

Doebritz DBR-1237 Gravity Quick-Release Rotary Valve - Official Technical Overview & Datasheet

DOEBRITZ DBR-1237 GRAVITY QUICK-RELEASE ROTARY VALVE - OFFICIAL TECHNICAL OVERVIEW & DATASHEET

EXECUTIVE SUMMARY

The Doebritz DBR-1237 Quick-Release Rotary Valve represents a benchmark in hygienic, high-performance bulk solids handling. Engineered for gravity discharge, pneumatic conveying, and precision metering, this valve integrates a rapid clean-in-place (CIP) design with exceptional airlock integrity. The DBR-1237 is purpose-built for global leaders in the food, pharmaceutical, chemical, and new energy sectors, delivering validated lock-up performance, ATEX-certified safety, and minimized total cost of ownership.



HOUSING & ROTOR METALLURGY

The DBR-1237 platform is constructed from a robust selection of materials to suit diverse process media. Standard housings and rotors are manufactured from SUS304 or SUS316L stainless steel for superior corrosion resistance and sanitary compliance. For highly abrasive or corrosive applications, Doebritz offers advanced surface engineering solutions, including tungsten carbide, ceramic, and polymer coatings. The internal geometry is precision-machined to achieve a rotor-to-housing clearance of 0.1 - 0.2 mm, a critical parameter for minimizing air leakage and maximizing volumetric efficiency across differential pressures.

KEY FEATURES

- Feature 1: Rapid Tool-less Disassembly: The innovative quick-release mechanism enables swift, tool-less disassembly, drastically reducing downtime for manual cleaning, inspection, and maintenance. This design inherently supports CIP and WIP protocols, eliminating dead zones to prevent cross-contamination.
- Feature 2: Precision Air Sealing: The tight 0.1 - 0.2 mm clearance between the rotor tips and the housing ensures exceptional air lock integrity, significantly reducing compressed air or gas leakage. This leads to more stable pneumatic conveying, lower energy consumption, and improved metering accuracy.
- Feature 3: Material Versatility: Available in a wide array of metallurgies and coatings, including SUS304, SUS316L, carbon steel with various finishes, and coated with PE, PTFE, PA, tungsten carbide, or ceramics. This adaptability ensures reliable performance with everything from fine pharmaceutical powders to abrasive carbon black.
- Feature 4: Safety and Compliance: The DBR-1237 is designed for operation in Zone 20, 21, and 22 explosive dust atmospheres. The flame-proof variant is pressure-rated to 16 bar, providing robust containment in the event of a deflagration. The valve meets the stringent requirements for Class W, 10W, 30W, C, and D cleanrooms, backed by CE and TÜV certifications.
- Feature 5: Integrated Process Control: Designed for the modern automated plant, the DBR-1237 is fully compatible with variable frequency drives (VFD) and PLC-based control systems. This enables precise flow rate modulation for

continuous discharge, batch metering, and recipe-based automatic batching, ensuring high process consistency.

COMPLIANCE & SAFETY STANDARDS

The Doebritz DBR-1237 is engineered and certified to meet the most demanding global industrial standards. The product carries the CE mark, confirming conformity with relevant EU health, safety, and environmental protection legislation. TÜV certification provides independent validation of the valve's quality and safety performance for pressure equipment and machinery. For explosive environments, the DBR-1237 is available with ATEX certification for use in Zone 20, 21, and 22, with a flameproof enclosure capable of withstanding internal explosions up to 16 bar. The design strictly adheres to NFPA standards for combustible dust, ensuring safe operation in hazardous locations. Hygienic design principles, validated through the Statement certification, ensure compliance with GMP guidelines for food, pharmaceutical, and biotechnology applications.

TECHNICAL SPECIFICATIONS

Parameter	Specification
Materials of Construction	SUS304, SUS316L, Carbon Steel

	(Painted/Nickel-plated), Tungsten Carbide, PE, PTFE, PA Coated
Rotor-to-Housing Clearance	0.1 - 0.2 mm
Explosion Protection	Non-Explosion-proof / Zone 20, 21, 22 (ATEX) with 16 bar flame-proof housing
Cleanroom Classification	Class W, 10W, 30W, C, D
Operating Temperature (Ambient)	-15°C to 60°C
Operating Temperature (Product)	0°C to 120°C
Flange Standard	HG20592 (Custom options available)
Inlet/Outlet Interface	DN50, DN100, DN150, DN200, DN300, DN350
Surface Finish (Internal)	Mirror, $R_a \leq 0.4 / 0.8 / 1.6 \mu m$, Various coatings
Surface Finish (External)	Machined $< 0.8 \mu m$, Sandblasted, Shot-blasted, Anti-fingerprint
Cleaning Options	Manual (Quick-release), CIP, WIP
Certifications	CE, TÜV, Statement (ATEX / NFPA compliant)

