



Precision Cleaning. Global Availability. ISO Class 6.

GLOBAL FACILITIES

Bray's cleanroom facilities offer a single source for precision cleaned valves, from automated packages to assemblies and spare parts. With global cleaning capabilities from ISO Class 9 through ISO Class 6, multiple service levels are available to meet a variety of international certifications and standards.

SUPPORTED INDUSTRIES

- > Aerospace
- > Air Separation
- > Automotive
- > Biotechnology & Pharma
- > Chemical
- > Chlor-Alkali
- > Cryogenics
- > Food & Beverage
- > Industrial Gas
- > Semiconductor
- > Ultrapure Water

THE BRAY ADVANTAGE

- > Factory direct cleaned valve & automation packages.
- > Reduced logistical risk provides faster delivery.
- > Trained and experienced technicians provide consistent product cleanliness.
- > Cleaning procedures validated by third party labs.

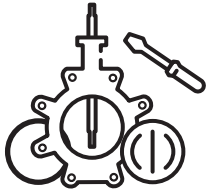
CERTIFICATIONS & STANDARDS

EIGA 33/18	Cleaning of Equipment for Oxygen Service
ISO 14644-1	Certification of Air Cleanliness
MSS-SP-140	Preparation of Valves and Fittings for Silicone-Free Service
VDMA 24364	Testing for Paint Wetting Impairment Substances (LABS-Conformity)

AVAILABLE CLEANING LEVELS

CLEANING SERVICE	LEVEL		METHOD		INSPECTION			PACKAGING		
	Component	Valve	Mechanical	Solution	White Light	UV Light	Wipe Test	Single Bag	Double Bag	Desiccants
Oxygen Ready	■		■	■	■	■	■		■	■
Ultrapure	■			■	■				■	
Process Clean	■		■	■	■		■		■	■
Silicone-Free	■			■	■	■			■	
LABS-Free		■		■	■	■			■	
EC 1935		■		■	■			■		
Clean & Degreased		■		■	■			■		

RIGOROUSLY CONTROLLED PROCESSES



1

PREPARATION & DISASSEMBLY

Prior to cleaning commencing, all components are inspected and approved for use. Technicians apply the appropriate PPE to protect both themselves and the valve.

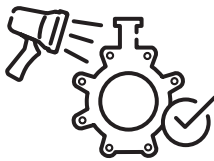
Valves are cleaned and validated (either fully built or at component level) to ensure complete product compliance. When required, valves which arrive fully built are completely disassembled to ensure any pre-contamination is removed.



2

CLEANING & DRYING

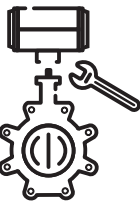
Two methods are used to ensure the desired cleanliness level — **mechanical** and **solution** cleaning — but the selected method is dependent on the type of service. After all components are cleaned, they are dried using oil free nitrogen (a cleaner and drier alternative to compressed air).



3

INSPECTION & VALIDATION

Before being reassembled, valve components must be inspected and validated to ensure they meet the required standard. This is achieved through a combination of **white light inspection**, **UV light inspection**, and **wipe testing**. If any of the methods detect contamination, the components are re-cleaned using the appropriate methods.



4

ASSEMBLY, TESTING, & MOUNTING

Once all applicable tests have been passed, the valves are assembled (using application-suitable lubricant when required) and pneumatically seat tested with oil-free nitrogen to ensure functionality.

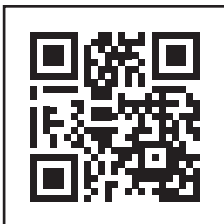
Any mechanical, electrical, or pneumatic actuators will be mounted in the same environment before being packaged. Actuator exteriors will be cleaned with isopropanol and lint-free cloths.



5

FINAL INSPECTION, PACKAGING, & SHIPPING

Cleaned valves are inspected, packaged, and labeled in accordance with the applicable standards before being efficiently shipped to your location — clean and ready for installation.



VISIT US

Our Bray team can assist in determining which cleaning level is necessary based on your specific requirements.

Contact Bray today to learn more and schedule a visit to one of our cleanroom facilities near you. [BRAY.COM/PRECISIONCLEANING](https://bray.com/precisioncleaning)