

# Needle Valves

## Options

Parker Autoclave Engineer's Needle Valves can be supplied with a number of options to meet your requirements. These include various materials of construction, packing material, high temperature packing, handle colors, stem options, custom valves, pneumatic actuators, and a number of other options.

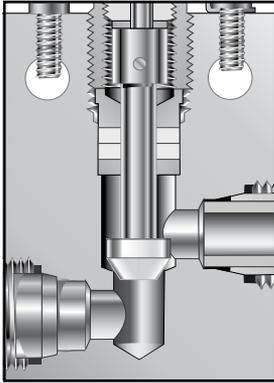
The following pages provide details on these options. For additional or technical information not found in this section, please consult the factory or local distributor.



# Needle Valves - Stem Options

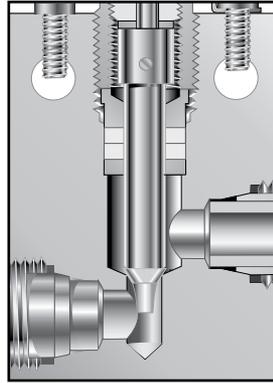
## Three Stem Types

Three types of stems are offered by Parker Autoclave Engineers: Vee, Regulating and MicroMetering. Both Vee and Regulating stems are interchangeable on most Parker AE valves and provide bubble-tight shut-off against liquids and gases.



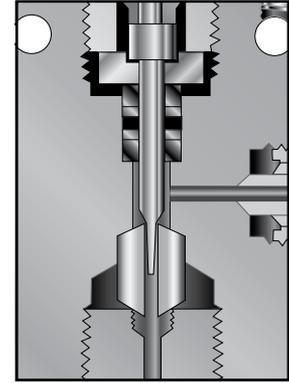
**VEE Stem**

The Vee stem is used for direct on-off, metal-to-metal shut-off with quick-opening flow characteristics.



**Regulating Stem**

In some applications, more precise flow control is required than is possible with a Vee stem. For these cases, Autoclave offers a non-rotating, two-piece regulating stem which can be used for both control and shut-off. This stem has a 4° taper at the tip in conjunction with a standard 60° section for shut-off. While it is not as precise as the control associated with the MicroMetering stem, especially with smaller flows, it does offer substantially better control than the Vee stem.



**MicroMetering Stem**

Where precise control of small flows is required, Autoclave offers special MicroMetering valves. For complete information on MicroMetering valves, refer to Micro-Metering in the Needle Valve section.

## Optional Materials

To order optional materials for wetted parts, add the following designations to the order number.

316L	Type 316 extra low carbon stainless steel
HB	*Hastelloy B-2
HC	*Hastelloy C276 wetted parts
IN	*Inconel 600
IN625	*Inconel 625
IN825	*Incoloy 825
KMO	*Monel K500
MO	*Monel 400 or 450
NI	Nickel 200
TI	Titanium grade 2

*Note: For duplex, super duplex and other materials contact your sales representative.*

\* Trademark names

## Air Operated Valves

Refer to Valve Actuators section for available models.

## Packing Options

Refer to the valve model required, and see valve options in that section.

## Optional Connections

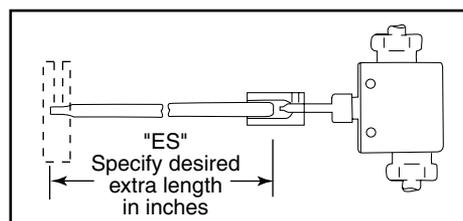
In addition to standard tube connections, Parker Autoclave Engineers can supply many valve and fitting series with such optional end connections as Female or Male NPT, Socket Weld to O.D. tube size, or nominal pipe size, Female “AN” (MS 33649), Male “AN” (MS 33656), Butt Weld and British straight thread. Contact factory for current information. Metric sizes can be supplied on most Parker Autoclave Engineers valves and fittings on special order.

### Anti-Vibration Adder

For valves or other components supplied with anti-vibration option, add -K to catalog number. See fitting and tubing sections for anti-vibration information.

### Stem and Handle Extenders

Stem Extenders are offered for high or low temperature operation on most Parker Autoclave Engineers valves. They are also useful for remote actuation, such as behind a barricade. To order any valve with a Stem Extender, add “ES” and the length (6”, 12”, 18” or 24”) to the beginning of the valve catalog number: e.g. ES12-30VM4071. Other lengths on special order. To order stem extender only, please provide extender number and the prefix of the valve model. Ex: ES12-20SM6 (handle not included.)



### Abrasive or Highly Erosive Service Option

For service conditions where high flows, erosive mediums, or high pressures cause premature wear on stems and seats, N-Dura coating can be supplied to increase component life.

N-Dura coating is specifically used to enhance stem and seat life by providing a protective coating over a base substrate. This creates a thin, hard, protective coating with no effects of brittleness. The coating will not peel, chip or flake off the base material. The coating hardness is in a range of minimum 85 Rc surpassing other coatings and most materials.

The additional performance characteristics provided with the coating are reduced friction, corrosion resistance exceeding 400 stainless steel, and operating temperature ranges from -300°F to 1200°F.

The coating has been tested in erosive applications, yielding far better results than Stellite®, which has been utilized extensively in these applications. With few exceptions, most major ferrous and non ferrous materials can be successfully coated.

Most valves in this catalog are available with N-Dura coated stems or with both N-Dura coated stems and replaceable seats. This coating is available for all stem options. To order both N-Dura stems on any valve pattern, add suffix “CS” to the catalog model number. To order both N-Dura coated stems and N-Dura coated replaceable seats (available on 2-way angle replaceable seat pattern only) add suffix “CSS” to the catalog number. Stellite® is available as a special upon request.

### Optional Valve Handles

Blue powder coated stainless handles are standard on the majority of the valve series. Stainless handles can be purchased in different colors if required, contact the factory for color options.

**Exception: Heavy-duty Stainless Steel T-handles assemblies** are standard on our larger valves, see detailed information on each section for handles used.

## Panel Mounting

Most Parker Autoclave Engineers valve series can be panel mounted through the locking device screw hole and a corresponding hole opposite the packing gland. To order a set of two panel mounting screws, add PM to the catalog order number.

**Handle Lockouts:** Handle lockouts are available to lockout valves in the open or closed position preventing unauthorized personnel from actuating valves during shutdowns or emergency situations. Lockouts consist of two halves that completely cover the valve handle and can be locked for security. They are constructed of durable plastic resistant to abrasion, solvents, and chemical agents. Consult factory for details.

To order lockouts with valves add -L to part number.

Lockout part numbers: 90088 - 2.5" (63.5) to 5.0" (127.0) handle size

90194 - 6.5" (165.1) to 10.0" (254.0) handle size

Note: Modifications may be required to some valves to use lockouts if purchased separately. See page 1 of ball valve options for photo of clamp style lockout.

Note: Many standard and special options and accessories for Parker Autoclave Engineers valves are listed here. Not all options apply to all valve series - see individual ordering pages for specifics. Some options listed here are special order options with prices quoted on application. See Custom Valves/Manifolds section for other options.

For prompt service, Parker Autoclave Engineers stocks select products. Consult your local representative.

### WARNING

**FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

### Offer of Sale

The items described in this document are available for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. Any sale contract entered by Parker will be governed by the provisions stated in Parker's standard terms and conditions of sale (copy available upon request).



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**Caution!** Do not mix or interchange parts or tubing with those of other manufacturers. Doing so is unsafe and will void warranty.

**Caution!** Parker Autoclave Engineers Valves, Fittings and Tools are not designed to work with common commercial instrument tubing and will only work with tubing built to Parker Autoclave Engineers Specifications AES-222. Failure to do so will void warranty.

**ISO-9001 Certified**