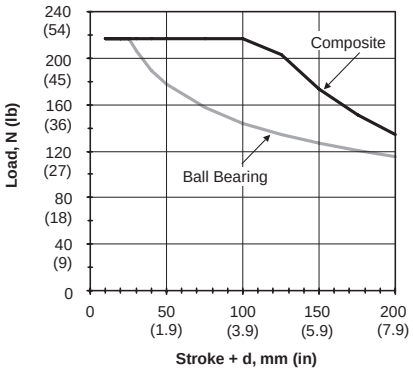
EXAMPLE: A P5T2-020 with "stroke + d" of 100mm and high load composite bushings would have a load capacity of 300 N. With linear ball bearings, the capacity would be 190 N.



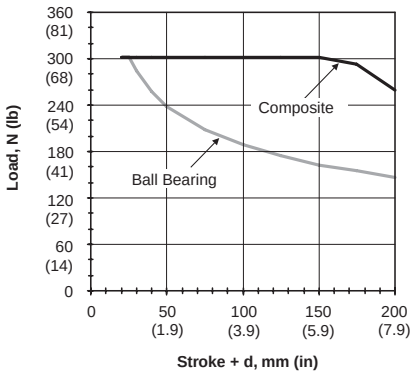
12mm Bore Size



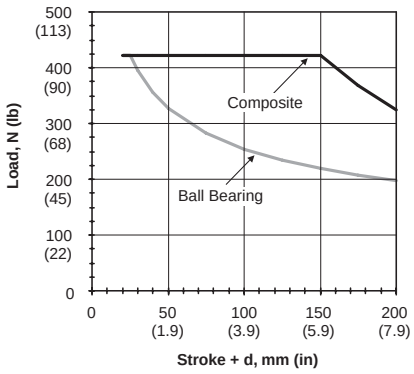
16mm Bore Size



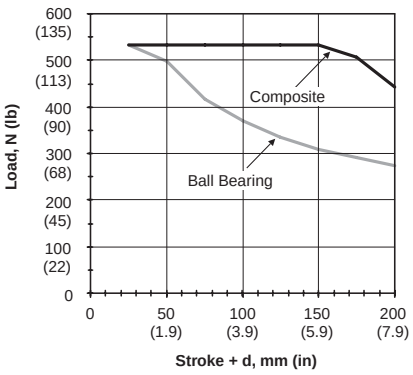
20mm Bore Size



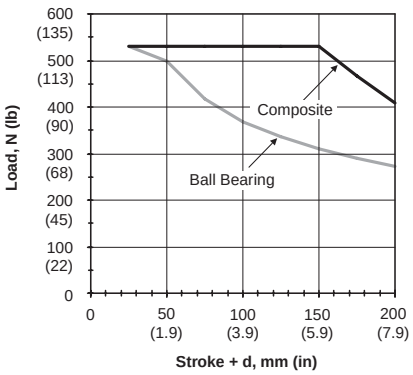
25mm Bore Size



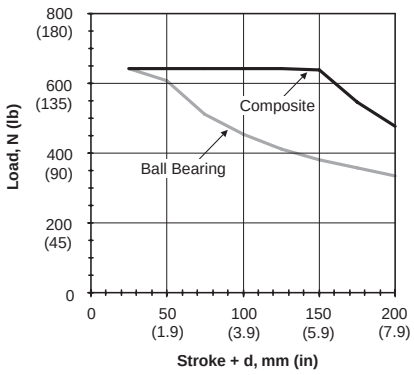
32mm Bore Size



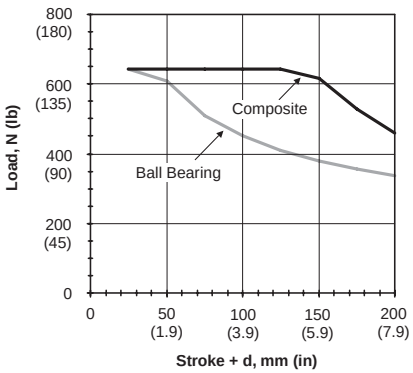
40mm Bore Size



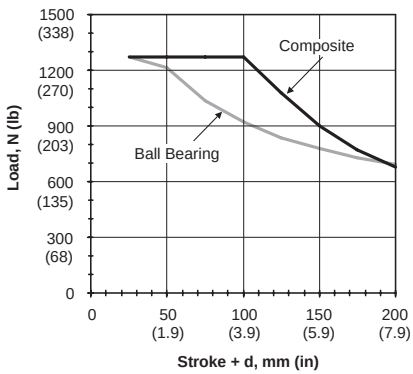
50mm Bore Size



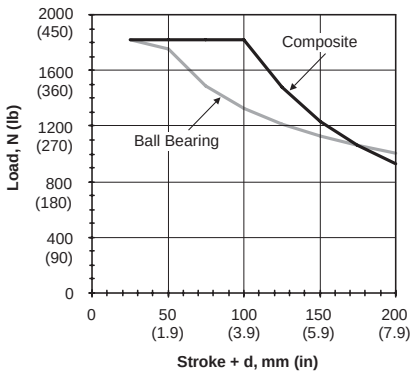
63mm Bore Size



80mm Bore Size



100mm Bore Size



Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

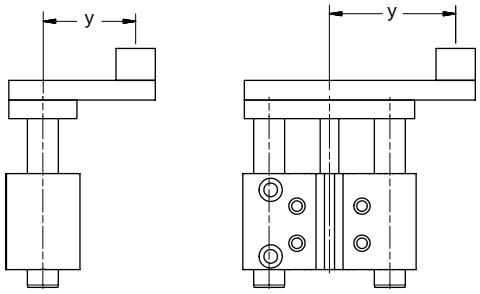
A074

Vertical Eccentric Load Capacity

P5T2 Series units mounted vertically will have the same eccentric load capacity regardless of orientation. The graphs provide maximum load capacity for an eccentric mounted load. The load is assumed to be mounted at the face of the tool plate.

These load curves illustrate load ratings based on the bearing system of the product. Load rating is a key selection criterion but is not the only one to consider in the selection of a product.

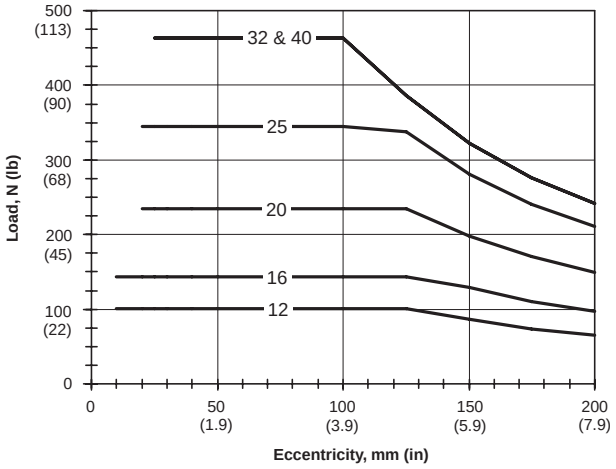
EXAMPLE: A P5T2-050 unit will lift up to a 90-lb load, offset 170mm from actuator centerline.



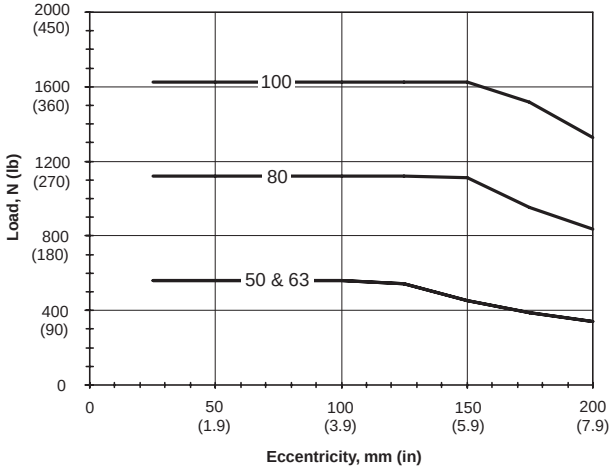
y = distance from the center of gravity of the moveable load to the center of the actuator.

Standard Unit

12 - 40mm Bore Sizes

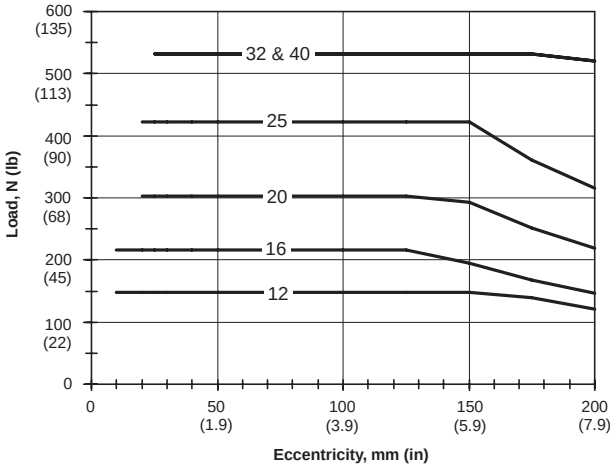


50 - 100mm Bore Sizes

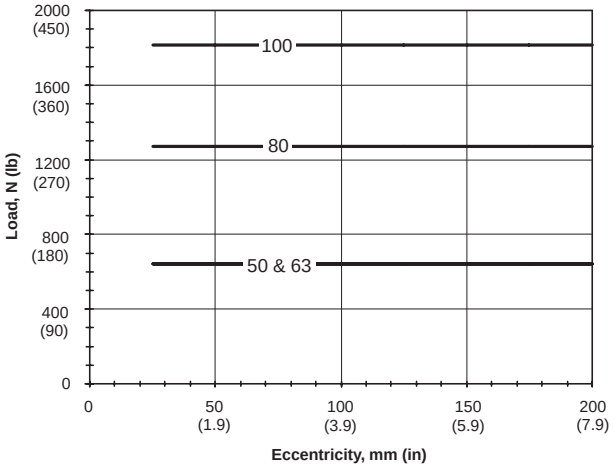


High Load Bearings

12 - 40mm Bore Sizes



50 - 100mm Bore Sizes



Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

A074

Load Stopping Capacity

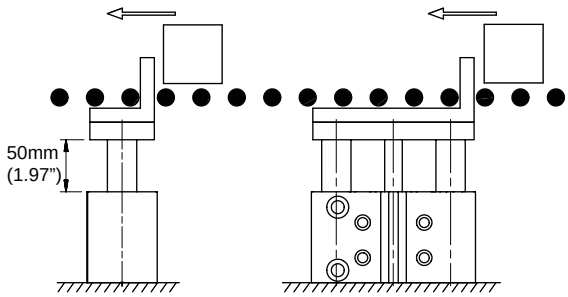
P5T2 Series actuators are ideal for conveyor stopping applications. Units can be mounted horizontally or vertically.

These load curves illustrate load ratings based on the bearing system of the product. Load rating is a key selection criterion but is not the only one to consider in the selection of a product.

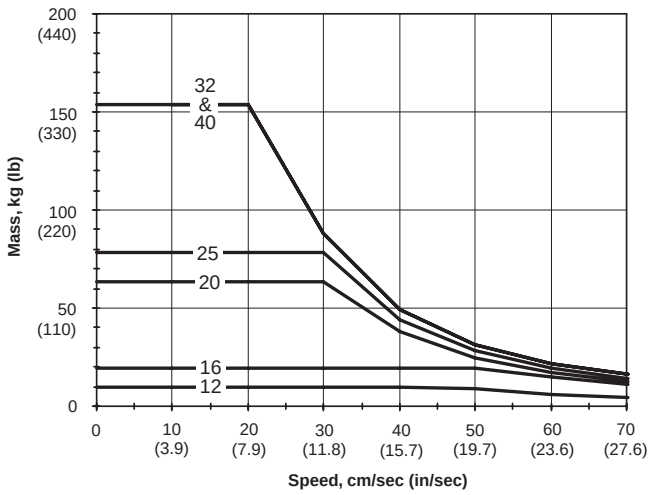
Composite bushings are strongly recommended for this type of application.

EXAMPLE: A P5T2-032 unit with a stroke up to 50mm will stop an object moving at 40 cm/second (15.7 in/s) that weighs up to 50 kg (110 lb).

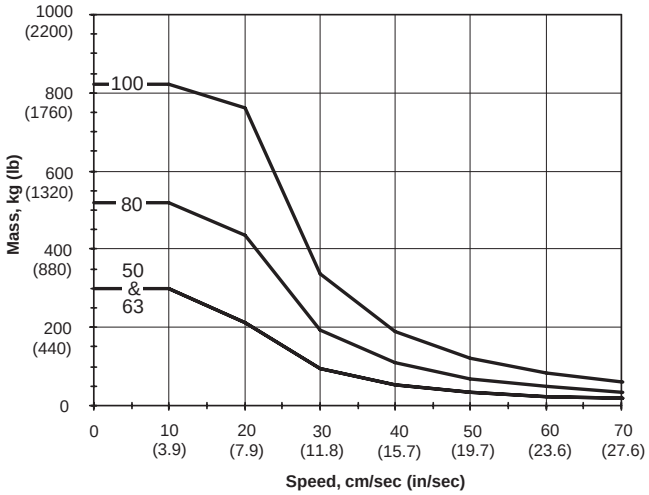
Note: The following graphs are based on 50mm of stroke.



12 - 40mm Bore Sizes



50 - 100mm Bore Sizes

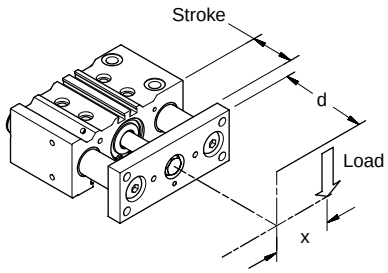


Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

Asymmetrical Torque Capacity with Standard Bearings (J1, J3, H3)

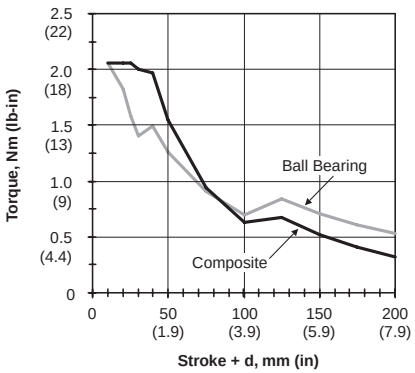
Asymmetrical loading occurs when the load is applied to one side of the unit. P5T2 Series units can resist torsional loads that are asymmetrical up to the charted lines.

EXAMPLE: A mechanism exerts an asymmetrical load of 15 Nm on a unit with 50mm "stroke+d". The P5T2-050 with composite bushings will have adequate torsional capacity.

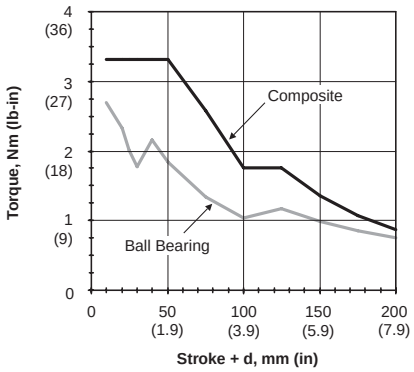


Torque is calculated by multiplying the distance 'x' by the load. The torque will be either Nm or lb-in.

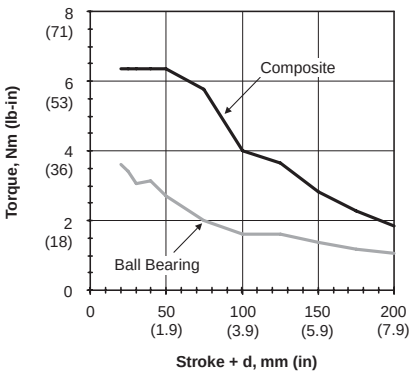
12mm Bore Size



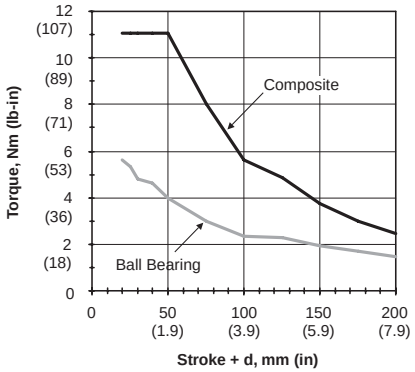
16mm Bore Size



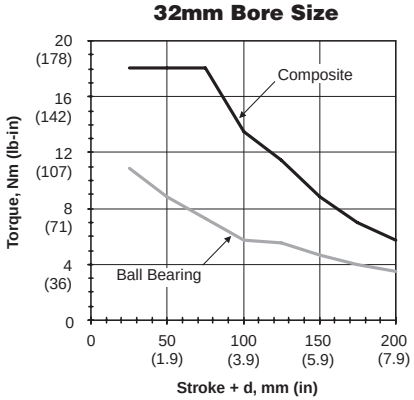
20mm Bore Size



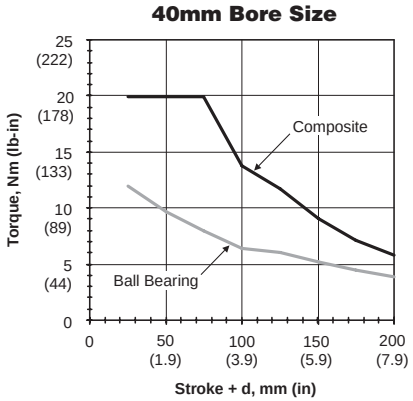
25mm Bore Size



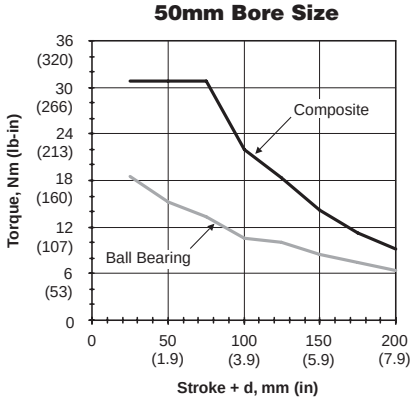
32mm Bore Size



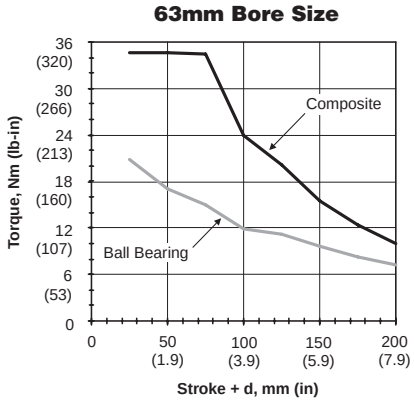
40mm Bore Size



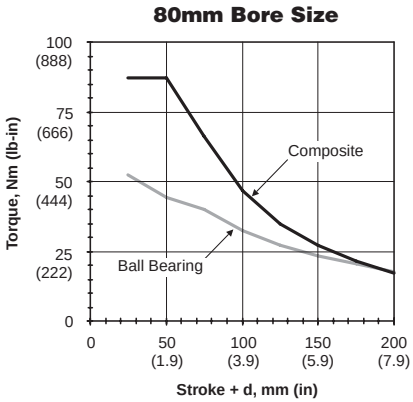
50mm Bore Size



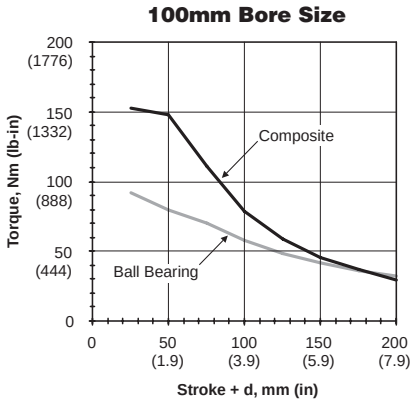
63mm Bore Size



80mm Bore Size



100mm Bore Size



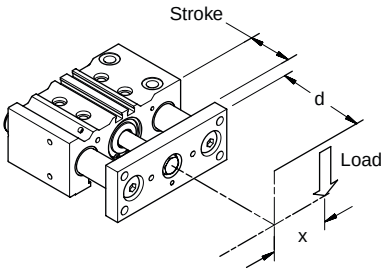
F

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

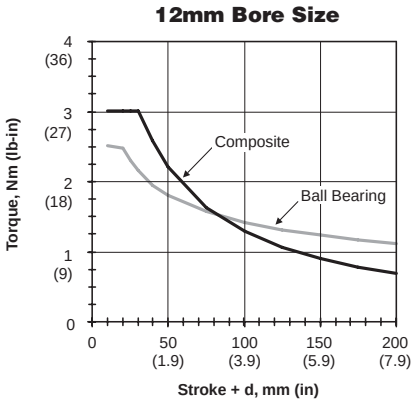
Asymmetrical Torque Capacity with High Load Bearings (K1, K3, L3)

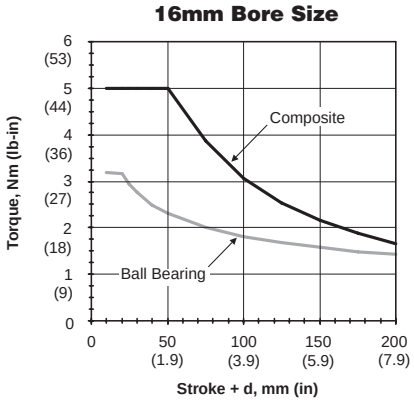
Asymmetrical loading occurs when the load is applied to one side of the unit. P5T2 Series units can resist torsional loads that are asymmetrical.

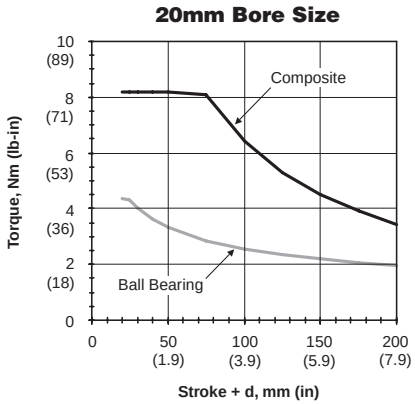
EXAMPLE: A mechanism exerts an asymmetrical load of 15 Nm on a unit with 50mm “stroke+d”. The P5T2-050 with composite bushings or ball bearings will have adequate torsional capacity.

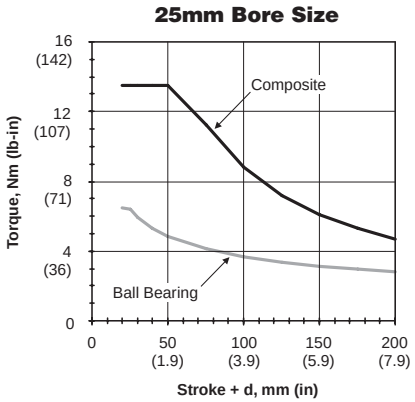


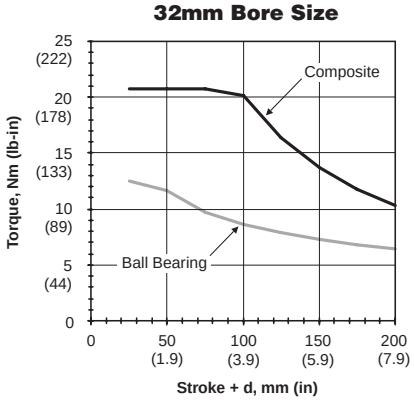
Torque is calculated by multiplying the distance 'x' by the load. The torque will be either Nm or lb-in.

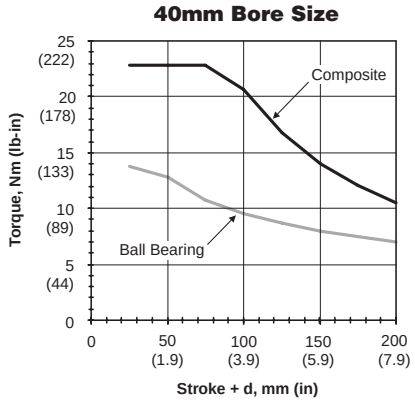


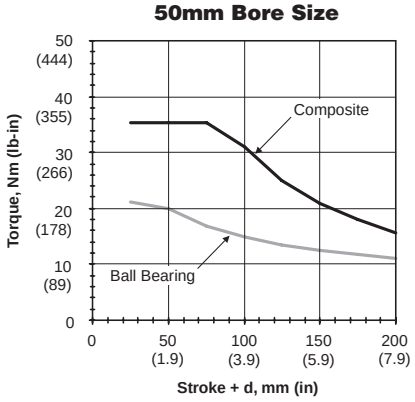


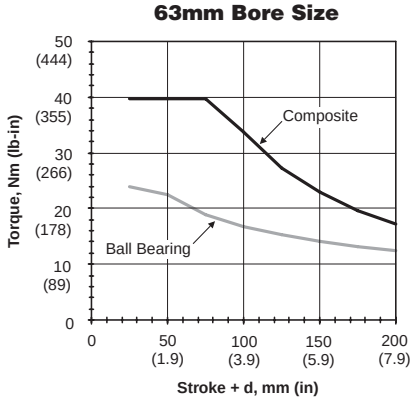


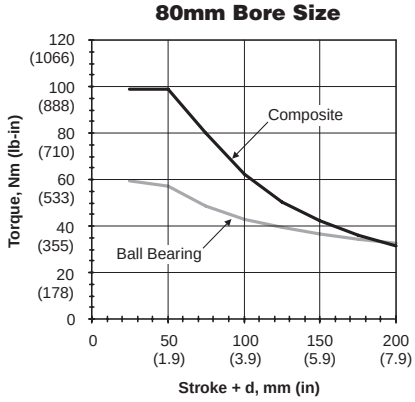


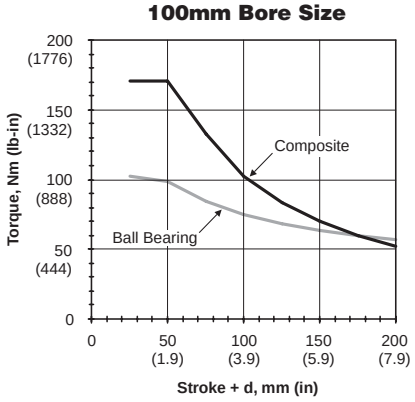












Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

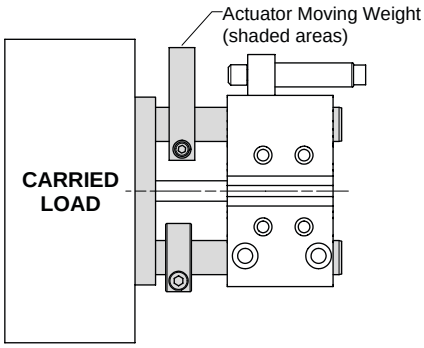
A074

Kinetic Energy

Moving weight is defined as the weight of the carried load and the weight of any moving parts of the actuator (support rods, tool plate, etc.). The moving weight from the charts below should be considered when using the graphs on the following page.

Actuator Moving Weight =
Base Weight + [(Stroke/5) × Stroke Multiplier]

Total Moving Weight =
Actuator Moving Weight + Carried Load



Model Bore	Support Rod Diameter	Actuator Moving Weight							
		Single Tool Plate				Dual Tool Plate			
		Base @ Zero Stroke		Stroke Multiplier (per 5mm)		Base @ Zero Stroke		Stroke Multiplier (per 5mm)	
		kg	lbs	kg	lbs	kg	lbs	kg	lbs
20	10	0.16	0.35	0.009	0.020	0.211	0.47	0.015	0.03
	12	0.19	0.43	0.012	0.026	0.251	0.55	0.021	0.05
25	12	0.22	0.48	0.012	0.026	0.293	0.65	0.021	0.05
	16	0.31	0.69	0.019	0.042	0.394	0.87	0.035	0.08
32	16	0.45	0.98	0.024	0.052	0.604	1.33	0.039	0.09
	20	0.58	1.27	0.033	0.072	0.749	1.65	0.057	0.13
40	16	0.50	1.11	0.024	0.052	0.669	1.48	0.039	0.09
	20	0.65	1.43	0.033	0.072	0.827	1.82	0.057	0.13
50	20	0.87	1.92	0.037	0.082	1.210	2.67	0.062	0.14
	25	1.11	2.44	0.051	0.112	1.485	3.27	0.089	0.20
63	20	1.05	2.31	0.037	0.082	1.465	3.23	0.062	0.14
	25	1.30	2.86	0.051	0.112	1.753	3.87	0.089	0.20
80	25	2.02	4.46	0.058	0.127	2.947	6.50	0.096	0.21
	30	2.37	5.22	0.075	0.165	3.348	7.38	0.130	0.29
100	30	3.26	7.18	0.068	0.150	4.816	10.62	0.123	0.27
	35	3.73	8.23	0.088	0.194	5.390	11.88	0.163	0.36

See example below.

EXAMPLE:

P5T2-032, 20mm support rods, dual tool plate, 100mm stroke

Base Weight = 1.65 lbs
Extra Weight for Stroke Length: (100 ÷ 5) × 0.13 lbs = 2.60 lbs
Actuator Moving Weight = 1.65 lbs + 2.60 lbs = 4.25 lbs

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

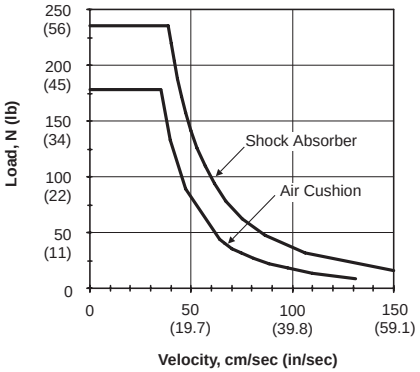
Kinetic Energy

These graphs illustrate the kinetic energy absorption of the P5T2 Series as a total moving weight versus speed chart for both air cushions and shock absorbers.

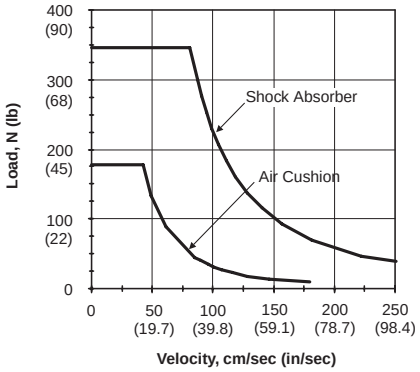
Note: These charts are to be used only to determine the energy absorption of each guided cylinder and to determine if shocks or cushions are needed.

1 kg = 9.80 Newtons (N)
1 Newton = 0.225 lbs

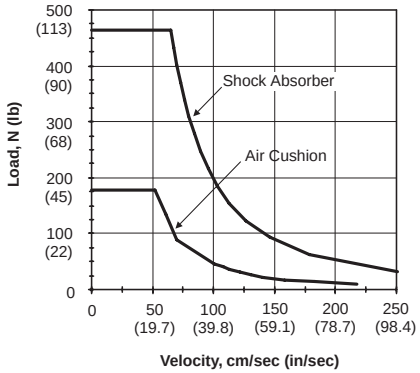
20mm Bore Size



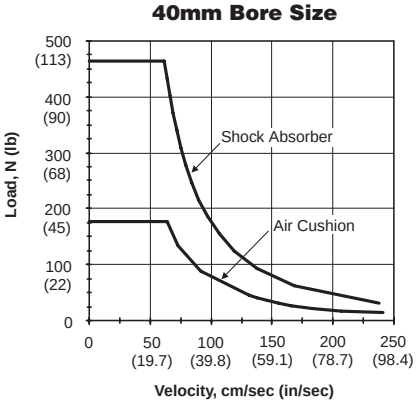
25mm Bore Size



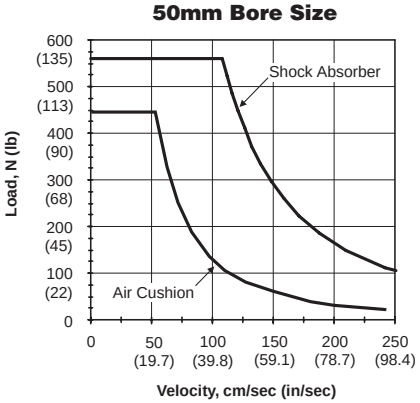
32mm Bore Size



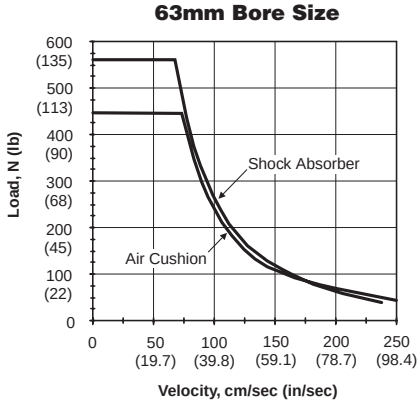
40mm Bore Size



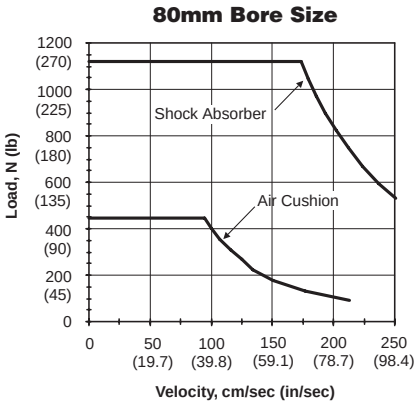
50mm Bore Size



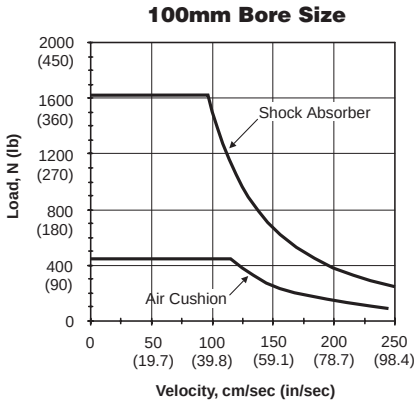
63mm Bore Size



80mm Bore Size

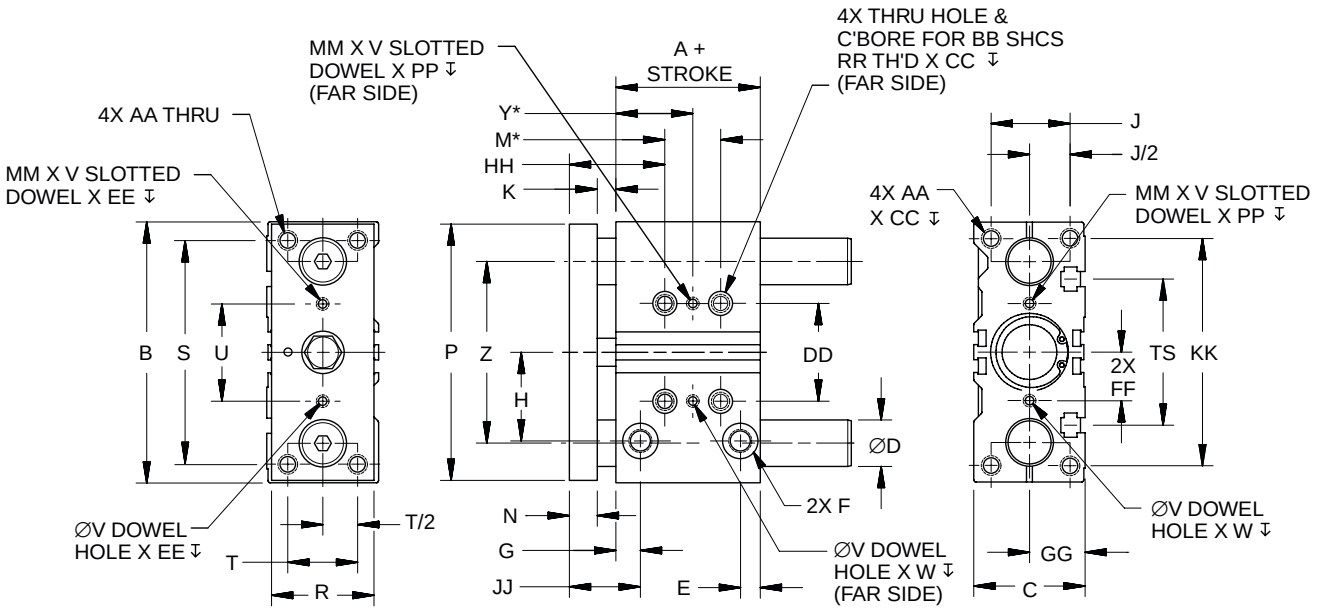


100mm Bore Size



Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

Basic Unit



F

3D CAD FILES
available for download at
parker.com/pneumatics

**** See page F42 for these stroke dependent dimensions.***

Bore	A	B	C	D_1	D_2	E	F	G	H	J	K	N	P	R	S	T	U
12	29 (1.14)	58 (2.28)	26 (1.02)	6 (0.24)	8 (0.31)	6.75 (0.27)	M5x0.8*	10.5 (0.41)	7.5 (0.30)	18 (0.71)	6 (0.24)	7 (0.28)	56 (2.20)	22 (0.87)	48 (1.89)	14 (0.55)	23 (0.91)
16	33 (1.30)	64 (2.52)	30 (1.18)	8 (0.31)	10 (0.39)	6.2 (0.24)	M5x0.8*	12 (0.47)	16.5 (0.65)	22 (0.87)	5 (0.20)	8 (0.31)	62 (2.44)	25 (0.98)	54 (2.13)	16 (0.63)	24 (0.94)
20	37 (1.46)	83 (3.27)	36 (1.42)	10 (0.39)	12 (0.47)	10 (0.39)	1/8 BSPP 1/8 NPTF	11 (0.43)	25 (0.98)	24 (0.94)	8 (0.31)	8 (0.31)	81 (3.19)	30 (1.18)	70 (2.76)	18 (0.71)	28 (1.10)
25	37.5 (1.48)	93 (3.66)	42 (1.65)	12 (0.47)	16 (0.63)	10.5 (0.41)	1/8 BSPP 1/8 NPTF	10.5 (0.41)	30 (1.18)	30 (1.18)	8 (0.31)	8 (0.31)	91 (3.58)	38 (1.50)	78 (3.07)	26 (1.02)	34 (1.34)
32	37.5 (1.48)	112 (4.41)	48 (1.89)	16 (0.63)	20 (0.79)	10.75 (0.42)	1/8 BSPP 1/8 NPTF	11.75 (0.46)	37.5 (1.48)	34 (1.34)	10 (0.39)	12 (0.47)	110 (4.33)	44 (1.73)	96 (3.78)	30 (1.18)	42 (1.65)
40	44 (1.73)	120 (4.72)	54 (2.13)	16 (0.63)	20 (0.79)	11.5 (0.45)	1/8 BSPP 1/8 NPTF	16 (0.63)	42 (1.65)	40 (1.57)	10 (0.39)	12 (0.47)	118 (4.65)	44 (1.73)	104 (4.09)	30 (1.18)	50 (1.97)
50	44 (1.73)	148 (5.83)	64 (2.52)	20 (0.79)	25 (0.98)	12.5 (0.49)	1/4 BSPP 1/4 NPTF	16 (0.63)	49 (1.93)	46 (1.81)	15 (0.59)	13 (0.51)	146 (5.75)	60 (2.36)	130 (5.12)	40 (1.57)	66 (2.60)
63	49 (1.93)	162 (6.38)	78 (3.07)	20 (0.79)	25 (0.98)	13 (0.51)	1/4 BSPP 1/4 NPTF	16 (0.63)	57 (2.24)	58 (2.28)	15 (0.59)	13 (0.51)	158 (6.22)	70 (2.76)	130 (5.12)	50 (1.97)	80 (3.15)
80	56.5 (2.22)	202 (7.95)	91.5 (3.60)	25 (0.98)	30 (1.18)	17 (0.67)	3/8 BSPP 3/8 NPTF	18 (0.71)	74 (2.91)	54 (2.13)	18 (0.71)	22 (0.87)	198 (7.80)	75 (2.95)	174 (6.85)	52 (2.05)	100 (3.94)
100	66 (2.60)	240 (9.45)	112 (4.41)	30 (1.18)	35 (1.38)	20 (0.79)	3/8 BSPP 3/8 NPTF	23 (0.91)	94 (3.70)	48 (1.89)	25 (0.98)	25 (0.98)	236 (9.29)	89 (3.50)	210 (8.27)	64 (2.52)	124 (4.88)

D_1 with linear ball bearing; D_2 with composite bushing
*10-32 fittings will fit into M5x0.8 ports.

All dimensions in mm (inch)

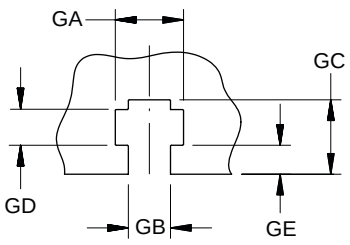
Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

Basic Unit

Bore	V $^{+0.01}_{-0.00}$	W	Z	AA	BB	CC	DD	EE	FF	GG	HH	JJ	KK	MM**	PP	RR	TS
12	3.06 (0.12)	6 (0.24)	41 (1.61)	M4 x0.7	M4	10 (0.39)	23 (0.91)	4.5 (0.18)	11.5 (0.45)	13 (0.51)	18 (0.71)	23.5 (0.93)	50 (1.97)	3.5 (0.14)	3 (0.12)	M5 x0.8	37 (1.46)
16	3.06 (0.12)	6 (0.24)	46 (1.81)	M5 x0.8	M4	10 (0.39)	24 (0.94)	4.5 (0.18)	12 (0.47)	15 (0.59)	18 (0.71)	25 (0.98)	56 (2.20)	3.5 (0.14)	3 (0.12)	M5 x0.8	38 (1.50)
20	3.06 (0.12)	6 (0.24)	54 (2.13)	M5 x0.8	M5	12 (0.47)	28 (1.10)	4.5 (0.18)	14 (0.55)	18 (0.71)	33 (1.30)	27 (1.06)	72 (2.83)	3.5 (0.14)	3 (0.12)	M6 x1.0	44 (1.73)
25	4.06 (0.16)	6 (0.24)	64 (2.52)	M6 x1.0	M5	12 (0.47)	34 (1.34)	4.5 (0.18)	17 (0.67)	21 (0.83)	33 (1.30)	26.5 (1.04)	82 (3.23)	4.5 (0.18)	3 (0.12)	M6 x1.0	50 (1.97)
32	4.06 (0.16)	6 (0.24)	78 (3.07)	M8 x1.25	M6	16 (0.63)	42 (1.65)	5.5 (0.22)	21 (0.83)	24 (0.94)	43 (1.69)	33.75 (1.33)	98 (3.86)	4.5 (0.18)	3 (0.12)	M8 x1.25	63 (2.48)
40	4.06 (0.16)	6 (0.24)	86 (3.39)	M8 x1.25	M6	16 (0.63)	50 (1.97)	5.5 (0.22)	25 (0.98)	27 (1.06)	44 (1.73)	38 (1.50)	106 (4.17)	4.5 (0.18)	3 (0.12)	M8 x1.25	72 (2.83)
50	5.04 (0.20)	8 (0.31)	110 (4.33)	M10 x1.5	M8	20 (0.79)	66 (2.60)	5.5 (0.22)	33 (1.30)	32 (1.26)	52 (2.05)	44 (1.73)	130 (5.12)	6 (0.24)	4 (0.16)	M1 x1.5	92 (3.62)
63	5.04 (0.20)	8 (0.31)	124 (4.88)	M10 x1.5	M8	20 (0.79)	80 (3.15)	5.5 (0.22)	40 (1.57)	39 (1.54)	52 (2.05)	44 (1.73)	142 (5.59)	6 (0.24)	4 (0.16)	M10 x1.5	110 (4.33)
80	6.04 (0.24)	10 (0.39)	156 (6.14)	M12 x1.75	M10	24 (0.94)	100 (3.94)	7.0 (0.28)	50 (1.97)	46 (1.81)	68 (2.68)	58 (2.28)	180 (7.09)	7 (0.28)	5 (0.20)	M12 x1.75	140 (5.51)
100	6.04 (0.24)	10 (0.39)	188 (7.40)	M14 x2.0	M12	28 (1.10)	124 (4.88)	7.0 (0.28)	62 (2.44)	56 (2.20)	61 (2.40)	73 (2.87)	221 (8.70)	7 (0.28)	5 (0.20)	M14 x2.0	166 (6.54)

** Slot length

T-Slot Detail



Bore	GA	GB	GC	GD	GE
12	7.4 (0.29)	4.5 (0.18)	6.2 (0.24)	3.7 (0.15)	2.0 (0.08)
16	7.4 (0.29)	4.5 (0.18)	7.7 (0.30)	3.7 (0.15)	3.0 (0.12)
20	8.5 (0.33)	5.5 (0.22)	9.4 (0.37)	4.5 (0.18)	3.7 (0.15)
25	8.5 (0.33)	5.5 (0.22)	9.5 (0.37)	4.5 (0.18)	3.0 (0.12)
32	10.5 (0.41)	6.5 (0.26)	10.5 (0.41)	5.5 (0.22)	3.5 (0.14)
40	10.5 (0.41)	6.5 (0.26)	12.5 (0.49)	5.5 (0.22)	4.0 (0.16)
50	13.5 (0.53)	8.5 (0.33)	15.0 (0.59)	7.5 (0.30)	3.5 (0.14)
63	16.8 (0.66)	10.8 (0.43)	21.0 (0.83)	10.0 (0.39)	7.0 (0.28)
80	18.7 (0.74)	12.8 (0.50)	24.8 (0.98)	12.0 (0.47)	10.3 (0.41)
100	23.0 (0.91)	15.0 (0.59)	31.0 (1.22)	14.0 (0.55)	10.0 (0.39)

All dimensions in mm (inch)

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

Basic Unit

Stroke Dependent Dimensions

Size	Dim	Standard Stroke Length (mm)											
		10	**20**	**25**	**30**	**40**	**50**	**75**	**100**	**125**	**150**	**175**	**200**
12	M	20 (0.79)	20 (0.79)	N/A	20 (0.79)	40 (1.57)	40 (1.57)	40 (1.57)	40 (1.57)	110 (4.33)	110 (4.33)	110 (4.33)	110 (4.33)
	Y	15 (0.59)	15 (0.59)	N/A	15 (0.59)	25 (0.98)	25 (0.98)	25 (0.98)	25 (0.98)	60 (2.36)	60 (2.36)	60 (2.36)	60 (2.36)
16	M	24 (0.94)	24 (0.94)	N/A	24 (0.94)	44 (1.73)	44 (1.73)	44 (1.73)	44 (1.73)	110 (4.33)	110 (4.33)	110 (4.33)	110 (4.33)
	Y	17 (0.67)	17 (0.67)	N/A	17 (0.67)	27 (1.06)	27 (1.06)	27 (1.06)	27 (1.06)	60 (2.36)	60 (2.36)	60 (2.36)	60 (2.36)
20, 25	M	N/A	24 (0.94)	N/A	24 (0.94)	44 (1.73)	44 (1.73)	44 (1.73)	44 (1.73)	120 (4.72)	120 (4.72)	120 (4.72)	120 (4.72)
	Y	N/A	29 (1.14)	N/A	29 (1.14)	39 (1.54)	39 (1.54)	39 (1.54)	39 (1.54)	77 (3.03)	77 (3.03)	77 (3.03)	77 (3.03)
32	M	N/A	N/A	24 (0.94)	N/A	N/A	48 (1.89)	48 (1.89)	48 (1.89)	124 (4.88)	124 (4.88)	124 (4.88)	124 (4.88)
	Y	N/A	N/A	33 (1.30)	N/A	N/A	45 (1.77)	45 (1.77)	45 (1.77)	83 (3.27)	83 (3.27)	83 (3.27)	83 (3.27)
40	M	N/A	N/A	24 (0.94)	N/A	N/A	48 (1.89)	48 (1.89)	48 (1.89)	124 (4.88)	124 (4.88)	124 (4.88)	124 (4.88)
	Y	N/A	N/A	34 (1.34)	N/A	N/A	46 (1.81)	46 (1.81)	46 (1.81)	84 (3.31)	84 (3.31)	84 (3.31)	84 (3.31)
50	M	N/A	N/A	24 (0.94)	N/A	N/A	48 (1.89)	48 (1.89)	48 (1.89)	124 (4.88)	124 (4.88)	124 (4.88)	124 (4.88)
	Y	N/A	N/A	36 (1.42)	N/A	N/A	48 (1.89)	48 (1.89)	48 (1.89)	86 (3.39)	86 (3.39)	86 (3.39)	86 (3.39)
63	M	N/A	N/A	24 (0.94)	N/A	N/A	52 (2.05)	52 (2.05)	52 (2.05)	128 (5.04)	128 (5.04)	128 (5.04)	128 (5.04)
	Y	N/A	N/A	38 (1.50)	N/A	N/A	50 (1.97)	50 (1.97)	50 (1.97)	88 (3.46)	88 (3.46)	88 (3.46)	88 (3.46)
80	M	N/A	N/A	28 (1.10)	N/A	N/A	52 (2.05)	52 (2.05)	52 (2.05)	128 (5.04)	128 (5.04)	128 (5.04)	128 (5.04)
	Y	N/A	N/A	42 (1.65)	N/A	N/A	54 (2.13)	54 (2.13)	54 (2.13)	92 (3.62)	92 (3.62)	92 (3.62)	92 (3.62)
100	M	N/A	N/A	48 (1.89)	N/A	N/A	72 (2.83)	72 (2.83)	72 (2.83)	148 (5.83)	148 (5.83)	148 (5.83)	148 (5.83)
	Y	N/A	N/A	35 (1.38)	N/A	N/A	47 (1.85)	47 (1.85)	47 (1.85)	85 (3.35)	85 (3.35)	85 (3.35)	85 (3.35)

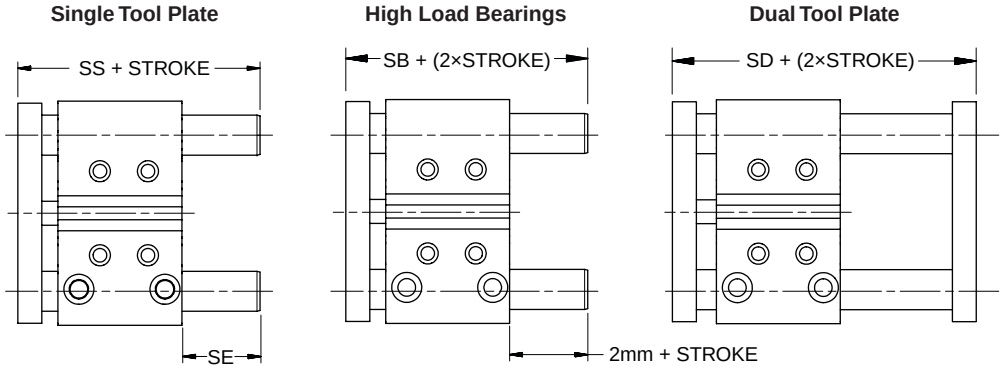
F

All dimensions in mm (inch)

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

Overall Length without Extend and Retract Options

A single tool plate unit with no options has the same support rod lengths with or without cushions.



SIZE	Stroke						SB @ zero stroke		SD @ zero stroke		YY_2	PA	PB
	10, 20, 30,		40, 50, 75, 100		125, 150, 175, 200		Non-cushion	Cushion	Non-cushion	Cushion			
	SS at stroke	SE at retract	SS at stroke	SE at retract	SS at stroke	SE at retract							
12	41 (1.61)	0 0.00	55 (2.17)	13 (0.51)	85 (3.35)	43 (1.69)	44 (1.73)	N/A	50 (1.97)	N/A	15 (0.59)	10 (0.39)	25 (0.98)
16	39 (1.54)	0 0.00	65 (2.56)	19 (0.75)	95 (3.74)	49 (1.93)	48 (1.89)	N/A	55 (2.17)	N/A	15 (0.59)	11 (0.43)	26 (1.02)

SIZE	Stroke						SB @ zero stroke		SD @ zero stroke		YY_2	PA	PB
	20, 25, 30		40, 50, 75, 100		125, 150, 175, 200		Non-cushion	Cushion	Non-cushion	Cushion			
	SS at stroke	SE at retract	SS at stroke	SE at retract	SS at stroke	SE at retract							
20	44 (1.73)	0 0.00	80 (3.15)	27 (1.06)	104 (4.09)	51 (2.01)	55 (2.17)	80 (3.15)	62.0 (2.44)	87.0 (3.43)	17 (0.67)	10 (0.39)	27 (1.06)
25	70 (2.74)	16 (0.63)	86 (3.37)	32 (1.26)	105 (4.11)	51 (2.01)	56 (2.19)	81 (3.17)	62.5 (2.46)	87.5 (3.44)	19 (0.75)	12 (0.47)	31 (1.22)

SIZE	Stroke						SB @ zero stroke		SD @ zero stroke		YY_2	PA	PB
	25, 50		75, 100		125, 150, 175, 200		Non-cushion	Cushion	Non-cushion	Cushion			
	SS at stroke	SE at retract	SS at stroke	SE at retract	SS at stroke	SE at retract							
32	84 (3.31)	25 (0.96)	98 (3.86)	39 (1.52)	118 (4.65)	59 (2.30)	63 (2.46)	88 (3.44)	73 (2.85)	97.5 (3.84)	21 (0.83)	12 (0.47)	33 (1.30)
40	85 (3.35)	19 (0.75)	98 (3.86)	32 (1.26)	118 (4.65)	52 (2.05)	69 (2.72)	94 (3.70)	79 (3.11)	104.0 (4.09)	21 (0.83)	12 (0.47)	33 (1.30)
50	93 (3.66)	21 (0.83)	114 (4.49)	42 (1.65)	134 (5.28)	62 (2.44)	75 (2.95)	100 (3.94)	86 (3.39)	111.0 (4.37)	21 (0.83)	7 (0.28)	28 (1.10)
63	93 (3.66)	16 (0.63)	114 (4.49)	37 (1.46)	134 (5.28)	57 (2.24)	80 (3.15)	105 (4.13)	91 (3.58)	116.0 (4.57)	21 (0.83)	7 (0.28)	28 (1.10)
80	123 (4.84)	27 (1.04)	142 (5.59)	46 (1.79)	142 (5.59)	46 (1.79)	100 (3.92)	125 (4.90)	120 (4.70)	144.5 (5.69)	21 (0.83)	4 (0.16)	25 (0.98)
100	103 (4.06)	0 0.00	162 (6.38)	46 (1.81)	162 (6.38)	46 (1.81)	119 (4.69)	144 (5.67)	142 (5.59)	167.0 (6.57)	21 (0.83)	0 0.00	18 (0.71)

Overall Length with Extend and Retract Options

Option	Single Tool Plate	High Load Bearing	Dual Tool Plate
Retract Option	SS + STROKE + PA	SB + (2× STROKE) + PA	SD + (2× STROKE) + PA
Extend Option	SB + (2× STROKE) + YY_2	SB + (2× STROKE) + YY_2	SD + (2× STROKE) + YY_2
Extend & Retract Option	SB + (2× STROKE) + PB	SB + (2× STROKE) + PB	SD + (2× STROKE) + PB

Example: High load bearing style, 32mm bore, 175mm stroke with an extend option and a retract option.

Overall Length = SB + (2×STROKE) + PB = 63 + (2×175) + 33 = 446mm

All dimensions in mm (inch)

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

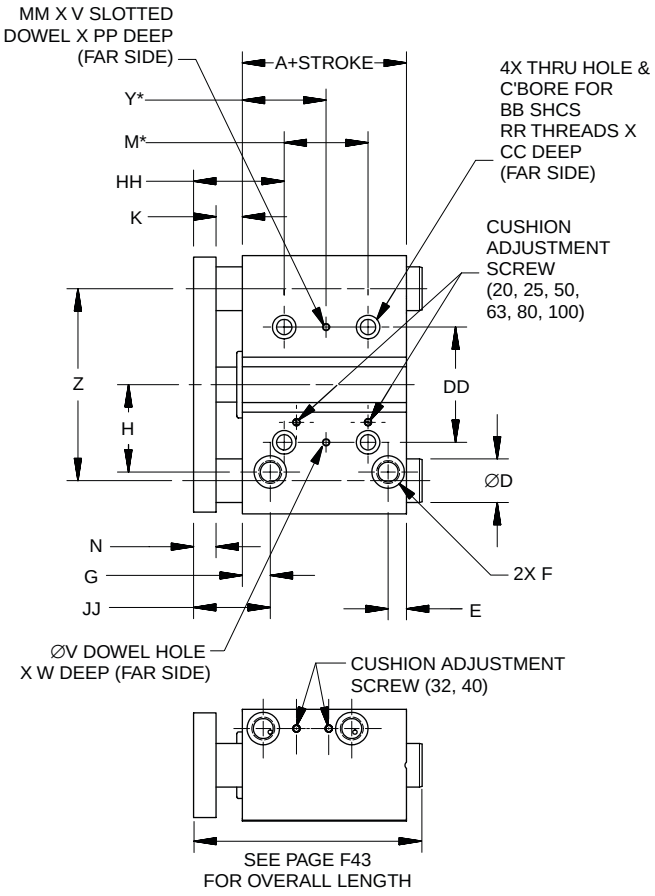
A074

Cushions (E, F)

P5T2 units in bore sizes 20mm - 100mm are available with adjustable air cushions to absorb Kinetic energy at end of stroke. Internal cushions should be used in lieu of bumpers when more energy dissipation is required. Cushions are not available in 12mm and 16mm bore sizes.

Cushions may not operate effectively when combined with shocks, adjustable stop collars and/or bumpers.

See charts on pages F38-F39 for sizing. For additional mounting dimensions not shown, please refer to basic dimensions on pages F40-F41.



**** See next page for stroke dependent dimensions.***

Dimensions

Bore	A	D_1	D_2	E	F
20	62 (2.44)	10 (0.39)	12 (0.47)	10 (0.39)	1/8 BSPP 1/8 NPTF
25	62.5 (2.46)	12 (0.47)	16 (0.63)	10.5 (0.41)	1/8 BSPP 1/8 NPTF
32	62.5 (2.46)	16 (0.63)	20 (0.79)	10.75 (0.42)	1/8 BSPP 1/8 NPTF
40	69 (2.72)	16 (0.63)	20 (0.79)	11.5 (0.45)	1/8 BSPP 1/8 NPTF
50	69 (2.72)	20 (0.79)	25 (0.98)	12.5 (0.49)	1/4 BSPP 1/4 NPTF
63	74 (2.91)	20 (0.79)	25 (0.98)	13 (0.51)	1/4 BSPP 1/4 NPTF
80	81.5 (3.21)	25 (0.98)	30 (1.18)	17 (0.67)	3/8 BSPP 3/8 NPTF
100	91 (3.58)	30 (1.18)	35 (1.38)	19.5 (0.77)	3/8 BSPP 3/8 NPTF

D_1 with Linear Ball Bearing
D_2 with Composite Bushing

Bore	G	H	K	N	V $^{+0.01}_{-0.00}$	W	Z	BB	CC	DD	HH	JJ	MM*	PP	RR
20	11 (0.43)	25 (0.98)	8 (0.31)	8 (0.31)	3.06 (0.12)	6 (0.24)	54 (2.13)	M5	12 (0.47)	28 (1.10)	33 (1.30)	27 (1.06)	3.5 (0.14)	3 (0.12)	M6x1.0
25	10.5 (0.41)	30 (1.18)	8 (0.31)	8 (0.31)	4.06 (0.16)	6 (0.24	64 (2.52)	M5	12 (0.47)	34 (1.34)	33 (1.30)	26.5 (1.04)	4.5 (0.18)	3 (0.12)	M6x1.0
32	11.75 (0.46)	37.5 (1.48)	10 (0.39)	12 (0.47)	4.06 (0.16)	6 (0.24)	78 (3.07)	M6	16 (0.63)	42 (1.65)	43 (1.69)	33.75 (1.33)	4.5 (0.18)	3 (0.12)	M8x1.25
40	16 (0.63)	42 (1.65)	10 (0.39)	12 (0.47)	4.06 (0.16)	6 (0.24)	86 (3.39)	M6	16 (0.63)	50 (1.97)	44 (1.73)	38 (1.50)	4.5 (0.18)	3 (0.12)	M8x1.25
50	16 (0.63)	49 (1.93)	15 (0.59)	13 (0.51)	5.04 (0.20)	8 (0.31)	110 (4.33)	M8	32 (1.26)	66 (2.60)	52 (2.05)	44 (1.73)	6 (0.24)	4 (0.16)	M10x1.5
63	16 (0.63)	57 (2.24)	15 (0.59)	13 (0.51)	5.04 (0.20)	8 (0.31)	124 (4.88)	M8	20 (0.79)	80 (3.15)	52 (2.05)	44 (1.73)	6 (0.24)	4 (0.16)	M10x1.5
80	18 (0.71)	74 (2.91)	18 (0.71)	22 (0.87)	6.04 (0.24)	10 (0.39)	156 (6.14)	M10	24 (0.94)	100 (3.94)	68 (2.68)	58 (2.28)	7 (0.28)	5 (0.20)	M12x1.75
100	23 (0.91)	93.5 (3.68)	25 (0.98)	25 (0.98)	6.04 (0.24)	10 (0.39)	188 (7.40)	M12	28 (1.10)	124 (4.88)	61 (2.40)	73 (2.87)	7 (0.28)	5 (0.20)	M14x2.0

*Slot length

All dimensions in mm (inch)

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

Cushions

Dimensions

Size	Dim	Stroke Length (mm)							
		25	**50**	**75**	**100**	**125**	**150**	**175**	**200**
20, 25	M	44 (1.73)	44 (1.73)	44 (1.73)	120 (4.72)	120 (4.72)	120 (4.72)	120 (4.72)	200 (7.87)
	Y	39 (1.54)	39 (1.54)	39 (1.54)	77 (3.03)	77 (3.03)	77 (3.03)	77 (3.03)	117 (4.61)
32	M	48 (1.89)	48 (1.89)	48 (1.89)	124 (4.88)	124 (4.88)	124 (4.88)	124 (4.88)	200 (7.87)
	Y	45 (1.77)	45 (1.77)	45 (1.77)	83 (3.27)	83 (3.27)	83 (3.27)	83 (3.27)	121 (4.76)
40	M	48 (1.89)	48 (1.89)	48 (1.89)	124 (4.88)	124 (4.88)	124 (4.88)	124 (4.88)	200 (7.87)
	Y	46 (1.81)	46 (1.81)	46 (1.81)	84 (3.31)	84 (3.31)	84 (3.31)	84 (3.31)	122 (4.80)
50	M	48 (1.89)	48 (1.89)	48 (1.89)	124 (4.88)	124 (4.88)	124 (4.88)	124 (4.88)	200 (7.87)
	Y	48 (1.89)	48 (1.89)	48 (1.89)	86 (3.39)	86 (3.39)	86 (3.39)	86 (3.39)	124 (4.88)
63	M	52 (2.05)	52 (2.05)	52 (2.05)	128 (5.04)	128 (5.04)	128 (5.04)	128 (5.04)	200 (7.87)
	Y	50 (1.97)	50 (1.97)	50 (1.97)	88 (3.46)	88 (3.46)	88 (3.46)	88 (3.46)	124 (4.88)
80	M	NA	52 (2.05)	52 (2.05)	128 (5.04)	128 (5.04)	128 (5.04)	128 (5.04)	200 (7.87)
	Y	NA	54 (2.13)	54 (2.13)	92 (3.62)	92 (3.62)	92 (3.62)	92 (3.62)	128 (5.04)
100	M	NA	72 (2.83)	72 (2.83)	148 (5.83)	148 (5.83)	148 (5.83)	148 (5.83)	220 (8.66)
	Y	NA	47 (1.85)	47 (1.85)	85 (3.35)	85 (3.35)	85 (3.35)	85 (3.35)	121 (4.76)

All dimensions in mm (inch)

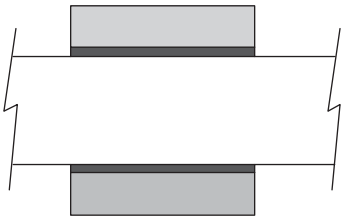
Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

Shaft Bearings

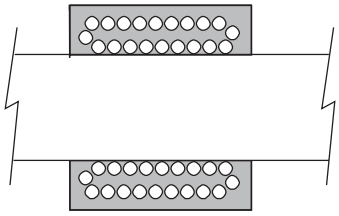
Composite bushings are supplied as standard.
Linear ball bearings are optional.

Selection should be based on the following criteria:

Application Requirement	Ball	Composite
Precision	Excellent	Good
Friction	Low	Higher
Friction coefficient	Constant	Variable
Precision over	Constant	Variable
Static Load Capacity	Good	Excellent
Dynamic Load Capacity	Good	Good with lower efficiency
Vibration Resistance	Fair	Excellent
Contamination Resistance	Poor	Excellent
Washdown Compatibility	Poor	Excellent



Composite Bushing (J, K)



Linear Ball Bearing (H, L)

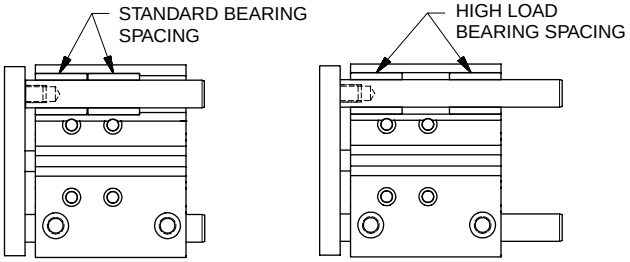
F

High Load Bearings (K1, K3, L3)

The standard bearing configuration locates both sets of bearings at the tool plate end of the actuator providing a compact actuator package.

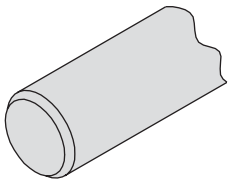
The High Load Bearings option locates the bearings at the extreme ends of the housing, increasing the dynamic and static load capacity. The bearing spacing increases as stroke length increases.

The High Load Bearing spacing is not available on strokes less than 50mm.



Corrosion Resistant Shafting

Chrome-plated steel shafting with composite bearings is utilized for standard slides. Stainless steel corrosion resistant shafting is available for extreme conditions.

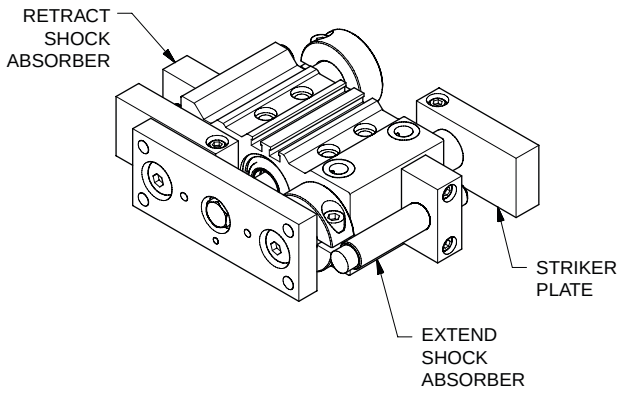


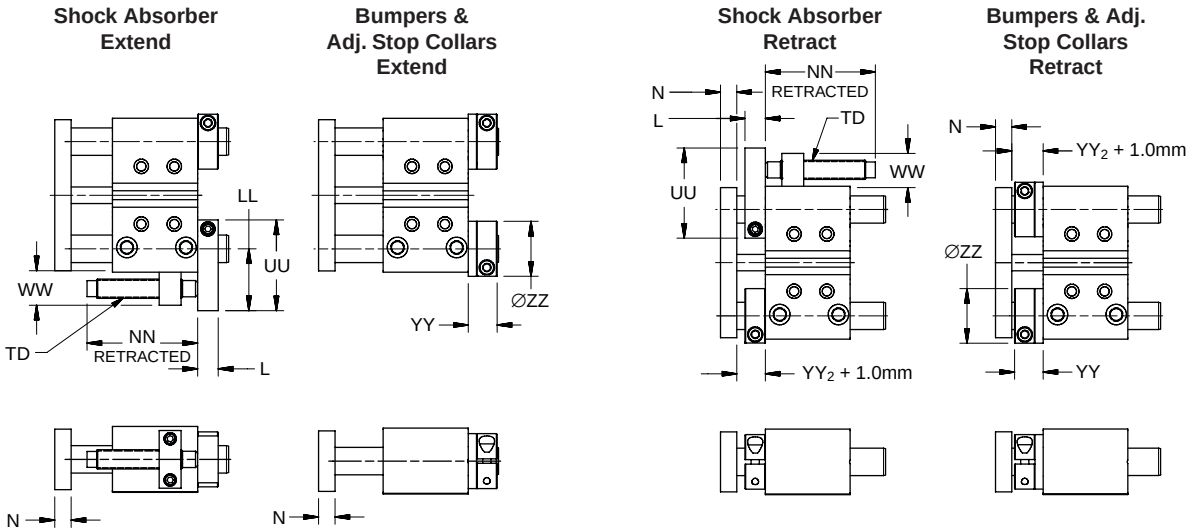
Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

A074

Extend and Retract Options

Shock Absorber (A)
Bumpers & Adj. Stop Collars (K)
Bumpers & Shock Absorber (L)





Note: See page F43 for overall length.

Dimensions

Bore	L_1	L_2	N	LL	NN	TD	UU	WW	YY_1	YY_2	ZZ_1	ZZ_2
12	N/A	N/A	7 (0.28)	N/A	N/A	N/A	N/A	N/A	15 (0.59)	15 (0.59)	16 (0.63)	18 (0.71)
16	N/A	N/A	8 (0.31)	N/A	N/A	N/A	N/A	N/A	15 (0.59)	15 (0.59)	18 (0.71)	24 (0.94)
20	9 (0.35)	11 (0.43)	8 (0.31)	33.0 (1.30)	74 (2.91)	M12x1.0	48 (1.89)	19 (0.75)	15 (0.59)	17 (0.67)	24 (0.94)	28 (1.10)
25	11 (0.43)	13 (0.51)	8 (0.31)	39.0 (1.54)	80 (3.15)	M14x1.5	57 (2.24)	24 (0.94)	17 (0.67)	19 (0.75)	28 (1.10)	34 (1.34)
32	13 (0.51)	15 (0.59)	12 (0.47)	45.0 (1.77)	80 (3.15)	M14x1.5	66 (2.60)	24 (0.94)	19 (0.75)	21 (0.83)	34 (1.34)	40 (1.57)
40	15 (0.59)	15 (0.59)	12 (0.47)	45.0 (1.77)	99.5 (3.92)	M20x1.5	66 (2.60)	35 (1.38)	19 (0.75)	21 (0.83)	34 (1.34)	40 (1.57)
50	15 (0.59)	15 (0.59)	13 (0.51)	54.0 (2.13)	117 (4.61)	M25x1.5	79 (3.11)	40 (1.57)	21 (0.83)	21 (0.83)	40 (1.57)	45 (1.77)
63	15 (0.59)	15 (0.59)	13 (0.51)	54.0 (2.13)	117 (4.61)	M25x1.5	79 (3.11)	40 (1.57)	21 (0.83)	21 (0.83)	40 (1.57)	45 (1.77)
80*	15 (0.59)	15 (0.59)	22 (0.87)	71.0 (2.80)	140.5 (5.53)	M33x1.5	98 (3.86)	48 (1.89)	21 (0.83)	21 (0.83)	45 (1.77)	54 (2.13)
100*	15 (0.59)	15 (0.59)	25 (0.98)	76.0 (2.99)	140.5 (5.53)	M36x1.5	108 (4.25)	50 (1.97)	21 (0.83)	21 (0.83)	54 (2.13)	57 (2.24)

1 with Linear Ball Bearing

2 with Composite Bushing

* Shocks not available with 25mm stroke.

All dimensions in mm (inch)

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

A074

Rod Lock (R)

P5T2 Series units in 32mm - 100mm bore sizes are available with an integral rod lock mechanism.

The powerful rod lock device is air/spring activated and enables the piston rod to be locked in any position. In the absence of air signal pressure, full holding force is applied to the piston rod. When an air signal pressure of 60 PSI (4 Bar) is applied, the locking device is released. Exhaust air can be piped away when a contaminant-free environment is required.

Applications: Vertical guided cylinders
In the event of pressure loss
In the event of electrical control failure

Design Tip: The piston rod should not be moving when the locking device is activated. The locking device is not intended to repeatedly brake movement. See sample pneumatic circuit.

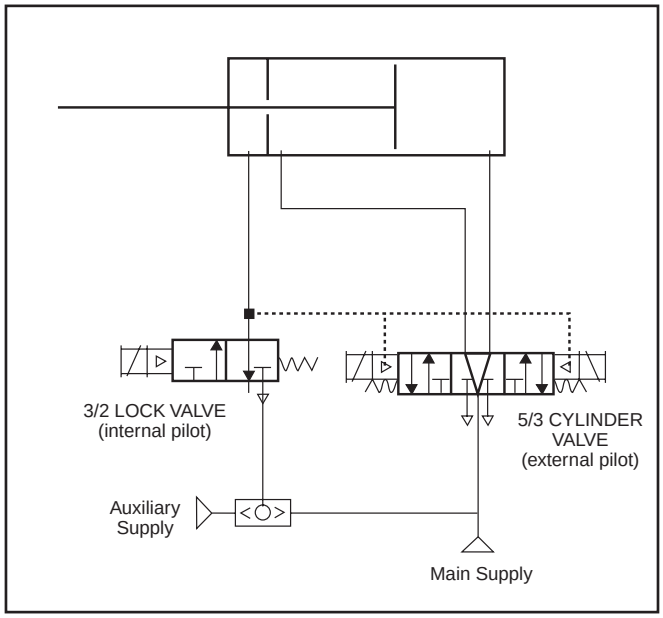
Technical Data

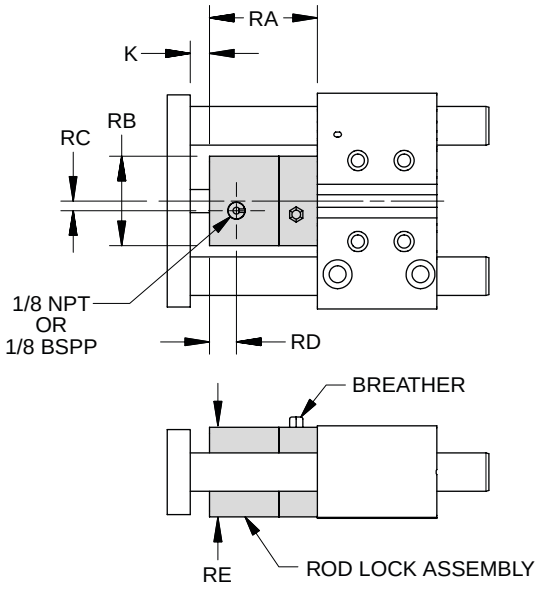
Maximum Pressure: 145 PSI (10 Bar)
Pressure Required to Unlock: 60 PSI (4 Bar)

Bore Size (mm)	Holding Force @7 Bar (102 PSI)	
	lb	N
32	123	550
40	193	860
50	303	1345
63	481	2140
80	755	3450
100	1211	5390

ROD LOCK CIRCUIT

Lock valve must be maintained energized during cylinder motion, otherwise rod lock is engaged and cylinder valve shifts to mid position. For manual override of the rod lock, insert a shuttle valve and an auxiliary air supply to disable rod lock.





Dimensions

Bore	RA	RB	RC	RD	RE	K
32	56 (2.20)	46.5 (1.83)	5 (0.20)	14 (0.55)	46.5 (1.83)	10 (0.39)
40	58 (2.28)	50.8 (2.00)	6 (0.24)	10 (0.39)	50.8 (2.00)	10 (0.39)
50	66 (2.60)	63.5 (2.50)	0 0.00	14 (0.55)	63.5 (2.50)	15 (0.59)
63	83 (3.27)	76.2 (3.00)	7.4 (0.29)	18 (0.71)	76.2 (3.00)	15 (0.59)
80	100 (3.94)	95.25 (3.75)	10 (0.39)	26 (1.02)	92.75 (3.65)	18 (0.71)
100	116 (4.57)	111 (4.37)	10 (0.39)	43 (1.69)	111 (4.37)	25 (0.98)

All dimensions in mm (inch)

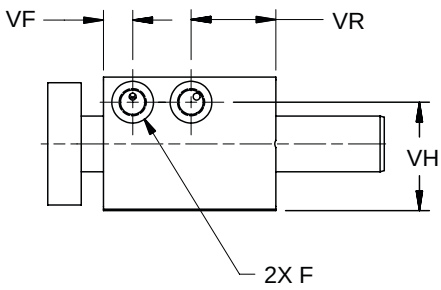
Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

Optional Port Location (2, 3)

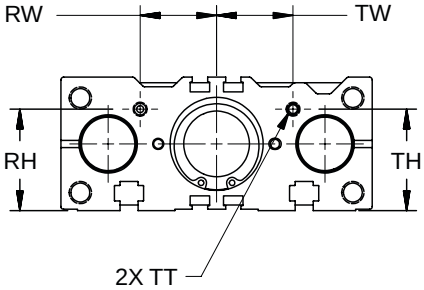
Top porting (1) is standard (see drawing on page F40). Optional side (2) and rear (3) porting is available. When ordering either optional port location, the top ports will also be present with threaded port plugs installed.

Certain configurations cannot be used with side or rear ports. Reference Model Code & Ordering Information on page F29.

Side Ports (2)



Rear Ports (3)



Dimensions

Bore	F	VH	TT	VR	VF	RW	RH	TW	TH
12	M5 x 0.8	21.5 (0.85)	M5 x 0.8	17.5 (0.69)	9.5 (0.37)	10.5 (0.41)	17.5 (0.69)	12 (0.47)	18.5 (0.73)
16	M5 x 0.8	25.5 (1.00)	M5 x 0.8	20 (0.79)	10 (0.39)	12 (0.47)	20 (0.79)	12 (0.47)	20 (0.79)
20	1/8 BSPP 1/8 NPTF	29.5 (1.16)	M5 x 0.8	25.5 (1.00)	11 (0.43)	20.5 (0.81)	28.5 (1.12)	20.5 (0.81)	28.5 (1.12)
25	1/8 BSPP 1/8 NPTF	34.5 (1.36)	M5 x 0.8	25 (0.98)	11.5 (0.45)	26.1 (1.03)	34.75 (1.37)	26.1 (1.03)	34.8 (1.37)
32	1/8 BSPP 1/8 NPTF	40 (1.57)	M5 x 0.8	30.75 (1.21)	11.75 (0.46)	29 (1.14)	37.8 (1.49)	29 (1.14)	37.8 (1.49)
40	1/8 BSPP 1/8 NPTF	46 (1.81)	1/8 BSPP 1/8 NPTF	34 (1.34)	14 (0.55)	33 (1.30)	45 (1.77)	33 (1.30)	45 (1.77)
50	1/4 BSPP 1/4 NPTF	53.75 (2.12)	1/4 BSPP 1/4 NPTF	34 (1.34)	12 (0.47)	38.5 (1.52)	48.5 (1.91)	38.5 (1.52)	48.5 (1.91)
63	1/4 BSPP 1/4 NPTF	63 (2.48)	1/4 BSPP 1/4 NPTF	36 (1.42)	16 (0.63)	45 (1.77)	63 (2.44)	45 (1.77)	62 (2.44)
80	3/8 BSPP 3/8 NPTF	74 (2.91)	3/8 BSPP 3/8 NPTF	42 (1.65)	13.5 (0.53)	61.5 (2.42)	75 (2.95)	61.5 (2.42)	75 (2.95)
100	3/8 BSPP 3/8 NPTF	83 (3.27)	3/8 BSPP 3/8 NPTF	50 (1.97)	18 (0.71)	68 (2.68)	76 (2.99)	68 (2.68)	76 (2.99)

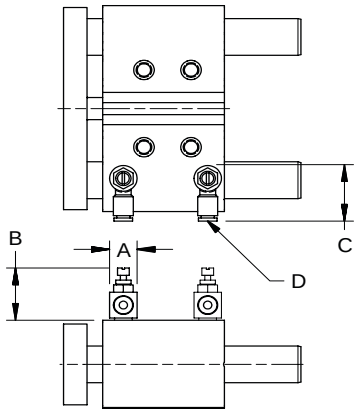
All dimensions in mm (inch)

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

A074

Flow Controls

Right angle flow control valves allow precise adjustment of cylinder speed by metering exhaust air flow. Prestolok push-in tube fittings or threaded fittings provide 360° orientation capability. In some rear porting instances, the flow control may not have 360° of orientation due to support rod interference.



Dimensions

Model	NPT Cylinder Ports								BSPP Cylinder Ports							
	Threaded (P, S)				Prestolok (E, K)				Threaded (R, T)				Prestolok (F, N)			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
12, 16	NA	NA	NA	NA	NA	NA	NA	NA	10.0 (0.39)	28.5 (1.12)	17.5 (0.69)	M5	10.0 (0.39)	18 (0.71)	19.5 (0.77)	4mm tube
20, 25, 32, 40	17.2 (0.68)	28.4 (1.12)	55.4 (2.18)	1/8	17.2 (0.68)	25.2 (0.99)	55.4 (2.18)	1/4"* tube	14.4 (0.57)	25.4 (1.00)	28.5 (1.12)	1/8	14.4 (0.57)	31.6 (1.24)	28.5 (1.12)	6mm tube
50, 63	17.2 (0.68)	32.4 (1.28)	65.2 (2.57)	1/4	17.2 (0.68)	38.3 (1.51)	65.2 (2.57)	3/8" tube	18.4 (0.72)	34.3 (1.35)	27.4 (1.08)	1/4	18.4 (0.72)	41.3 (1.63)	34 (1.34)	10mm tube
80, 100	25.0 (0.98)	39.0 (1.54)	80.2 (3.16)	3/8	30.0 (1.18)	47.4 (1.87)	98.0 (3.86)	3/8" tube	21.6 (0.85)	40.2 (1.58)	34 (1.34)	3/8	21.6 (0.85)	46.7 (1.84)	44 (1.73)	12mm tube

Fluorocarbon Seals (L, M)

Standard abrasion resistant Buna-N nitrile seals should be used for general purpose applications with temperatures of 18° to 74°C (0° to 165°F). Fluorocarbon seals are recommended for high temperature applications up to 121°C (250°F).

Other components in the actuator may be affected by the higher temperatures. Please see chart for temperature ratings of other commonly used components.

Feature	Temperature Range
Bumpers	-18° to 93°C (0° to 200°F)
Shock Absorbers	0° to 66°C (32° to 150°F)
Magnets	-18° to 74°C (0° to 165°F)
Switches	-10° to 85°C (14° to 185°F)

All dimensions in mm (inch)

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

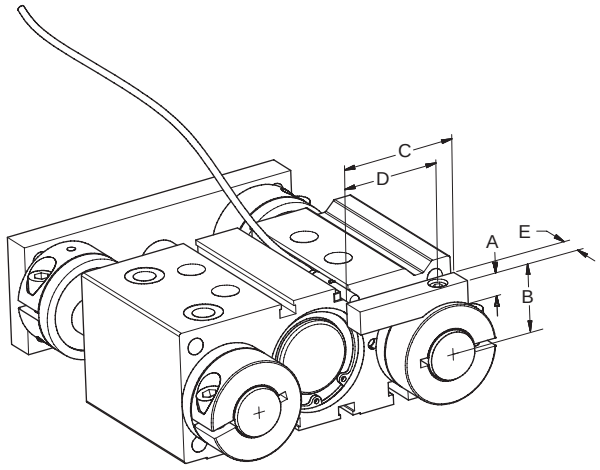
A074

Proximity Sensors – 4mm

Proximity sensors are normally ordered with the unit as part of the model number. Use the part numbers below for spare parts only.

Type	Quick Connect	Flying Leads	Bracket
PNP	B8829-QC-P*	B8829-FL-P	HW-3
NPN	B8829-QC-N**	B8829-FL-N	

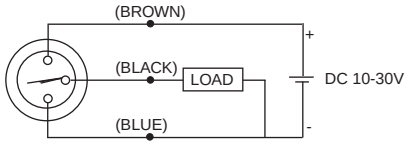
* Order cordset B8757-P separately.
** Order cordset B8757-N separately.



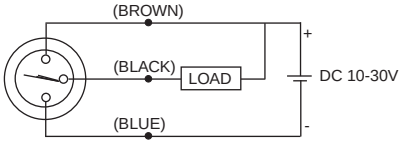
Electrical Specifications

Voltage..... 10-30 VDC (3 wire) PNP or NPN
No Load Current..... 3-10 mA
Continuous Current ..... 100 mA
Switching Speed..... 8 ms
Switch Frequency ..... 1800 Hz
Switching Distance ..... Aluminum = 0.024 in (0.6mm) Brass = 0.041 in (1.05mm) Steel = 0.059 in (1.5mm)
Overload Protection..... Triggered at 170mA
Reverse Polarity Protection ..... Incorporated
Temp. Range..... -13° to 158°F (-25° to 70°C)
Enclosure Rating ..... Meets NEMA 1, 3, 4, 6, 13 and IEC IP67, fully encapsulated

PNP WIRING CONNECTION



NPN WIRING CONNECTION



Dimensions

Size	Support Rod Dia.	A	B	C	D	E
12	6mm	8.0 (0.31)	14.3 (0.56)	31.8 (1.25)	24.1 (0.95)	9.5 (0.38)
	8mm	9.5 (0.38)	16.0 (0.63)	34.9 (1.38)	26.5 (1.05)	9.5 (0.38)
16	8mm	9.5 (0.38)	16.0 (0.63)	34.9 (1.38)	26.5 (1.05)	9.5 (0.38)
	10mm	9.5 (0.38)	19.0 (0.75)	34.9 (1.38)	26.5 (1.04)	9.5 (0.38)
20	10mm	9.5 (0.38)	19.0 (0.75)	34.9 (1.38)	26.5 (1.04)	9.5 (0.38)
	12mm	9.5 (0.38)	21.5 (0.85)	37.8 (1.49)	30.8 (1.21)	9.5 (0.38)
25	12mm	9.5 (0.38)	21.5 (0.85)	37.8 (1.49)	30.8 (1.21)	9.5 (0.38)
	16mm	9.5 (0.38)	24.5 (0.96)	45.4 (1.79)	37.4 (1.47)	9.5 (0.38)
32	16mm	9.5 (0.38)	24.5 (0.96)	45.4 (1.79)	37.4 (1.47)	9.5 (0.38)
	20mm	9.5 (0.38)	26.8 (1.06)	47.5 (1.87)	37.4 (1.47)	9.5 (0.38)
40	16mm	9.5 (0.38)	24.5 (0.96)	45.4 (1.79)	37.4 (1.47)	9.5 (0.38)
	20mm	9.5 (0.38)	26.8 (1.06)	47.5 (1.87)	37.4 (1.47)	9.5 (0.38)
50	20mm	19.0 (0.75)	37.0 (1.46)	59.6 (2.35)	50.8 (2.00)	9.5 (0.38)
	25mm	19.0 (0.75)	37.2 (1.47)	64.0 (2.52)	50.8 (2.00)	12.7 (0.50)
63	20mm	19.0 (0.75)	37.0 (1.46)	59.6 (2.35)	50.8 (2.00)	9.5 (0.38)
	25mm	19.0 (0.75)	37.2 (1.47)	64.0 (2.52)	50.8 (2.00)	12.7 (0.50)
80	25mm	25.4 (1.00)	45.1 (1.78)	69.3 (2.73)	58.4 (2.30)	12.7 (0.50)
	30mm	19.0 (0.75)	44.5 (1.75)	69.1 (2.72)	58.4 (2.30)	12.7 (0.50)
100	30mm	19.0 (0.75)	44.5 (1.75)	69.1 (2.72)	58.4 (2.30)	12.7 (0.50)
	35mm	12.7 (0.50)	38.1 (1.50)	69.8 (2.75)	52.1 (2.05)	12.7 (0.50)

All dimensions in mm (inch)

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics

F

Parker Hannifin Corporation
Pneumatic Division
Wadsworth, Ohio
www.parker.com/pneumatics