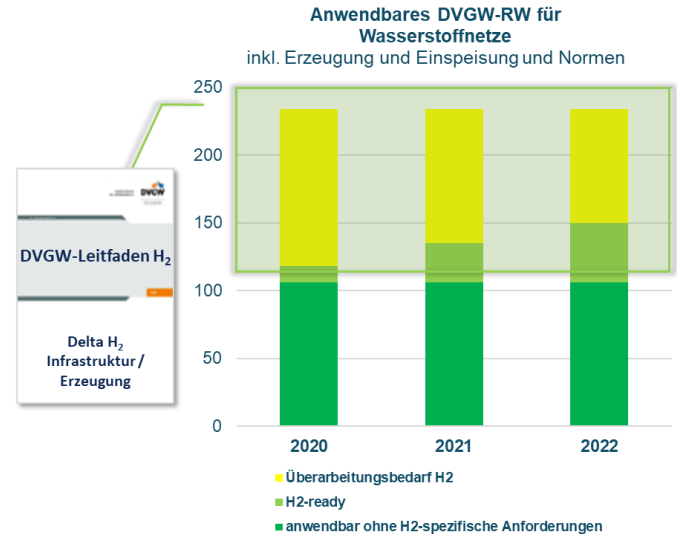


DVGW ZP 3100

**Additional Testing protocol for Gas-fired central heating
boilers using H₂NG up to 20 Vol.-% hydrogen**



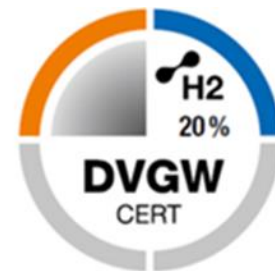
- Increasing demand for the possibility of approving gas appliances that use up to 20% hydrogen admixture in natural gas
- A protocol is needed until the standard is available
- Which is based on research and state of the art
- Part of the DVGW-2-Step-Roadmap for hydrogen standardization
 - Part 1 (guidance and protocols to ensure safe usage of hydrogen in the gas grid)
 - Total revision of all existing gas standards in hydrogen aspects



ZP 3100 – the testing protocol

A Testing protocol for appliances that can use 0-20% hydrogen admixture

- Based on the EN 15502-2-1
- Additional tests which are affected by hydrogen admixtures
- Tested with a second reference gas (80-20) and a new limit gas for flame lift (G 22)
- Components, parts and materials need a manufacturer declaration that they are suitable



Structure of the ZP:

Clause in EN 15502-2-1	Requirement	Test condition	Comment	Test Gas

ZP 3100 – Basis for standardization

- The Testing protocol was developed by german experts of testing laboratories, manufacturers and notified bodies
- It was used to support the amendment for hydrogen of EN 15502-2-1 in CEN/TC 109/WG 1 AHG hydrogen
- The new test gases are also used to support the revision of EN 437 in CEN/TC 238/WG 1
- ZP 3100 is published and available for free under:

<https://www.dvgw-cert.com/de/produkte-gas/pruefgrundlagen/zertifizierungsprogramm-zp.html>

Steps ahead – New test protocols under development

Additional test protocols are under development:

- for Gas-fired central heating boilers using 100% hydrogen
- for fan burners using H2NG up to 20 Vol-% hydrogen

