

# Pull cylinders - Upper flange models

Shown: PUSS-52, PUSD-121



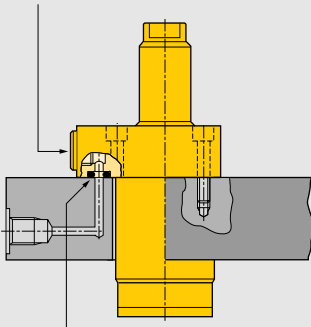
Swing cylinders  
Work supports

Linear cylinders

## ► 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.

BSPP 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		
	Pull	Push		Pull	Push	Pull	Push	
kN		mm		cm <sup>2</sup>		cm <sup>3</sup>		
<b>▼ Single-acting</b>								
2,6	-	16,5	PUSS-22	0,77	-	1,31	-	
5,6	-	22,6	PUSS-52	1,81	-	4,10	-	
13,3	-	28,4	PUSS-121	4,06	-	11,47	-	
<b>▼ Double-acting</b>								
2,7	5,3	16,5	PUSD-22	0,77	1,55	1,31	2,62	
6,3	13,3	22,6	PUSD-52	1,81	3,81	4,10	8,69	
11,2	28,0	22,1	PUSD-92	3,16	8,06	6,88	17,70	
14,3	27,4	28,4	PUSD-121	4,06	7,94	11,47	22,94	
43,5	81,9	30,0	PUSD-352	12,39	23,74	37,20	71,28	

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

## Dimensions in mm [⌀]

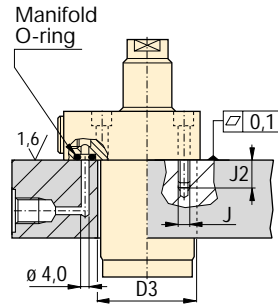
Model number	A	B	D	D1	D2	E	E1	F	G1	H
			⌀			⌀	⌀		⌀	
<b>▼ Single-acting</b>										
PUSS-22	107	91	28	47,2	45,0	10	8	7,1	9,4	11
PUSS-52	129	106	35	54,1	57,2	16	15	13,2	11,2	10
PUSS-121	160	132	48	66,8	73,2	22	21	17,3	11,2	10
<b>▼ Double-acting</b>										
PUSD-22	107	91	28	47,2	45,0	10	8	7,1	9,4	11
PUSD-52	129	106	35	54,1	57,2	16	15	13,2	11,2	10
PUSD-92	130	108	48	70,1	53,8	25	24	18,0	11,2	13
PUSD-121	160	132	48	66,8	73,2	22	21	17,3	11,2	10
PUSD-352	196	166	77	100,1	88,9	38	36	28,4	11,2	13



**Installation dimensions in mm**

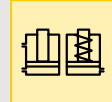
Pull Force kN	Fixture hole Ø D3 ±0,3	Mounting thread J	Min. depth J2	Manifold O-ring <sup>1)</sup> ARP nr. or Inside Ø x thickness
2,7	28,5	M5	16,5	568-010
6,3	35,5	M6	16,5	568-011
11,2	49,0	M6	15,0	4,32 x 3,53
14,3	49,0	.312-24 UNF	20,3	568-011
43,5	78,0	M10	18,8	4,32 x 3,53

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



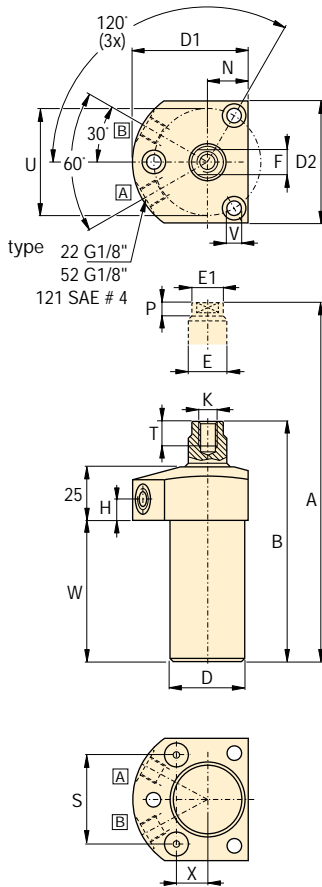
Pull force:	2,6 - 43,5 kN
Push force:	5,3 - 81,9 kN
Stroke:	16,5 - 30,0 mm
Pressure:	35 - 350 bar

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

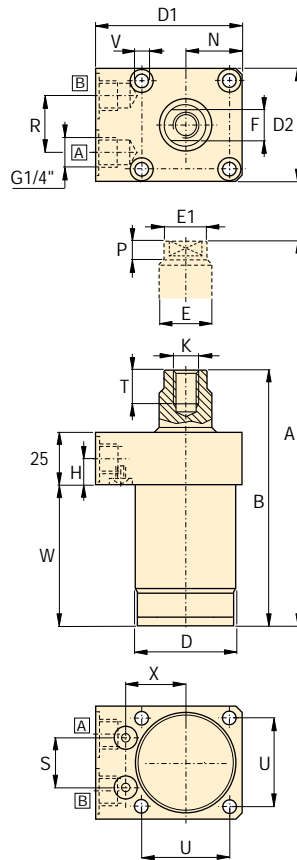


-22, 52, 121

-92, -352





type 22 G1/8"  
52 G1/8"  
121 SAE # 4





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

**Options**

Sequence valves  [92](#)

Accessories  [68](#)

Collet-Lok® push cylinders  [48](#)


Swing cylinders  [10](#)

**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.

	N	P	R	S	T	U	V	X	W		Model number	
											kg	
	Single-acting ▼											
	15,5	5	-	21,0	8	40,1	5,7	18,1	53,1	0,5	PUSS-22	
	19,1	6	-	41,0	16	50,0	6,8	14,3	66,0	1,1	PUSS-52	
	25,4	10	-	52,4	19	63,5	8,8	18,4	85,9	1,6	PUSS-121	
	Double-acting ▼											
	15,5	5	-	21,0	8	40,1	5,7	18,1	53,1	0,5	PUSD-22	
	19,1	6	-	41,0	16	50,0	6,8	14,3	66,0	1,1	PUSD-52	
	26,9	10	26	23,6	16	41,9	6,9	28,7	68,1	2,0	PUSD-92	
	25,4	10	-	52,4	19	63,5	8,8	18,4	85,9	1,6	PUSD-121	
	44,5	13	25	34,4	31	70,1	10,8	41,6	88,4	5,1	PUSD-352	

Note: U= bolt circle, U1= manifold port circle