

# Clamp arms for swing clamps

Shown: CAS-122, CAL-122

Collet-Lok® products

Swing clamps



## Clamp Arms

Enerpac's patented clamp arm design attaches to the hydraulic swing cylinder, allowing parts to be clamped at various distances from the hydraulic cylinder. Clamp arms are available in a variety of lengths, or you can use custom machining dimensions to create your own clamp arm configuration.

Ordering rotation limiting spacers

### BUILD YOUR PART NUMBER:

SP	186
Clamp force	Angle
02 = 2,2 kN	30
05 = 5,6 kN	45
09 = 9,0 kN	60
12 = 11,6 kN	
20 = 18,7 kN	
35 = 33,8 kN	

### Example:

SP-12 45-186 converts a 11,6 kN swing cylinder to 45 degree rotation.

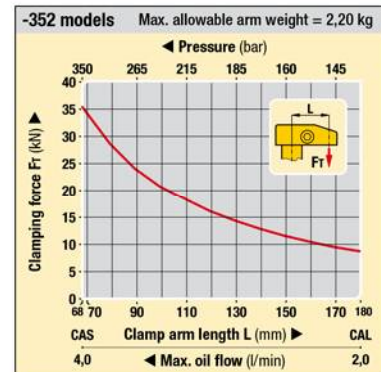
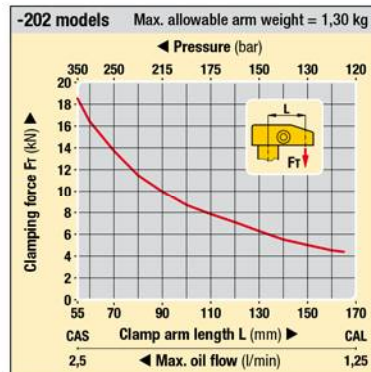
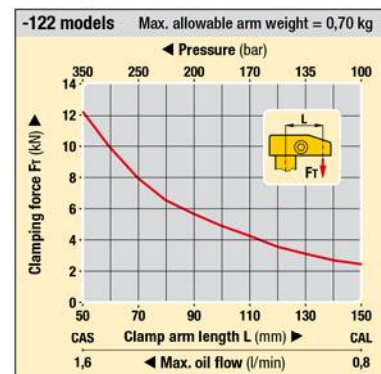
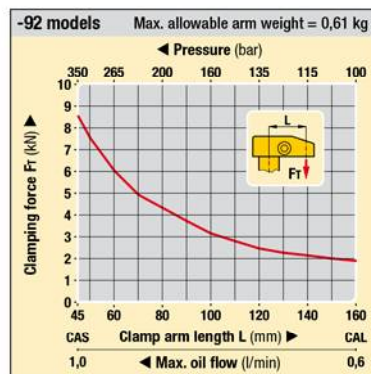
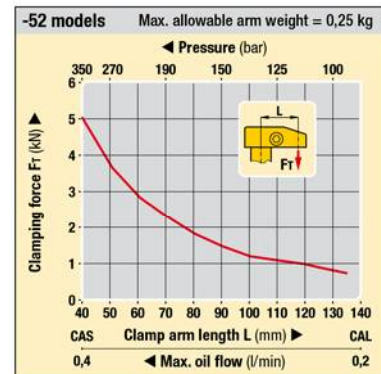
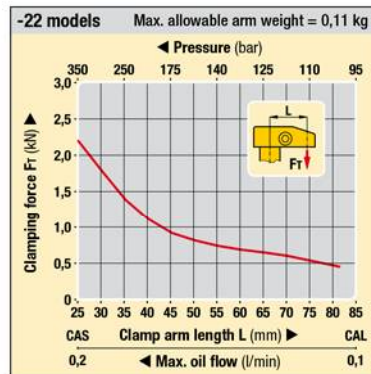
The addition of this spacer requires minor disassembly of the clamp. If you are uncomfortable doing this, please contact an authorized Enerpac Service Center.

## Patented Design

- Easy and precise location of the clamp arm in any position
- Arm can be easily installed and fastened while the cylinder is mounted in the fixture to allow exact arm positioning
- Vise not required for fastening arms.

## Pressure vs clamping force

The use of different length clamp arms requires reduction in applied pressure and resulting clamp force. The charts below show this relationship.

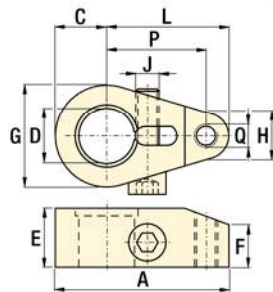


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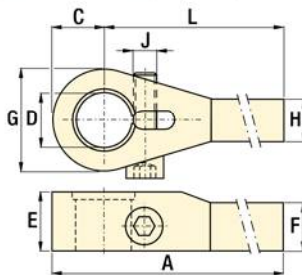


Dimensions & options **CAS, CAL-series**

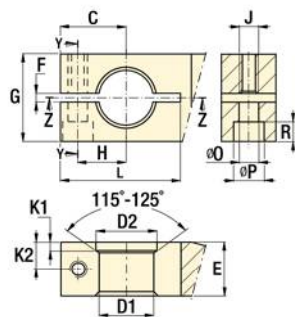
**CAS models** Standard clamp arms



**CAL models** Long clamp arms



**Custom design** (for SU, SL, ST and SC models only)



**Dimensions** in mm [  $\text{mm}$  ]

Clamp. force kN	Model number	A	C	D	E	F	G	H	J	L	P	Q	kg
<b>▼ Standard clamp arms</b>													
2,2	CAS-22	41	9,7	9,98-10,03	16	10	19	13	M6 x 1	31	25	M6 x 1	0,1
5,6	CAS-52	61	12,7	16,00-16,03	19	11	25	16	M8 x 1	48	40	M8 x 1,25	0,4
9,0	CAS-92	76	20,1	25,02-25,04	25	16	40	22	M10 x 1,25	56	45	M10 x 1,5	0,3
11,6	CAS-121	80	17,8	22,25-22,28	30	16	36	21	.375-24 UNF	62	51	.375-16 UN	0,5
18,7	CAS-202	94	24,1	32,00-32,05	30	21	48	30	M12 x 1,25	70	55	M12 x 1,75	0,5
33,8	CAS-352	118	35,1	38,02-38,05	40	30	70	30	M16 x 1,5	83	68	M16 x 2	1,4
<b>▼ Long clamp arms</b>													
2,2	CAL-22	92	9,7	9,98-10,03	16	11	19	11	M6 x 1	83	-	-	0,1
5,6	CAL-52	148	12,7	16,00-16,03	19	11	25	14	M8 x 1	135	-	-	0,5
9,0	CAL-92	180	20,1	25,02-25,04	25	16	40	18	M10 x 1,25	160	-	-	0,6
11,6	CAL-121	179	17,8	22,25-22,28	30	16	36	19	M10 x 1,5	162	-	-	0,7
18,7	CAL-202	202	24,1	32,00-32,05	30	21	48	25	M12 x 1,25	178	-	-	0,7
33,8	CAL-352	215	35,1	38,02-38,05	40	34	70	30	M16 x 1,5	180	-	-	1,9

Clamp. force kN	C	D1 <sup>1)</sup>	D2	E	F	G	H	J	K1	K2	L	O	P	R	
<b>▼ Custom design clamp arms <sup>2)</sup></b> (Recommended machining dimensions)															
2,2	15,5	10,00-10,02	12,58-12,62	16	1,5-3,0	20	20	9,4	M6 x 1	3,1-3,5	8	25-28	6	12	6
5,6	20,1	16,00-16,03	18,47-18,51	19	1,5-3,0	30	13,5	M8 x 1	4,1-4,5	10	35-40	7	11	7	
9,0	30,0	25,00-25,03	27,85-27,95	25	1,5-3,0	40	22,1	M10 x 1,25	3,9-4,2	12	55-60	9	14	9	
11,6	28,4	22,24-22,27	25,46-25,55	30	1,5-3,0	35	17,8	M10 x 1,5	6,9-7,3	13	52-57	10	16	8	
18,7	35,1	32,00-32,04	35,50-35,60	30	1,5-3,0	60	24,9	M12 x 1,25	5,1-5,5	15	62-67	11	17	11	
33,8	39,9	38,00-38,04	41,50-41,60	40	1,5-3,0	70	30,0	M16 x 1,5	4,9-5,3	20	80-85	11	17	11	

<sup>1)</sup> Surface roughness for D1 should be 1,6 micro meters.  
<sup>2)</sup> Not for use with Collet-Lok swing clamps.

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Force: 2,2 - 33,8 kN

Pressure: 35 - 350 bar

- (E) Brazos de amarre
- (F) Bras de bridage
- (D) Spannarme

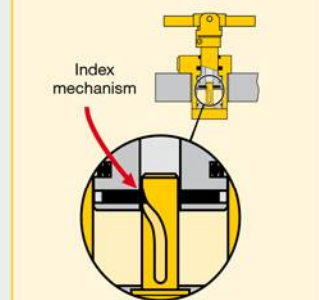
**Options**

Gauges and accessories  190 ▶

Flow control valves  155 ▶

**Important**

**Do not exceed maximum oil flow.**  
 If flow rates are exceeded, swing cylinder indexing mechanism may be permanently damaged.



When designing custom clamp arms, the flow rates must be further reduced. This rating should be in proportion to the mass and the center of gravity of the clamp arm.

**Example:**  
 If the mass of the arm is twice that of the long arm, flow rates must be reduced by 50%.

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