baelz automatic®

North America

ANSI Valves

An Overview of Baelz North America's ANSI Valves

The North American valve industry is subject to a number of standards. One of the most popular is ANSI. The following eBook provides an overview of ANSI valve standards, what each ANSI valve class encompasses, how ANSI compares to DIN, and how to maintain ANSI valves properly.

An Overview of ANSI Valve Standards

Formed in 1918, the American National Standards Institute (ANSI) is an independent not-for-profit organization that develops and issues voluntary consensus standards. These standards are applicable to various products, services, processes, systems, and personnel across virtually every industry, including valves.
ANSI valve standards offer guidelines for all of the most critical elements of a valve, such as:

Valve sizing.

Regarding sizing, all ANSI valves follow standard specifications for flange dimensions, face-to-face dimensions, pressure ratings, and valve body material. Values are expressed in American standard units (e.g., inches or psi).

Markings/Tag Placement.

Having key valve information, such as the size, pressure, Kvs value, material, manufacturing serial number, and valve type is essential. ANSI standards call for this information to be placed on tags located near the bottom of the valve.

Factory testing.

According to the testing requirements outlined by ANSI, the structural integrity of ANSI valves must be tested to verify durability and leak integrity. Valves that pass these testing requirements must:

- Withstand hydrotesting with no visible leaks on the valve body
- Show no leakage at the flanges, stem, or any other valve part under pressure
- Exhibit no impairments in function during testing

ISA Certification

The International Society of Automation (ISA)—a non-profit professional association for engineers, technicians, and management professionals involved with industrial automation—who also issues valve-related standards. Since the standards they currently maintain reaffirm ANSI valve standards, valves that are compliant with ANSI standards are also compliant with ISA standards. As a result, ANSI valves can be used in any industrial flow control operation.

By using ANSI/ISA certified valves in such operations, industry professionals have the peace of mind that their valve(s) will meet their temperature, flow, and pressure requirements.

ANSI Classes

Standard ANSI ratings typically run from 100 to 900. However, higher ANSI ratings (1000+) are available. Baelz NA, the official supplier of ANSI control valves, offer valves that are available in 150# and 300# pressure classes. These vales can withstand temperatures up to 650° F. The table below outlines the pressure-temperature relationships for these valves.

Temperature (° F)	ANSI Pressure Class (lb.)	
	150#	300#
	up to: **PSI**	up to: **PSI**
-20 to 100	**285**	**740**
200	**260**	**675**
300	**230**	**655**
400	**200**	**635**
500	**170**	**600**
600	**140**	**550**
650	**125**	**535**

DIN vs. ANSI

The Deutsches Institut für Normung (DIN)—i.e., the German Institute for Standardization—serves a similar purpose for European companies as the American National Standards Institute does for American companies. The key difference between their standards is the measurement units used. ANSI standards utilize standard units (e.g., inches and psi), while DIN standards employ metric units (e.g., millimeters and bar).

ANSI Valve Maintenance Tips

ANSI valves play an essential role in a wide range of fluid handling and processing applications. However, similar to all other valves, they must be regularly and properly inspected and maintained to ensure they continue to operate as needed.

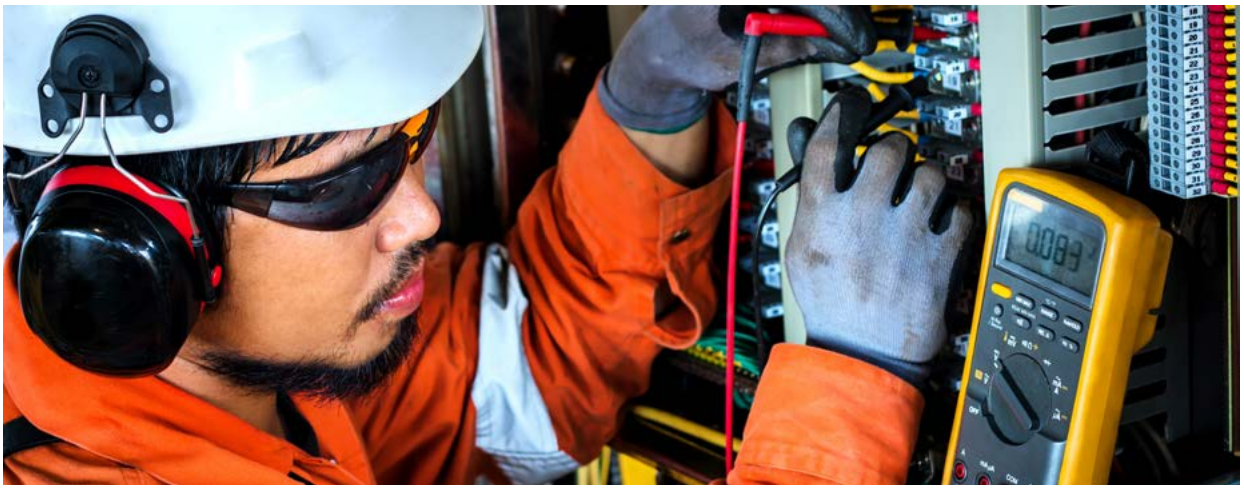
There are three approaches to valve maintenance:

Reactive maintenance:
taking action only once a problem occurs (e.g., repairing a malfunctioning or failed valve)

Preventative maintenance:
routinely inspecting valve operations to identify future valve performance issues and implement an appropriate preventative solution before they occur

Predictive maintenance:
employing monitoring and testing equipment to examine and diagnose valve condition and performance and detect and resolve any anomalies before they affect performance

Many companies employ a reactive maintenance approach for their valves to save on costs. However, this reliance can result in greater product quality issues, lower process efficiency, and larger repair and replacement costs, all of which lead to decreased profitability over time. Preventative maintenance and predictive maintenance approaches catch and resolve valve issues before they occur or before they have a significant effect on facility operations. As a result, they often prove to be a more cost-effective maintenance method over time.



ANSI Valves From Baelz NA

Two different models, 2-way or 3-way, that are available for low or high temperature process.

Stainless Steel Bellows Valves With Cooling Tube (365/367-BK/BBK-SS)

These valves incorporate a cooling tube to enable performance at temperatures up to 650° F. Built with durable stainless steel construction, the valve seals can withstand 150,000 reps at this maximum operating temperature, allowing for a long working life with minimal maintenance required. Our bellows valves are fully ANSI-compliant and available as either a 365 (two-way) or 367 (three-way) control valve.

Non-Bellows Seal Valves (365/367-B/BB)

These valves are also available in two-way or three-way options as well. They support maximum operating temperatures of 450° F.

365
2-way valve

367
3-way valve

4875 Deen Road, Suite 100 • Marietta, GA, USA • Tel. 844-BAELZ-NA (223-5962) • Fax. 678-265-1186
www.baelzna.com

Contact Baelz North America for ANSI Valves

If you need high-quality control valves that meet ANSI/ISA standards, Baelz NA has got you covered. We subject all of our valves to comprehensive factory testing to verify they comply with industry standards and specifications, so you can have the peace of mind knowing your valves meet your requirements. To learn more about our ANSI/ISA-certified valves, download the technical guides. To discuss your application requirements with one of our experts, contact us or request a free quote today.

Contact Us

Visit our Resource Library

4875 Deen Road, Suite 100 • Marietta, GA, USA • Tel. 844-BAELZ-NA (223-5962) • Fax. 678-265-1186
www.baelzna.com