

Doebritz DBR-1237 - Official Technical Overview & Datasheet

DoeBRITZ DBR-1237 GRAVITY-FED QUICK-RELEASE ROTARY VALVE

OFFICIAL TECHNICAL OVERVIEW & DATASHEET

EXECUTIVE SUMMARY

The Doebritz DBR-1237 Quick-Release Rotary Valve represents a paradigm shift in powder and bulk solids handling, engineered as a high-performance airlock and metering device for the most demanding industrial applications. This unit is meticulously designed to integrate seamlessly into pneumatic conveying systems, gravity discharge points, and automated batching lines across the food, pharmaceutical, chemical, and new energy sectors.

At its core, the DBR-1237 is defined by its innovative quick-release clamp mechanism, which facilitates unprecedented access for cleaning and maintenance without the need for specialized tools. This feature, combined with precision-engineered clearances, robust hygienic construction, and comprehensive ATEX certification, positions the DBR-1237 as a superior solution for plants requiring strict sanitation, explosion safety, and operational efficiency.



HOUSING & ROTOR METALLURGY

The DBR-1237 is built upon a foundation of high-grade materials, ensuring longevity and compatibility with a vast array of process media. The housing and rotor are precision-cast from a selection of premium materials, chosen to match the specific abrasiveness, corrosiveness, and temperature requirements of the application.

- Standard Material Suite: SUS304 stainless steel provides a robust and cost-effective solution for general-purpose applications. For enhanced corrosion resistance and stringent sanitary requirements, SUS316L is the preferred choice. Carbon steel options, available with painted or nickel-plated finishes, offer a durable alternative for less corrosive, heavy-duty industrial duties.

- **Wear Protection:** For severe abrasive applications involving materials such as carbon black, titanium dioxide, or battery compounds, the contact surfaces can be fortified with advanced coatings. Options include tungsten carbide coatings, ceramic coatings, and specialized polymer linings (PE, PTFE, PA), dramatically extending the service life of the valve.

KEY FEATURES

- **Feature 1: Rapid Maintenance & Hygiene.** The patented quick-release system allows for the complete disassembly of the valve head in seconds, without tools. This drastically reduces downtime for manual cleaning and supports efficient CIP and WIP cleaning protocols, ensuring zero cross-contamination and full traceability.

- **Feature 2: Precision Airtight Sealing.** Maintaining a precise rotor-to-housing clearance of 0.1–0.2 mm ensures minimal air leakage across the valve. This critical tolerance preserves system pressure, reduces energy consumption, and guarantees accurate volumetric filling, making it ideal for both metering and airlock applications.

- **Feature 3: Versatile & Safe Operation.** The DBR-1237 is designed for full operational flexibility. It supports positive pressure systems up to 1 bar (and 16 bar in its flameproof configuration) and negative pressure systems down to -1 bar. With ATEX certification for Zone 20, 21, and 22, it can be safely deployed in

explosive dust atmospheres.

- Feature 4: Smart Integration. The valve is engineered for the digital age. It is compatible with variable frequency drives (VFD) and PLC control systems, enabling precise speed control, batch metering, recipe management, and full automation for consistent product quality.

COMPLIANCE & SAFETY STANDARDS

The Doebritz DBR-1237 is manufactured to the highest international standards for safety, hygiene, and performance. This commitment ensures that the equipment can be integrated into critical applications without compromise.

- Explosion Safety: ATEX Certified for Zone 20, Zone 21, and Zone 22 dust atmospheres. The flameproof design is pressure-resistant up to 16 bar, containing any potential explosion within the housing.
- Sanitary Design: Designed to meet the stringent requirements of GMP and FDA regulations. It is suitable for cleanroom environments up to Class C/D and 10W/30W cleanroom standards, facilitating easy validation.
- Quality Assurance: The product holds CE and TÜV certifications, confirming conformity with all relevant European directives and industrial safety protocols.

TECHNICAL SPECIFICATIONS

Parameter	Specification
Capacity (Nominal)	Up to 100 Liters/rev (depending on model)
Flange Standard	HG20592 (Customizable: DIN PN10 / ANSI 150#)
Drive Configuration	VFD-Ready, Direct or Chain Drive
Pressure Range (Pneumatic)	-1.0 bar to +1.0 bar
Pressure Range (Flameproof)	Up to 16 bar
Explosion Protection	ATEX Zone 20, 21, 22
Temperature Range (Ambient)	-15°C to +60°C
Temperature Range (Material)	0°C to +120°C
Valve/Housing Materials	SUS304, SUS316L, Carbon Steel (Painted/Nickel-Plated)
Wear Protection Coatings	Tungsten Carbide, Ceramic, PE, PTFE, PA
Surface Finish (Internal)	Mirror finish, Ra ≤ 0.4/0.8/1.6 μm
Cleaning Methods	Manual (Quick-release), Online CIP / WIP
Certifications	CE, TÜV, ATEX, GMP Compliant
Nominal Sizes	DN50, DN100, DN150, DN200, DN300, DN350

