

# Pull cylinders - Upper flange models

Shown: PUSS-52, PUSD-121

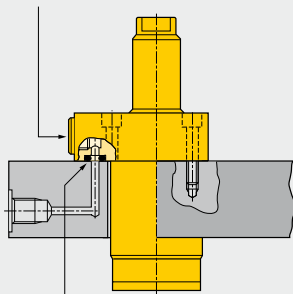


## PU series

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

■ *Energac 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 mm	Model number	Cylinder effective area		Oil capacity	
Pull kN	Push kN			Pull cm <sup>2</sup>	Push cm <sup>2</sup>	Pull cm <sup>3</sup>	Push cm <sup>3</sup>
<b>▼ Single acting</b>							
5,6	–	22,6	<b>PUSS-52</b>	1,81	–	4,10	–
13,3	–	27,9	<b>PUSS-121</b>	4,06	–	11,47	–
<b>▼ Double acting</b>							
6,3	13,3	22,6	<b>PUSD-52</b>	1,81	3,81	4,10	8,69
11,2	28,0	22,1	<b>PUSD-92</b>	3,16	8,06	6,88	17,70
14,3	27,4	27,9	<b>PUSD-121</b>	4,06	7,94	11,47	22,94
43,5	81,9	30,5	<b>PUSD-352</b>	12,39	23,74	37,20	71,28

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

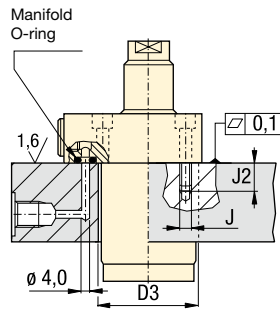
## Dimensions in mm [ ]

Model number	A	B	C1	D	D1	D2	E	E1	F	H
				∅			∅	∅		
<b>▼ Single acting</b>										
<b>PUSS-52</b>	128,8	106,2	24,9	34,8	54,1	57,2	16,0	15,0	13,0	14,0
<b>PUSS-121</b>	160,3	132,3	25,4	47,5	66,5	73,2	22,1	20,8	17,3	15,5
<b>▼ Double acting</b>										
<b>PUSD-52</b>	128,8	106,2	24,9	34,8	54,1	57,2	16,0	15,0	13,0	14,0
<b>PUSD-92</b>	137,9	116,1	24,9	47,8	70,1	54,1	24,9	23,6	17,8	12,4
<b>PUSD-121</b>	160,3	132,3	25,4	47,5	66,5	73,2	22,1	20,8	17,3	15,5
<b>PUSD-352</b>	204,2	173,5	24,9	79,8	100,1	88,9	38,1	36,1	28,7	12,4

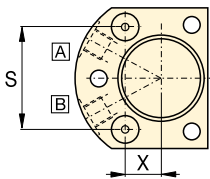
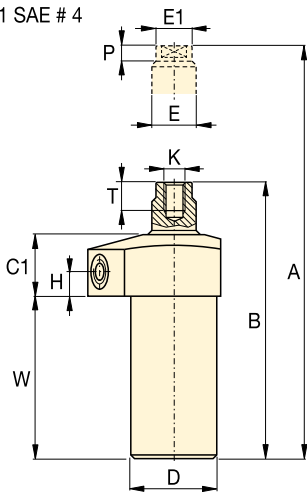
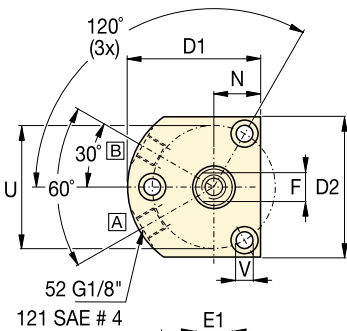
**Installation dimensions** in mm

Pull force kN	Fixture hole Ø D3	Mounting thread J	Min. depth J2	Manifold O-ring <sup>1)</sup> ARP numbers or Inside Ø x thickness
6,3	35,3	M6 x 1	16,5	568-011
11,2	49,0	M6 x 1	15,0	4,32 x 3,53
14,3	48,0	.312-24 UNF	20,3	568-011
43,5	78,0	M10 x 1,25	18,8	4,32 x 3,53

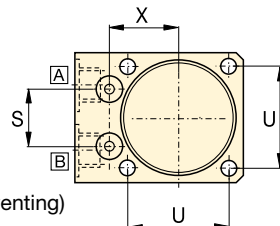
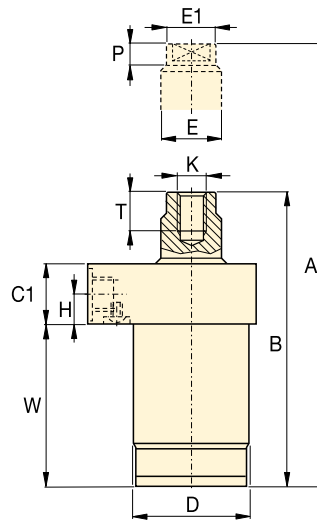
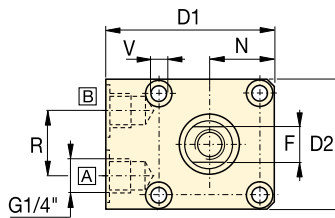
<sup>1)</sup> O-ring material: polyurethane, 92 Durometer



**-52, 121**



**-92, -352**



**A** = Pull  
**B** = Push (venting)

**Pull force: 5,6 - 43,5 kN**

**Push force: 13,3 - 81,9 kN**

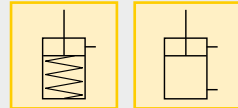
**Stroke: 22,1 - 30,5 mm**

**Pressure: 35 - 350 bar**

**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.

	K	N	P	R	S	T	U	V	W	X	kg	Model number
								Ø				
												<b>Single acting ▼</b>
	M8 x 1,25	19,1	5,8	-	41,0	15,7	50,0	6,9	66,0	14,4	1,1	<b>PUSS-52</b>
	.500-20 UNF	25,1	9,4	-	52,0	19,1	63,5	8,8	85,9	18,2	1,6	<b>PUSS-121</b>
												<b>Double acting ▼</b>
	M8 x 1,25	19,1	5,8	-	41,0	15,7	50,0	6,9	66,0	14,4	1,1	<b>PUSD-52</b>
	M10 x 1,5	26,4	10,4	25,9	23,7	16,0	41,9	6,6	75,9	28,7	2,0	<b>PUSD-92</b>
	.500-20 UNF	25,1	9,4	-	52,0	19,1	63,5	8,9	85,9	18,2	1,6	<b>PUSD-121</b>
	M16 x 2	43,4	13,0	25,9	34,8	31,0	70,1	10,9	96,5	41,6	5,6	<b>PUSD-352</b>