



## introduction

### < STANDARDS >



ASTM D1784  
ASTM D2466  
ASTM F1498



ANSI B1.20.1

IPEX LV Lab Valves are an ingenious PVC quarter turn product ideal for many simple plumbing applications. These compact, economical valves are supplied with an assortment of connections that match up with any kind of existing pipe or hose. LV Lab Valves are part of our complete systems of pipe, valves, and fittings, engineered and manufactured to our strict quality, performance, and dimensional standards.

#### Valve Availability

Body Material:	PVC
Size Range:	1/4"
Pressure:	150 psi
Seats:	Teflon® (PTFE)
Seals:	EPDM
End Connections:	Threaded (MNPT) Hose Adaptor

# LV Lab Valves

## Sample Specification



### 1.0 Lab Valves - LV

#### 1.1 Material

- The valve body and ball shall be made of PVC compound which shall meet or exceed the requirements of cell classification 12454 according to ASTM D1784.

#### 1.2 Seats

- The ball seats shall be made of Teflon® (PTFE).

#### 1.3 Seals

- The o-ring seals shall be made of EPDM.

### 2.0 Connections

#### 2.1 Threaded style

- The male NPT threaded PVC end connections shall conform to the dimensional standards ASTM D2464, ASTM F1498, and ANSI B1.20.1.

#### 2.2 Hose adaptor style

- Hose adaptors may be substituted for the male NPT threaded PVC end connections.

### 3.0 Design Features

- The valve shall have a double stop polypropylene handle.
- The valve shall allow for bi-directional flow.

#### 3.1 Pressure Rating

- All valves shall be rated at 150 psi at 73°F.

#### 3.2 Markings

- All valves shall be marked to indicate size, material designation, and manufacturers name or trade mark.

#### 3.3 Color Coding

- All PVC valves shall be color-coded dark gray.

### 4.0 All valves shall be Xirtec® 140 by IPEX or approved equal.

## valve selection

Size (inches)	Body Material	O-ring Material	IPEX Part Number IPS Socket	Pressure Rating at 73°F
1/4	PVC	EPDM	052308	150 psi
1/4 w/kit	PVC	EPDM	052308	150 psi

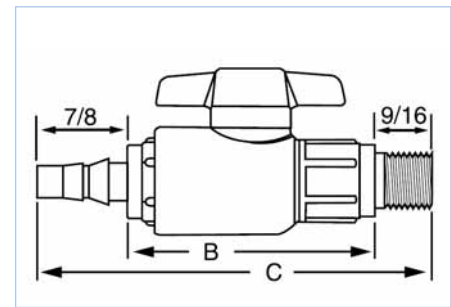
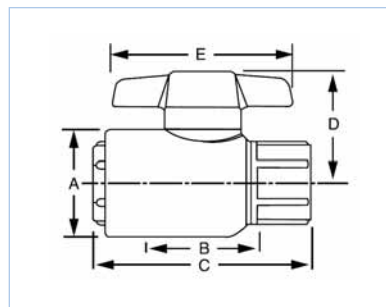
**IPEX Part Number:**

---

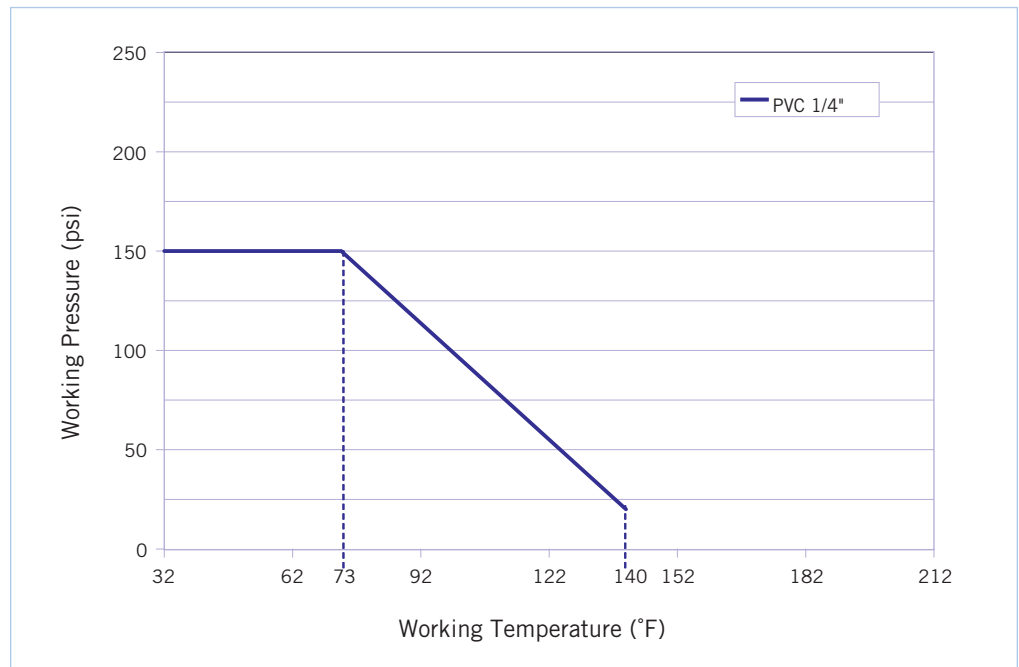
### dimensions and weights



Size	Dimension (inches)					W (lbs)
	A	B	C	D	E	
1/4	1.06	0.938	2.13	1.06	1.75	0.10
1/4 w/kit	1.06	2.44	3.88	1.06	1.75	0.14



### pressure – temperature ratings



### flow coefficients



The flow coefficient (CV) represents the flow rate in gallons per minute (GPM) at 68°F for which there is a 1 psi pressure drop across the valve in the fully open position. These values are determined from an industry standard testing procedure which uses water as the flowing media (specific gravity of 1.0). To determine specific flow rate and pressure loss scenarios, one can use the following formula:

$$f = sg \times \left( \frac{Q}{C_v} \right)^2$$

Where,

$f$  is the pressure drop (friction loss) in psi,

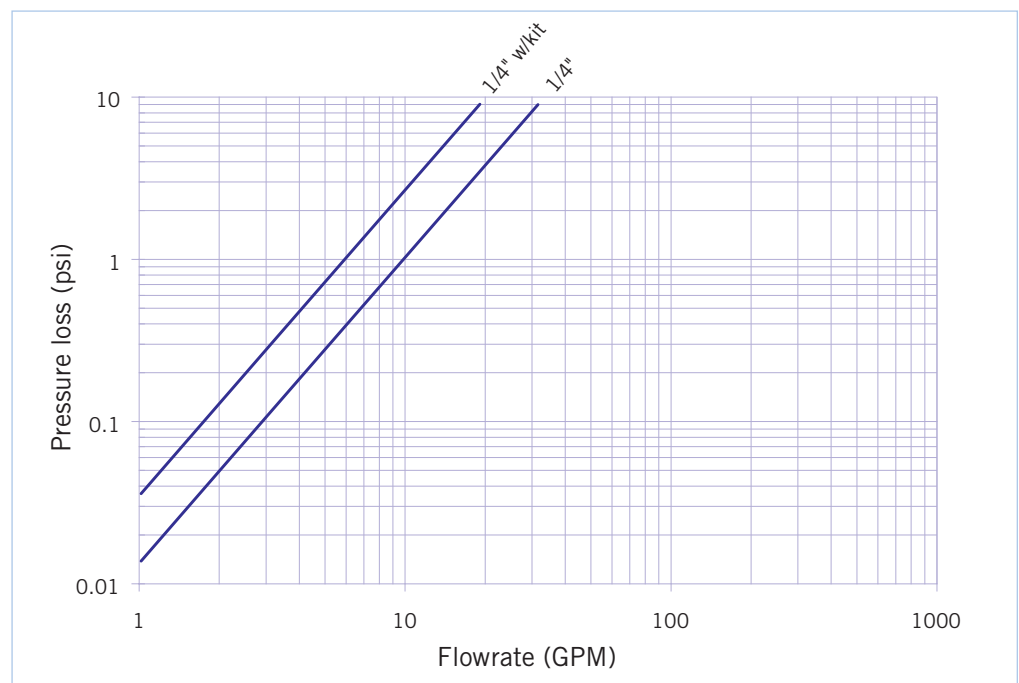
$sg$  is the specific gravity of the fluid,

$Q$  is the flow rate in GPM,

$C_v$  is the flow coefficient.

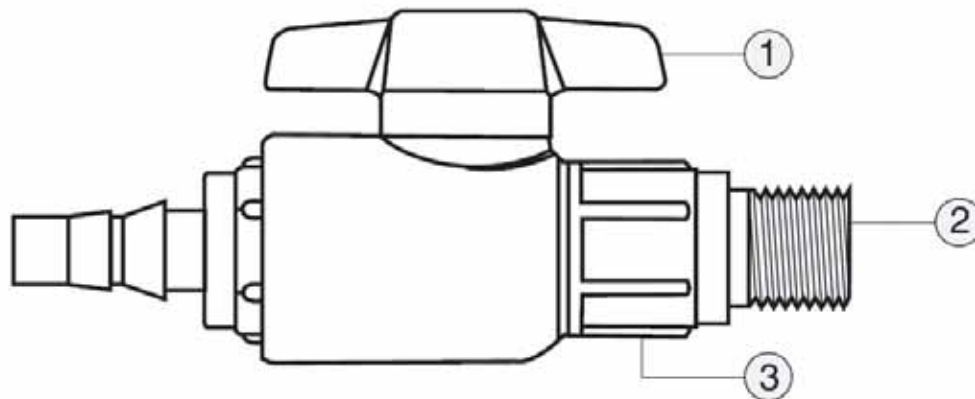
Size	CV
1/4	10.0
1/4 w/kit	6.00

### pressure loss chart



# LV Lab Valves

## Components



#	Component	Material	Qty
1	handle	PP	1
2	end connector	PVC	1
3	body	PVC	2

# LV Lab Valves

## Installation Procedures



1. Install the o-ring in the groove at the base of the threads on the desired end connector (part #2 on previous page).
2. Hand-tighten each end connector into the valve body (3). **Do not use Teflon tape or thread sealant.**
3. Tighten down the end connectors using the supplied plastic wrench. **Caution: Over-tightening may cause damage to the valve body and/or end connectors.**
4. Use the appropriate fittings or tube and ring clamps to connect the valve to the system.



## removal from the system

1. If removing the valve from an operating system, isolate the valve from the rest of the system. **Be sure to depressurize and drain the isolated branch and valve before continuing.**
2. Depending on the connection type, either loosen the fittings or ring clamps to remove the valve.
3. The valve can now be reused and/or replaced.

**Note:** The LV Lab Valve has a one piece valve body. It cannot be disassembled.



The purpose of system testing is to assess the quality of all joints and fittings to ensure that they will withstand the design working pressure, plus a safety margin, without loss of pressure or fluid. Typically, the system will be tested and assessed in sub-sections as this allows for improved isolation and remediation of potential problems. With this in mind, the testing of a specific installed valve is achieved while carrying out a test of the overall system.

An onsite pressure test procedure is outlined in the IPEX Industrial Technical Manual Series, "Volume I: Vinyl Process Piping Systems" under the section entitled, "Testing". The use of this procedure should be sufficient to assess the quality of a valve installation. **In any test or operating condition, it is important to never exceed the pressure rating of the lowest rated appurtenance in the system.**

#### Important points:

- Never test thermoplastic piping systems with compressed air or other gases including air-over-water boosters.
- When testing, do not exceed the rated maximum operating pressure of the valve.
- Avoid the rapid closure of valves to eliminate the possibility of water hammer which may cause damage to the pipeline or the valve.

Please contact IPEX customer service and technical support with regard to any concern not addressed in this data sheet or the technical manual.

IPEX is a leading supplier of thermoplastic piping systems. We provide our customers with one of the world's largest and most comprehensive product lines. All IPEX products are backed by over 50 years of experience. With state-of-the-art manufacturing facilities and distribution centers across North America, the IPEX name is synonymous with quality and performance.

Our products and systems have been designed for a broad range of customers and markets. Contact us for information on:

- PVC, CPVC, PP, FR-PVDF, ABS, PEX and PE pipe and fittings ( $\frac{1}{4}$ " to 48")
- Industrial process piping systems
- Double containment systems
- Acid waste systems
- High purity systems
- Industrial, plumbing and electrical cements
- Municipal pressure and gravity piping systems
- Plumbing and mechanical pipe systems
- Electrical systems
- Telecommunications systems
- Irrigation systems
- PE Electrofusion systems for gas and water
- Radiant heating systems

**WARRANTY:** All IPEX products are guaranteed against defects resulting from faulty workmanship or materials. If any such product is found to be defective by reason of faulty workmanship or materials, upon written notice and return of the product, the defective product will be replaced by IPEX free of charge, including shipping charges for the replacement product. Claims for labour costs and other expenses required to replace such defective product or to repair any damage resulting from the use thereof will not be allowed by IPEX. Our liability is limited to the price paid for the defective product. IPEX will not be bound by any warranty, other than the above set forth, unless such warranty is in writing.

This literature is published in good faith and is believed to be reliable. However, IPEX does not represent and/or warrant in any manner the information and suggestions contained in this brochure. Data presented is the result of laboratory tests and field experience.

IPEX maintains a policy of ongoing product improvement. This may result in modification of features and/or specifications without notice.

