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TN Series Needle Valves



ENGINEERING YOUR SUCCESS.

> INTRODUCTION

With years of valve design and development experience Parker Hannifin are able to offer the most comprehensive range of instrument hand valves available to users for a wide variety of markets, industries and applications. This series handle valve have been engineered for use at pressures up to 6,000 psi (414 bar) and temperatures as high as 1,000 °F (538 °C). A non-rotating lower stem helps to extend packing life by removing rotation from the packing area. Stem packing below the threads isolates the thread lubricant from the flow, ensuring adequate lubrication regardless of the media.

Continuous product development may from time to time necessitate changes in the details contained in this catalogue. Parker Hannifin reserve the right to make such changes at their discretion and without prior notification. All dimensions shown in this catalogue are approximate and subject to change.



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.

> FEATURES AND SPECIFICATIONS

10. Handle

Safty solid bar handle for ease of operation

4. Packing Adjuster

For maximum packing stability and performance, simple and easily adjustable for gland wear compensation.

3. Lock Nut

A secure anti vibration locking mechanism to prevent inadvertent gland packing adjuster loosening.

2. Bonnet

Heat code for traceability bonnet with replaceable sealing washer

11. Lock Pin

Bonnet locking pin to prevent accidental removal fitted as standard.(behind)

13. Bonnet / Body Washer

Annealed sealing washer to ensure complete atmospheric leakage and allowing on site retrofit of bonnets with 100% re-sealing assurance

1. Valve Body

Heat coded on body for traceability

For safty reliable and repeatable performance

12. Lock Screw

Compact design with socket head cap screw

14. Dust Wiper

Graphite dust wiper protect valve from external contamination

6. Upper Stem

Safety back seated upper stem prevents stem blowout

8. Ball

Rolling ball reduce operate torque for ease of operation

7. Lower Stem

None rotate lower stem provide low operating torque, long service life. Improve Performances and reliability.

9. Thrust Bush

Anti rotational adjustor bush ensures uniform packing compression, maximising pressure tight sealing and limiting cold flow passages.

5. Packing

Packing below the threads protects thread lubricants from media and isolates the lubricants from the media.

Item	Part	Material
1	Valve Body	ASTM A479 316SS
2	Bonnet	ASTM A479 316SS
3	Lock Nut	ASTM A479 316SS
4	Packing Adjuster	ASTM A479 316SS
5	Packing	Graphite / PTFE
6	Upper Stem	ASTM A479 316SS
7	Lower Stem	ASTM A479 316SS
8	Ball	ASTM A276 440C
9	Thrust Bush	ASTM A479 316SS
10	Handle	ASTM A479 316SS
11	Lock Pin	18-8(1.4310)
12	Lock Screw	A4-70 Stainless Steel
13	Bonnet / Body Washer	ASTM A479 316SS
14	Dust Wiper	Graphite

> SPECIFICATIONS

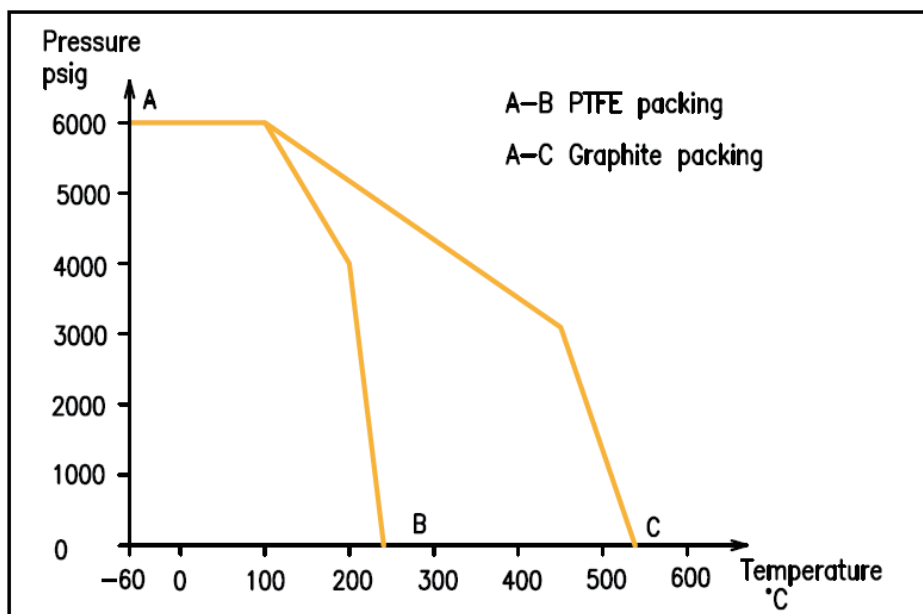
- Height closed = 55.5mm (2.19") ref.
- Height open = 60mm (2.36") ref.
- Stainless steel construction.
- Maximum standard pressure up to 6,000 psig (414 barg).
- Temperature rating -54°C to +538°C (-65F to +1000F).
- PTFE standard gland packing (Graphite optional).
- Maximum temperature PTFE 260°C (500F).
- Maximum temperature Graphite 538°C (1000F).
- Standard orifice: 6mm



> FEATURES

- Safety solid bar handle.
- Safety back seated upper stem prevents stem blowout.
- Graphite Dust wiper protect valve from external contaminates
- Packing below the threads protects thread lubricants from media and isolates the lubricants from the media.
- Stem swivel above the packing eliminates entrapment area and increases packing life.
- Non-rotating lower stem provide low operating torque, long service life. Improve Performances and Reliability.
- Bonnet locking pin to prevent accidental removal fitted as standard.
- 316 stainless steel construction.
- 100% factory tested.
- NACE certified wetted parts available.
- Heat code traceable body and bonnet.

Pressure vs. Temperature



> HOW TO ORDER

The correct part number is easily derived from the following number sequence. The five product characteristics required are coded as shown below.

*Note: If the inlet and outlet ports are the same eliminate the outlet port designator.

Example:

4F-TN6L-G-SS describes a TN6L needle valve with 1/4" female NPT end connections for inlet and outlet ports, graphite stem packing, and stainless steel construction.

<u>4F</u>	<u>*</u>	<u>TN6L</u>	<u>G</u>	<u>SS</u>
Inlet Port	Outlet Port	Valve Series	Packing Material	Body Material
4F	4F	TN6L series	T-PTFE G-Graphite	SS-316SS
4RF	4RF			321-321SS
4A	4A			316H-316H
6F	6F			
6RF	6RF			
6A	6A			
6W	6W			
8F	8F			
8RF	8RF			
8A	8A			
8W	8W			
M6A	M6A			
M8A	M8A			
M10A	M10A			
M12A	M12A			
M14A	M14A			
M20X1.5F	M20X1.5F			
M20X1.5M	M20X1.5M			
M10W	M10W			
M14W	M14W			
M16W	M16W			

Inlet / Outlet port introduction:

4F-1/4" FNPT; 4RF-1/4" BSPP; 4A-1/4" A-LOK; 6F-3/8" FNPT; 6RF-3/8" BSPP; 6A-3/8" A-LOK; 8F-1/2" FNPT; 8RF-1/2" BSPP; 8A-1/2" A-LOK; 6W- 3/8" OD TUBE S'WELD; 8W- 1/2" OD TUBE S'WELD; M6A-6mm A-LOK; M8A-8mm A-LOK; M10A-10mm A-LOK; M12A-12mm A-LOK; M14A-14mm A-LOK; M20X1.5F-M20X1.5 Female; M20X1.5M-M20X1.5 Male; M10W-10mm OD TUBE S'WELD; M14W-14mm OD TUBE S'WELD; M16W-16mm OD TUBE S'WELD.....

Other inlet / outlet requirements, please contact Parker Hannifin.

Options:

Panel Mount - Add the suffix -PM to the end of the part number to receive valves with panel mount function.

Panel hole diameter: 24.5mm, maximum panel thickness: 3mm.



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Parker Hannifin Instrumentation



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