



## Operation and Maintenance Manual

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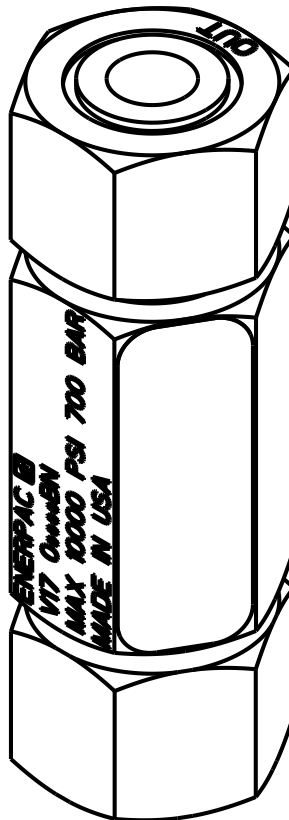
### Enerpac V17 Check Valve

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To reduce the risk of injury, user must read and understand this document before use.



# ABOUT US

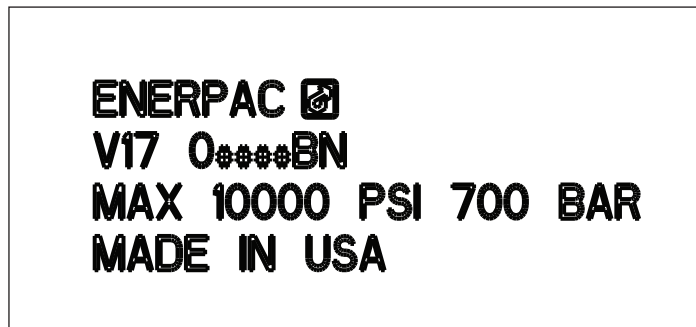
Enerpac is a global market leader in high pressure hydraulic tools, controlled force products, portable machining, on-site services and solutions for precise positioning of heavy loads. As a leading innovator with a 110-year legacy, Enerpac has helped move and maintain some of the largest structures on earth. When safety and precision matters, elite professionals in industries such as aerospace, infrastructure, manufacturing, mining, oil & gas and power generation rely on Enerpac for quality tools, services and solutions. For additional information, visit [www.enerpac.com](http://www.enerpac.com).

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# WARRANTY

Refer to the Enerpac Global Warranty document for terms and conditions of the product warranty. Such warranty information can be found at [www.enerpac.com](http://www.enerpac.com).

# NAMEPLATE



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# 1. Safety

Read all instructions carefully. Follow all recommended safety precautions to avoid personal injury as well as damage to the product and / or damage to other property. Enerpac cannot be responsible for any damage or injury from unsafe use, lack of maintenance, or incorrect operation. Do not remove warning labels, tags, or decals. In the event that any questions or concerns arise, contact Enerpac or a local Enerpac distributor for clarification.

Save these instructions for future use.

If you have never been trained on high-pressure hydraulic safety, consult your distributor or service center for information about Enerpac Hydraulic Safety Courses.

This manual follows a system of safety alert symbols, signals, words, and safety messages to warn the user of specific hazards. Failure to comply with these warnings could result in death or serious personal injury, as well as damage to the equipment or other property.



The Safety Alert Symbol appears throughout this manual. It is used to alert you to potential physical injury hazards. Pay close attention to Safety Alert Symbols and obey all safety messages that follow this symbol to avoid the possibility of death or serious injury.

Safety Alert Symbols are used in conjunction with certain Signal Words that call attention to safety messages or property damage messages and designate a degree or level of hazard seriousness. The Signal Words used in this manual are DANGER, WARNING, CAUTION, and NOTICE.

**DANGER** Indicates a hazardous situation that, if not avoided, will result in death or serious personal injury.

**WARNING** Indicates a hazardous situation that, if not avoided, could result in death or serious personal injury.

**CAUTION** Indicates a hazardous situation that, if not avoided, could result in minor or moderate personal injury.

**NOTICE** Indicates information considered important, but not hazard related (e.g. messages related to property damage). Please note that the Safety Alert Symbol will not be used with the signal word.

## 1.1 Safety Precautions



**Failure to observe and comply with the following precautions could result in death or serious personal injury. Property damage could also occur.**

- Always wear protective head-wear, ear protectors, footwear and gloves (at a minimum rigger type gloves) suitable for safe operation of the tool. The protective clothing must not interfere with safe operation of the tool or restrict the ability to communicate with co-workers.
- Be sure your workplace is safe. Follow the instructions in your workplace's standard operating procedures and be sure to observe all communicated safety precautions.
- V17 check valves are designed for a maximum working pressure of 10,150 psi [700 bar]. Do not exceed equipment ratings.
- The system operating pressure must not exceed the pressure rating of the lowest rated component in the system
- Make sure that all system components are protected from external sources of damage, such as excessive heat, flame, moving machine parts, sharp edges, and corrosive chemicals.
- Always be sure that pump is stopped and all pressure is fully relieved (0 psi/bar) before disconnecting or connecting hydraulic hoses. The sudden and uncontrolled release of pressurized oil could occur if hoses are disconnected while under pressure.
- Never attempt to connect or disconnect hoses while the pump is on and/or the system is pressurized.
- Be certain that all hose couplings are fully connected at both the pump and cylinder couplers before applying any hydraulic pressure. If the couplings are not fully connected, oil flow will be blocked, and the cylinder could be subjected to excessive hydraulic pressures. Catastrophic failure of cylinder could result.
- Always perform a visual inspection of the equipment before placing it into operation. If any problems are found, do not use it. Have the equipment repaired and tested by an Enerpac Authorized Service Center before it is returned to service.
- Never use a tool that is leaking oil. Do not use a tool that is damaged, altered or in need of repair.
- Be sure the operator has completed safety induction training, specific to the work surroundings. The operator should be thoroughly familiar with the controls and the proper use of the tool.
- The operator must be of at least the minimum age required by applicable local regulations, laws and the facility standard operating procedures.
- Take every precaution to prevent oil leaks from occurring. High pressure oil leaks can penetrate the skin, resulting in serious injury.
- Never strike the tool while it is pressurized or under

load. Components under tension may become dislodged, allowing them to become dangerous projectiles. Uncontrolled release of pressurized hydraulic oil could also occur.

- Avoid striking the tool at any time, even when it is not pressurized or under load. Striking the tool could cause permanent damage to cylinder components and may affect the cylinder calibration.

**CAUTION**

**Failure to observe and comply with the following precautions could result in minor or moderate personal injury. Property damage could also occur.**

- Be careful to avoid damaging hydraulic hoses. Avoid sharp bends and kinks when routing hydraulic hoses. Do not exceed the minimum bend radius specified by the hose manufacturer. Using a bent or kinked hose will cause severe backpressure. Sharp bends and kinks will internally damage the hose, leading to premature hose failure.
- Keep hydraulic equipment away from flames and heat. Excessive heat will soften packings and seals, resulting in fluid leaks. Heat also weakens hose materials and packings.
- For optimum performance, do not expose hydraulic equipment to temperatures of 150°F [65°C] or higher. Protect all hydraulic equipment from weld spatter.
- Immediately replace worn or damaged parts with genuine Enerpac parts. Enerpac parts are designed to fit properly and to withstand high loads. Non-Enerpac parts may break or cause the product to malfunction.

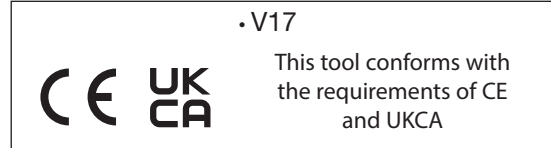
**NOTICE**

**Failure to observe and comply with the following precautions could result in property damage and/or void the product warranty.**

- Always use Enerpac pumps and hoses.
- Hydraulic equipment must only be serviced by a qualified hydraulic technician. For repair service, contact the Enerpac Authorized Service Center in your area.
- To help ensure proper operation and best performance, use of Enerpac oil is strongly recommended.

## 2. Compliance Statement

### 2.1 EU Declaration of Conformity



Enerpac declares that this product has been tested and conforms to applicable standards and is compatible with all EU and UKCA requirements.

A copy of an EU Declaration as well as an UK Self-Declaration are enclosed with each shipment.

## 3. Features & Components

### 3.1 Feature Diagram

1. Spring
2. Ball Seat (in port)
3. Ball Seat (out port)
4. Body
5. Threaded protector (2)
6. Ball

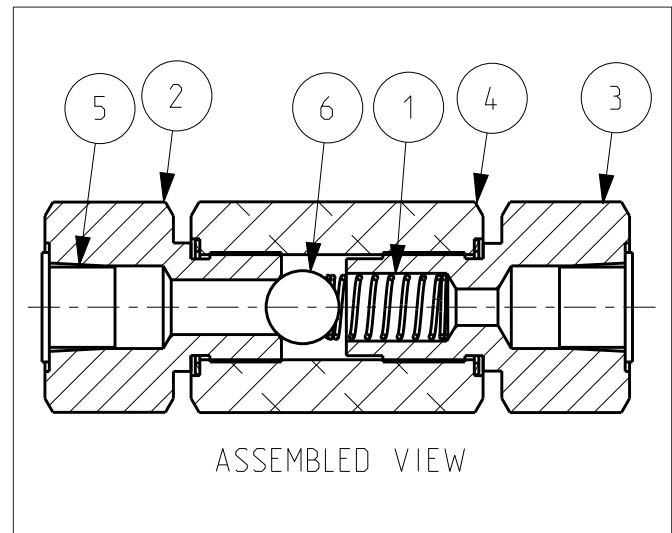


Figure 1: Major Features and Components of V17

# 4. Technical Product Data

## 4.1 Dimensional Callout Art

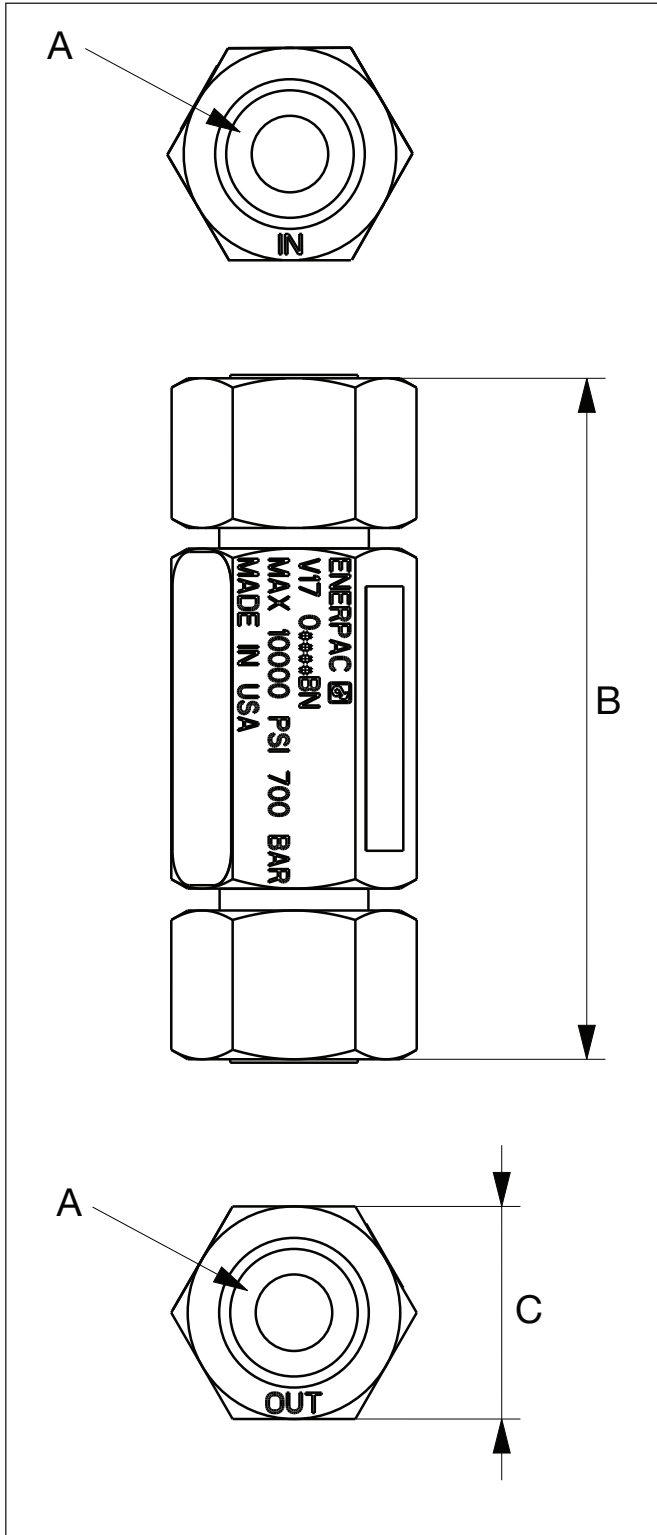


Figure 2: V17 Check Valve Dimensions

## 4.2 Dimensional table

Dimension	mm	in
A	3/8" NPT	
B	101	4
C	31	1.25

## 4.3 V17 Description

V17 is a one-way in-line check valve that controls hydraulic pressure or oil flow.

These valves are used in conjunction with other valves and system components to provide full automation and control.

## 4.4 V17 Specifications

VALVE SPECIFICATIONS		
Maximum operating pressure	700 bar	10,150 psi
Maximum oil flow	30 l/min	1,830 in <sup>3</sup> /min
Flow capacity	30 l/min	1,830 in <sup>3</sup> /min
Oil ports	3/8" NPT	

# 5. Operation

In a hydraulic system, the V17 check valve is used to block the flow in one direction while allowing free flow in the opposite direction.

Refer to the flow direction shown in Figure 3.

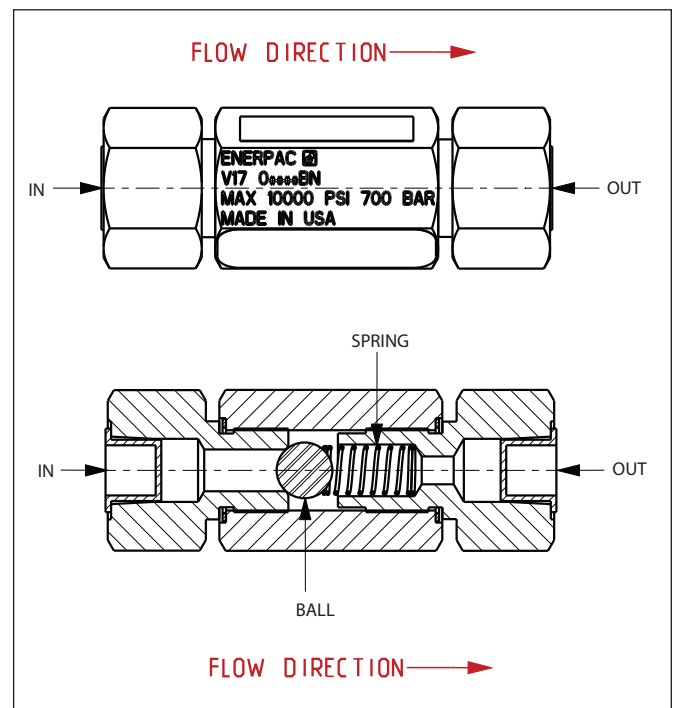


Figure 3: V17 Check Valve Flow Direction

# 6. Parts List

Product Date Code Beginning With: A

## 6.1 Exploded View

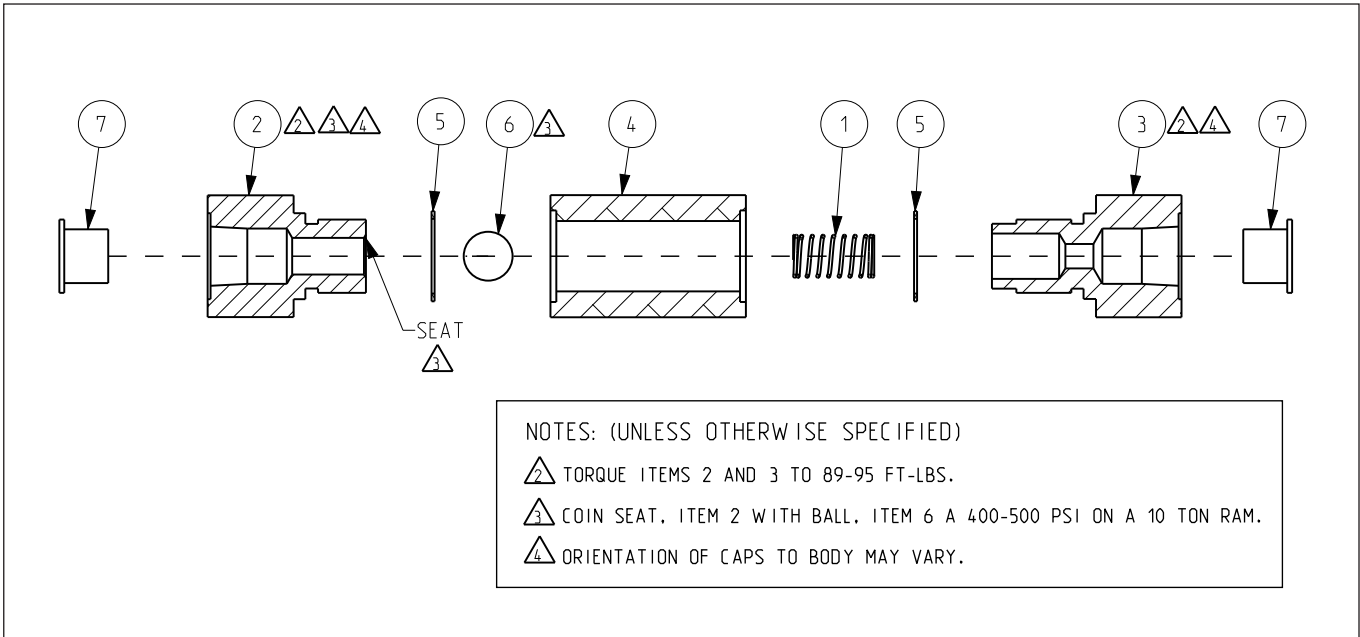


Figure 4: V17 Exploded View

## 6.2 Table of Parts

Repair Parts List V17 - Refer to Figure 4			
Item	Description	Qty.	Part number
1	Spring	1	BL10983
2	Ball Seat (IN port)	1	BL60044
3	Ball Seat (OUT port)	1	BL60045
4	Body	1	BL60046
5	Gasket	1	P6037
6	Ball	1	B1015016
7	Threaded protector	1	Y809271





