

# Pull cylinders - Upper flange models

Shown: PUSS-51, PUSD-121

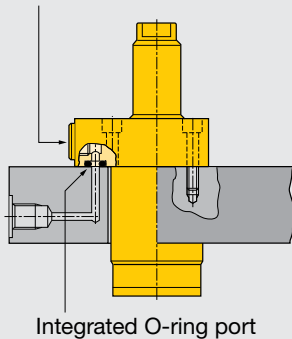


## PU series

Upper flange pull cylinders are designed for integrated manifold mounting solutions.

Hydraulic connections are made through SAE or BSPP oil connection or the standard integrated O-ring ports.

Oil connection



Integrated O-ring port

■ Enerpac upper flange pull cylinders in a fixture for gun breech production.



## Minimal mounting height

...when space is at a premium

- Guided linear plunger movement
- Flexible design allows for manifold or threaded port connection
- Low profile mounting style allows body to be below mounting surface
- Internal plunger thread allows easy mounting of attachments
- Simple mounting preparation
- Easy to machine fixture hole: does not require tight tolerances
- Easy assembly: 3 or 4 mounting bolts
- Double oil connection: threaded port or manifold mount

## Product selection

Cylinder capacity		Stroke	Model number	Cylinder effective area		Oil capacity	
lbs Pull	lbs Push	in		in <sup>2</sup> Pull	in <sup>2</sup> Push	in <sup>3</sup> Pull	in <sup>3</sup> Push
<b>▼ Single acting</b>							
1250	–	.89	<b>PUSS-51</b>	.28	–	.25	–
2950	–	1.10	<b>PUSS-121</b>	.63	–	.70	–
<b>▼ Double acting</b>							
1400	2950	.89	<b>PUSD-51</b>	.28	.59	.25	.53
2475	6300	.87	<b>PUSD-92</b>	.49	1.25	.42	1.08
3150	6150	1.10	<b>PUSD-121</b>	.63	1.23	.70	1.40
9600	18,400	1.20	<b>PUSD-351</b>	1.92	3.68	2.27	4.35

Note: - Call Enerpac to order models with BSPP oil connections.  
- Pull forces for single-acting cylinders reduced due to spring force.

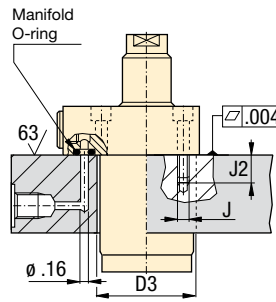
## Dimensions in inches [ ]

Model number	A	B	C1	D	D1	D2	E	E1	F	H
				∅			∅	∅		
<b>▼ Single acting</b>										
<b>PUSS-51</b>	5.07	4.18	0.98	1.37	2.13	2.25	0.63	0.59	0.51	0.55
<b>PUSS-121</b>	6.31	5.21	1.00	1.87	2.62	2.88	0.87	0.82	0.68	0.61
<b>▼ Double acting</b>										
<b>PUSD-51</b>	5.07	4.18	0.98	1.37	2.13	2.25	0.63	0.59	0.51	0.55
<b>PUSD-92</b>	5.43	4.57	0.98	1.88	2.76	2.13	0.98	0.93	0.70	0.49
<b>PUSD-121</b>	6.31	5.21	1.00	1.87	2.62	2.88	0.87	0.82	0.68	0.61
<b>PUSD-351</b>	8.04	6.83	0.98	3.14	3.94	3.50	1.50	1.42	1.13	0.49

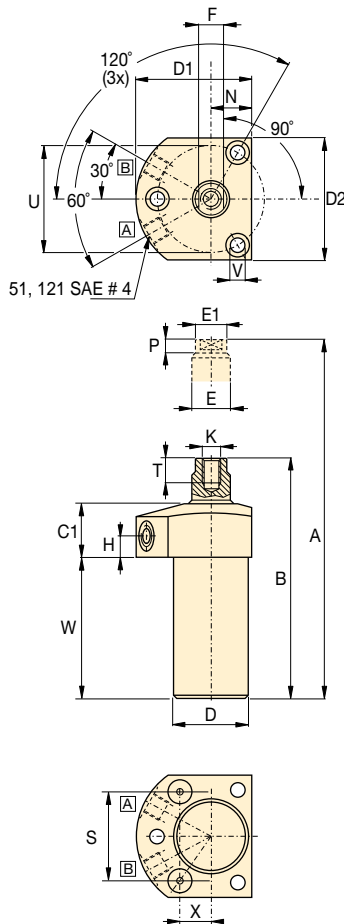
**Installation dimensions in inches**

Pull force lbs	Fixture hole Ø D3	Mounting thread J UNF	Min. depth J2	Manifold O-ring <sup>1)</sup> ARP numbers or Inside Ø x thickness
1400	1.39	.250-28	.65	568-011
2475	1.93	M6	.59	.17 x .139
3150	1.89	.312-24	.80	568-011
9600	3.06	.375-24	.74	.17 x .139

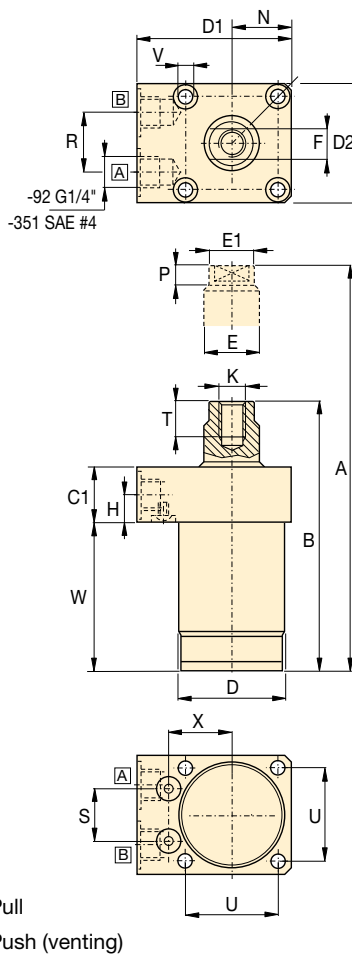
<sup>1)</sup> O-ring material: polyurethane, 92 Durometer



**-51, 121**



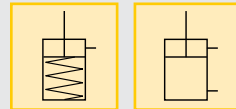
**-92, 351**



	K	N	P	R	S	T	U	V	W	X	Model number	
											lbs	
												Single acting ▼
	.312-24 UNF	0.75	0.23	-	1.614	0.62	1.97	0.27	2.60	0.565	2.5	<b>PUSS-51</b>
	.500-20 UNF	0.99	0.37	-	2.048	0.75	2.50	0.35	3.38	0.717	3.5	<b>PUSS-121</b>
												Double acting ▼
	.312-24 UNF	0.75	0.23	-	1.614	0.62	1.97	0.27	2.60	0.565	2.5	<b>PUSD-51</b>
	M10 x 1.50	1.04	0.41	1.02	0.934	0.63	1.65	0.26	2.99	1.128	4.4	<b>PUSD-92</b>
	.500-20 UNF	0.99	0.37	-	2.048	0.75	2.50	0.35	3.38	0.717	3.5	<b>PUSD-121</b>
	M16 x 2.00	1.71	0.51	1.02	1.356	1.22	2.76	0.43	3.80	1.637	12.3	<b>PUSD-351</b>

- Pull force: 1250-9600 lbs**
- Push force: 2950-18,400 lbs**
- Stroke: .87-1.20 inch**
- Pressure: 500-5000 psi**

- E Cilindros de tracción**
- F Verins traction**
- D Zugzylinder**



**Options**

- Accessories** 86 ▶
- Collet-Lok® push cylinders** 18 ▶
- Swing cylinders** 22 ▶
- Sequence valves** 152 ▶

**Important**

Single-acting cylinders can be vented through the manifold port.

The upper flange pull cylinder has a bolt pattern which is identical to its lower flange equivalent, enabling interchangeability.

In case there is a risk of machining coolants and debris being inhaled via the breather vent, it is recommended to pipe this port to an area outside the fixture that is protected from machining coolants and debris.