

# PRUSS

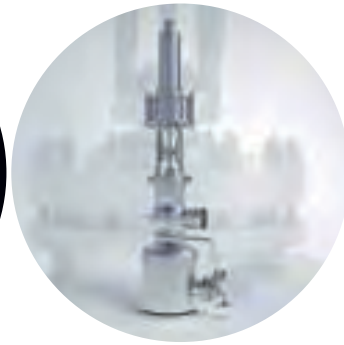
UNDER PRESSURE SINCE 1889.

CONTROL- & ESV-  
VALVES FOR HYDROGEN  
APPLICATIONS

H<sub>2</sub>

 MADE IN  
GERMANY

*The story of our valves*



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**IT'S BEEN A LONG WAY TO HI-TECH INDUSTRIAL VALVES.  
BUT SOME THINGS HAVE NEVER CHANGED.**

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From the early inventions and products back in 1889 to over 10.000 worldwide projects nowadays, there are four simple things we're always keeping in mind: flexibility, innovativeness, quality and trustworthiness.

PRUSS stands for more than 130 years as a reliable manufacturer of valves and actuators for severe applications. Our valves are used all over the world since decades in hydrogen operation.

Hydrogen is the medium of the future and will be used in more and more fields of operation. In order to ensure safe operation the suitability of the material and tightness of all selected components have to be tested and approved.



## MATERIAL TESTS:

Molecular hydrogen  $H_2$  is comparatively stable and not very reactive. Classical corrosion is therefore not to be expected.

The so-called hydrogen embrittlement, i.e. hydrogen-induced stress corrosion cracking, represents a risk for highly stressed pressure-retaining parts for which a special approach is required. As part of the suitability test the material selection is essential.

**The test is carried out on the basis of the following standards:**

- PED 2014/68/EU
- API 6A, API 6D, ASME

**The following criteria are considered:**

- Machinery Directive 2006/42/EU
- REACH Regulation 1907/2006
- Hardness values
- Explosive decompression
- Ductility

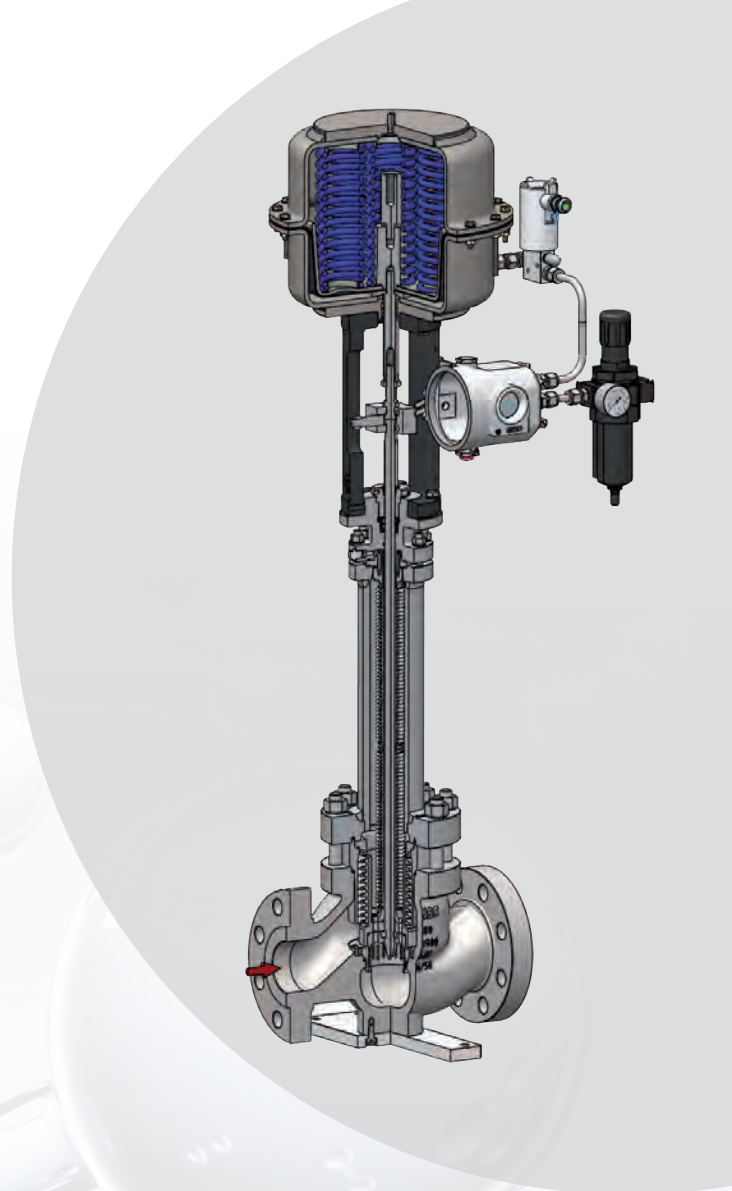
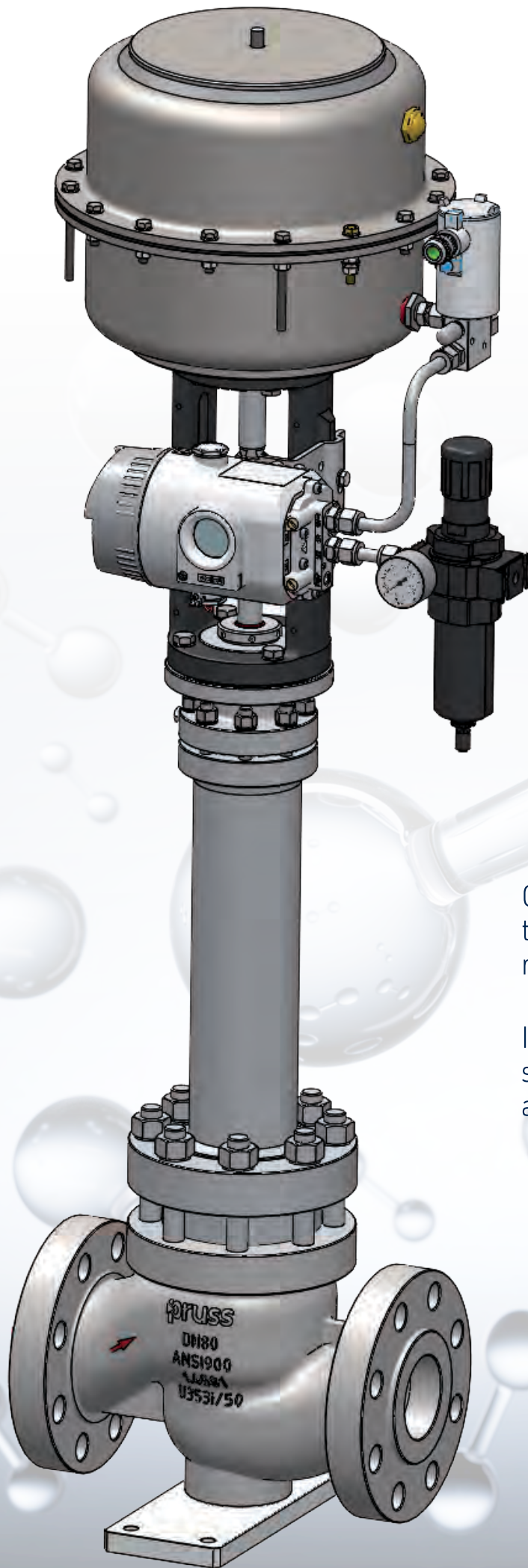




## APPLICATIONS:

All our series are suitable for the use in hydrogen applications.

- BR 300 straight globe
- BR 450 angleform
- Fuel control and ESV Valves up to 250° C with leakage class VI and control ratios of up to 350 : 1
- Process valves in the hydrolysis loops
- Liquid separation with special resistant seat geometries equipped with separate sealing and control edges
- Oxygen separation
- Pressure control
- Safety shut-off / quick-closing valves
- Pipeline control / quick-closing valves
- Storage / discharge valves for cavern storages
- Blow-off and Anti-Surge valves for protection and control of compressors



Our valves are generally available with metallic seals to meet the demanding tightness requirements of hydrogen applications.

In addition to the static seals, all movable sealing systems are designed in a way, that a maintenance-free operation is possible.

We are also offering our service to wherever our valves are.

Either on site by accredited service teams of our representatives, by our specialists from our factory Hanover or remotely via AI system.

Whether for commissioning, for a regular shutdown service, emergency operations or our spare parts recommendation, our highly qualified service team is available at any time.



HERE'S WHERE YOU CAN FIND US:



**PRUSS**  
UNDER PRESSURE SINCE 1889.

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