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## IMPORTANT RECEIVING INSTRUCTIONS

Visually inspect all components for shipping damage. If any shipping damage is found, notify carrier at once. Shipping damage is NOT covered by warranty. The carrier is responsible for all repair or replacement costs resulting from damage in shipment.

## DESCRIPTION

Enerpac Pull-pac cylinders use hydraulic pressure to produce a pulling or tensioning force. Typical applications include tension testing, weight measurements, tightening tension lines, or as a replacement for conventional ratchet cable pullers, in situations where high force is needed over a short stroke.

## SAFETY INFORMATION

To avoid personal injury or property damage during system operation, read and follow all CAUTIONS, WARNINGS, and INSTRUCTIONS included with or attached to each product. ENERPAC CANNOT BE HELD RESPONSIBLE FOR DAMAGE OR INJURY RESULTING FROM UNSAFE USE OF PRODUCT, LACK OF MAINTENANCE, OR INCORRECT PRODUCT AND SYSTEM APPLICATION. Contact Enerpac when in doubt as to applications and safety precautions.



### WARNING

**DO NOT DISASSEMBLE THE CYLINDER.** The stop ring is spring loaded and could cause serious personal injury if the cylinder is not disassembled properly. For repair service, contact the authorized Service Center in your area.



### WARNING

To avoid personal injury, always wear proper personal protective gear when operating hydraulic equipment (i.e. safety glasses, gloves, etc.).



### WARNING

The system operating pressure must not exceed the maximum pressure rating of the lowest rated component in the system.



### WARNING

Never overload the cylinder. Pulling a load that exceeds the capacity of the cylinder may cause equipment failure and serious personal injury.



### WARNING

Make sure that all system components are protected from external sources of damage, such as excessive heat, flame, moving machine parts, sharp objects, corrosive chemicals. **DO NOT** expose equipment to temperatures of 150°F (65°C) or more.



### CAUTION

**DO NOT** use the hydraulic hose to carry or drag a hydraulic component, because damage to the hose or the component may occur.

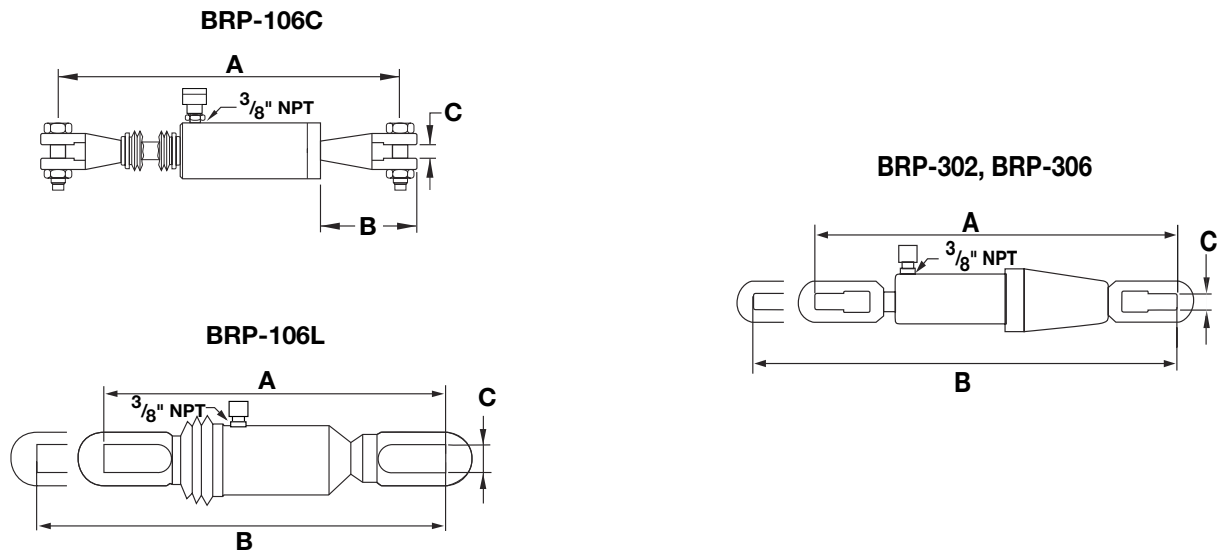


### CAUTION

Use less than the maximum rated stroke. Operating the cylinder beyond the limits of its rated stroke can damage the cylinder.

## SPECIFICATIONS

Model No.	Capacity Tons	Stroke in (cm)	Effective Area in <sup>2</sup> (cm <sup>2</sup> )	Oil Capacity in <sup>3</sup> (cm <sup>3</sup> )	Weight lbs (kg)	A in. (cm.)	B in. (cm.)	C in. (cm.)
<b>BRP106C</b>	10	6.00 (15,24)	2.32 (15,0)	13.8 (226,2)	35 (15,9)	23.13 (58,75)	--	1.38 (3,51)
<b>BRP106L</b>	10	6.00 (15,24)	2.32 (15,0)	13.8 (226,2)	29 (13,2)	22.19 (56,36)	28.19 (71,60)	1.18 (3,00)
<b>BRP302</b>	30	2.50 (6,35)	7.22 (46,6)	18.5 (303,2)	75 (34,0)	36.00 (91,44)	43.57 (110,7)	1.50 (3,81)
<b>BRP306</b>	30	6.00 (15,24)	7.22 (46,6)	43.3 (709,7)	106 (48,1)	37.95 (96,4)	43.95 (111,6)	1.50 (3,81)



## INSTALLATION

Attach hose to coupler in 3/8" NPT port. Connect mating coupler halves together hand tight only. Using tools will damage the coupler.



### CAUTION

Position hoses to avoid sharp bends, kinks, and sharp impacts from falling objects, because they may cause wear or damage to the hose, leading to premature failure.

## OPERATION

Refer to the instruction sheet supplied with your pump for information on installing and operating your pump.

1. Check the oil level in the pump.
2. Make sure all connections are tight and leak free.
3. Remove air from the system by placing the cylinder at a lower level than the pump with the coupler facing up. Cycle the cylinder several times until the motion is smooth.
4. Operate the pump to build pressure, causing the cylinder to retract. The cylinder will extend when the pressure is released. The speed of extension is dependent on the length of the hose and other restrictions in the line.



### WARNING

Keep hands and body out of the way of the cylinder and the load.

**WARNING**

**DO NOT handle pressurized hoses. Escaping oil under pressure can penetrate the skin, causing serious injury. If oil is injected under the skin, see a doctor immediately.**

**MAINTENANCE**

Use dust caps on couplers when cylinders are disconnected to prevent dirt from entering the system. Keep parts clean.

Inspect all components for damage or wear before and after use.

**TROUBLESHOOTING**

The following information is intended as an aid in determining if a problem exists. For repair service, contact the Authorized Enerpac Service Center in your area.

**WARNING**

**DO NOT DISASSEMBLE THE CYLINDER. The stop ring is spring loaded and could cause serious personal injury if the cylinder is not disassembled properly.**

<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
Cylinder does not retract, retracts slowly, or retracts in spurts.	Oil level in pump reservoir is low.	Add oil according to the instructions supplied with the pump.
	Pump release valve open.	Close pump release valve.
	Loose hydraulic coupler.	Check that all couplers are fully tightened.
	Load is too heavy.	Do not attempt to lift more than rated tonnage.
	Air trapped in system.	Remove air according to the instructions on page 3.
	Cylinder plunger binding.	Check for damage to cylinder. Have cylinder serviced by a qualified hydraulic technician.
Cylinder retracts, but does not hold pressure.	Leaking connection.	Check that all connections are tight and leak free.
	Leaking cylinder seals.	Locate leak(s) and have equipment serviced by a qualified hydraulic technician.
	Internal leakage in pump.	Have pump serviced by a qualified hydraulic technician.
Cylinder does not advance, advances part way, or advances more slowly than normal.	Pump release valve closed.	Open pump release valve.
	Pump reservoir is over-filled.	Drain oil level to full mark. See pump instructions for adding oil.
	Loose hydraulic coupler.	Check that all couplers are fully tightened.
	Air trapped in system.	Remove air according to the instructions on page 3.
	Hose I.D. too narrow.	Use larger diameter hydraulic hose.
	Cylinder retraction spring broken or other cylinder damage.	Have cylinder serviced by a qualified hydraulic technician.