

## TA Luft 2021 – Technical Instructions on Air Quality Control

### What operators should now know about valves

With the revised **TA Luft 2021**, the requirements for industrial installations in Germany have become more specific and more binding. For many operators, this particularly affects valves, as they play an important role in preventing diffuse emissions. What was previously often viewed mainly from a technical perspective has now also become a matter of regulatory compliance, traceable documentation, and long-term operational reliability.

TA Luft is a key component of German air pollution control legislation. Its purpose is to limit emissions into the atmosphere and to put the state of the art more consistently into practice for the operation of installations requiring approval. For companies, this means that selecting suitable valves is becoming more important not only from a technical standpoint, but also in terms of documentation, maintenance, and legal certainty.

### The most important points at a glance

For quick orientation, the following overview is helpful:

Topic	Relevance for operators
Legal framework	TA Luft specifies air pollution control requirements for the operation of industrial installations. Its legal basis is the German Federal Immission Control Act.
Relevance for valves	Valves, sealing points, and comparable components are receiving greater attention because they can influence diffuse emissions.
Existing installations	Existing valves may continue to be operated, but they must be technically suitable and their use in the relevant application must be clearly assessable and documented.
New projects	For new installations, the requirements should be taken into account early in the selection, planning, and documentation process.
Maintenance and verification	Documented testing, maintenance concepts, and technical records are becoming significantly more important.
Practical benefits	Greater legal certainty, improved audit readiness, and a lower risk of later retrofits.

## Why TA Luft matters to operators

For operators, it is not enough simply to know the legal requirements. They must also be implemented sensibly in day-to-day plant operation. Valves in particular are often underestimated in this context. Although they are only one part of the overall system, they can be crucial in determining whether an installation can be operated safely, tightly, and in compliance with regulations over the long term.

In practice, this means above all:

- The technical tightness of valves must receive greater attention.
- Verification and documentation are becoming more important than purely experience-based practical assessments.
- Operators should review at an early stage whether existing components still meet current requirements.

This shifts the focus away from a purely product-based view toward a broader assessment that includes selection, operating conditions, maintenance, and documentation.

## Which industries are particularly affected

This topic is especially relevant for industries that handle gaseous, volatile, or otherwise emission-relevant media. These include, among others, chemical and petrochemical applications, refineries, tank farms, and many other installations requiring official approval.

In these sectors in particular, it is essential that valves are not only generally suitable, but also continue to function reliably over long periods and maintain their tightness during operation. For operators, this increases the importance of a sound technical assessment at an early stage.

## Correctly assessing existing and new installations

TA Luft is not aimed exclusively at new installations or new components. Existing installations are also coming more strongly into focus. However, this does not automatically mean that every installed valve must be replaced immediately. What matters is whether the components in use remain suitable for the specific application and whether this can be demonstrated in a traceable manner.

In practical terms, this means:

- Existing valves may generally continue to be used if they remain technically tight and meet the operational requirements.

- New installations should be planned from the outset so that suitable valves, testing concepts, and verification documents are incorporated directly.
- Gaps in documentation may become more problematic in the future, even where a component has proven itself technically over many years.

This is precisely why an early inventory and assessment are worthwhile. They help create clarity as to where the current status is already sufficient and where action may still be required.

### **Maintenance and documentation are becoming more important**

One essential aspect of TA Luft is the increased emphasis on maintenance and documentation. In many cases, it is no longer enough to rely on the general quality of a valve or on the fact that it has performed well over many years. What is required instead is traceable information showing how tightness is ensured and under which conditions this property can be maintained over the long term.

Important documents may include, for example:

- technical evidence demonstrating the suitability of the valve,
- information on maintenance intervals or maintenance concepts,
- records of testing, condition, and servicing.

These documents are not only useful in everyday operation. They can also play an important role during audits, internal approvals, inspections, or official reviews. The better the documentation is prepared, the lower the effort is usually when proof is required later.

### **What this means in practical terms for customers**

From the perspective of operators and purchasers, TA Luft is not just associated with additional effort. It also offers an opportunity to operate installations in a more structured, safer, and more economical way over the long term. Anyone who pays attention at an early stage to suitable valves and complete documentation can reduce later uncertainty and improve planning reliability.

The practical benefits include in particular:

- greater confidence in the design and assessment of installations,
- better preparation for audits and official requirements,
- a reduced risk of short-notice retrofits or replacement measures.

This makes one thing clear: TA-Luft-compliant solutions are not merely a matter of meeting regulations, but also contribute to more stable and better documented plant operation.

### **In summary**

TA Luft 2021 makes the topic of valves significantly more relevant for many operators. The focus is not only on the technical properties of the components, but also on their verifiability, maintenance, and documented suitability in practical operation. For companies, it therefore makes sense not to address the issue only during an inspection or shortly before a deadline, but to approach it in a structured manner at an early stage.

Anyone who evaluates existing components in good time, compiles the necessary documentation, and considers suitable solutions from the outset in new projects creates a solid basis for safe, low-emission, and future-oriented plant operation.