Quick Reference Guide

Non Return Valve Rubber Disc
TRS Series 150mm (6”)

Access to PartsBender Ecommerce

Disclaimer

This manual provides guidelines for correct installation, operation, and servicing. The manufacturer assumes no liability for personal injury, equipment damage, or downtime caused by improper installation, misuse, negligence, or unauthorized modifications.

Safety Compliance Statement

This Non Return Valve must be installed, operated, and maintained in strict compliance with all applicable local, state, national health, safety, and environmental (HSE) regulations, as well as site-specific requirements.

Only genuine manufacturer-approved parts are to be used for servicing or replacement to maintain performance, warranty, and operational safety.

Transportation, Handling, and Storage

Upon receipt, immediately verify that all items match the packing list and inspect for transport damage. Report any shortages or damage to both the carrier and Parts Bender Pty Ltd without delay.

Handling and lifting must only be performed by trained personnel in compliance with local safety regulations. Responsibility for safe handling remain the responsibility of the user at all times.

For addition information:
https://partsbender.com/technical-data/
IOM_150mm_NRV

Installation Procedures

NRV Pre-Installation & Commissioning Checklist

1. Receive and inspect

☐ Check the valve on arrival for shipping damage, missing parts, and correct tag/size/class.

☐ Remove packaging, transit caps, and any foreign material inside the valve body.

2. Verify service suitability

☐ Confirm body material, seat/rubber disc material, pressure class, temperature rating, and chemical compatibility with the process fluid.

3. Confirm orientation

☐ Identify the flow arrow and plan the installation so the arrow matches the pipeline flow direction.

4. Check pipe layout

☐ Make sure the pipe run is straight, clean, and supported, and that there is enough clearance for maintenance access.

5. Clean the line

☐ Flush the upstream pipe, remove weld slag, sand, scale, gasket fragments, and swarf, and inspect the flange faces or thread condition.

6. Prepare the joint

☐ Fit the correct gasket for flanged ends or apply thread sealant where specified for threaded ends. Keep sealing material out of the bore.

7. Position the valve

☐ Lift the valve into place without forcing alignment. Ensure the hinge pin is positioned as required by the manufacturer.

8. Install flange bolts or threads

☐ Start all bolts by hand, then tighten in a cross pattern in multiple passes. For threaded connections, avoid over-tightening that can crack the body or distort the threads.

9. Check disc freedom

☐ Before pressurizing, confirm the disc moves smoothly and returns to seat without sticking.

10. Pressure test

☐ Slowly pressurize the line and inspect the body, cover, flanges, plugs, and seals for leakage.

11. Commissioning

☐ Start flow gradually to avoid water hammer and observe the valve during opening and shutdown.

12. Documentation

☐ Record serial numbers, installation date, and installer details.

☐ Note any deviations from standard installation procedures.

☐ Update maintenance log with baseline inspection and alignment readings.

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Operation

Start Up

- Observe initial operation for smooth, steady performance.
- Always use Non-Return Valve within system specification limits

Normal Running

- Monitor for smooth, quiet operation.
- Observe monitoring/fault alarms (if equipped) and act promptly on warnings

Maintenance

Daily Maintenance

- Visually inspect the Non Return Valve and assembly area for any leaks, damage, or unusual wear.
- Listen for abnormal noises or vibrations during operation that could indicate mechanical issues.
- Confirm that all fasteners and hardware are tight and secure.
- Ensure the Non-Return Valve is clean and free of debris

Monthly Maintenance

- Inspect gaskets and seals for deterioration and replace to prevent leaks.

Annually Maintenance

- Conduct a full teardown inspection and refurbish key components
- Inspect safety devices and controls for proper function.
- Review overall system performance and update maintenance records to identify recurring issues.

Maintenance Best Practices

- Periodic Visual Inspections: Check for external leaks, signs of corrosion, and proper operation during system cycles.
- Internal Inspections: Schedule periodic internal inspections to check for debris, disc wear, seat condition, and hinge mechanism integrity.
- Keep Spares: Maintain a stock of replacement rubber discs, seat & gaskets for quick repairs.
- Proper Sizing: Always ensure the check valve is correctly sized for the application's flow rate and pressure conditions to prevent premature wear and operational issues.

Common Problems, Causes, and Solutions		
Problem	**Likely Cause**	**Recommended Action**
Leakage	Debris, worn disc/seat, misalignment, low pressure	Clean system, replace disc/seat, correct installation, check pressure
Banging / Water hammer	Fast reverse flow, oversized valve, no damping	Add damping/spring valve, resize valve, reduce flow shock
Vibration / Chatter	Low flow, turbulence, loose parts	Increase flow or change valve type, tighten/replace parts, reduce turbulence
Sticking	Debris, corrosion, misalignment, material swelling	Clean/lube, replace damaged parts, correct alignment/material
Excess wear	Abrasion, frequent cycling, chemical attack	Use stronger materials, reduce cycling, ensure chemical compatibility

AP+ NRV 150mm Rubber Disc Specifications	
Maximum Working Pressure	17.2 Bar 250 PSI
Bore size	6” / 150mm
Inlet / Outlet flange	AS2129 TABLE E 150 7005 (DIN) PN16 ANSI CLASS 150
Body Material	ASTM A536 65-45-12 / AS1831 400/12
Lid Material	ASTM A536 65-45-12 / AS1831 400/12
Replaceable Seat Material	ASTM A240 TYPE 316 / Stainless Steel 316G
Rubber Disc Material	EPDM Rubber
Weight (approximate)	143 pounds (lb) 65 kilograms (kg)

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PartsBender Disclaimer, Return & Refund, and Warranty policies and Warranty Application Form can be viewed and downloaded at https://partsbender.com/