

# DIN EN 303-6:2019-12 (E)

Heating boilers - Part 6: Heating boilers with forced draught burners - Specific requirements for the domestic hot water operation and energy performance of water heaters and combination boilers with atomizing oil burners of nominal heat input not exceeding 70 kW

---

| <b>Contents</b>         |  | <b>Page</b> |
|-------------------------|--|-------------|
| European foreword ..... |  | 4           |
| 1                       | Scope .....  | 5           |
| 2                       | Normative references .....   | 5           |
| 3                       | Terms and definitions .....  | 6           |
| 4                       | Constructional requirements .....  | 8           |
| 4.1                     | General .....  | 8           |
| 4.2                     | Materials and method of construction of components of the domestic water circuit ..... | 8           |
| 4.3                     | Domestic water connections .....   | 9           |
| 4.4                     | Soundness of the domestic water circuit .....  | 9           |
| 4.5                     | Adjusting, control and safety devices for the domestic hot water circuit .....         | 9           |
| 5                       | Operational requirements .....   | 9           |
| 5.1                     | General .....  | 9           |
| 5.2                     | Safety of the domestic hot water circuit .....   | 9           |
| 5.3                     | Rational use of energy .....   | 10          |
| 5.4                     | Fitness of purpose .....   | 10          |
| 6                       | Test methods .....   | 11          |
| 6.1                     | General .....  | 11          |
| 6.2                     | Safety of the domestic hot water circuit .....   | 11          |
| 6.3                     | Rational use of energy .....   | 13          |
| 6.4                     | Fitness for purpose .....  | 15          |
| 7                       | Energy efficiency for hot water production .....                                       | 18          |
| 7.1                     | Reference conditions .....   | 18          |
| 7.2                     | Measurement uncertainties .....  | 19          |
| 7.3                     | Test conditions .....  | 19          |
| 8                       | Determination of the energy consumption of the appliance .....                         | 20          |
| 8.1                     | General .....  | 20          |
| 8.2                     | Tapping cycles .....   | 20          |
| 8.3                     | Measurement of the energy recovered by the useful water .....                          | 29          |
| 8.4                     | Calculation of heating oil energy .....  | 30          |
| 8.5                     | Calculation of daily electrical energy .....   | 31          |
| 8.6                     | Measurement of heating oil and electrical energy consumptions in standby mode .....    | 32          |
| 8.7                     | Measurement of daily auxiliary energy consumption in off mode .....                    | 33          |
| 9                       | Determination of the wasted water .....  | 33          |
| 10                      | Eco design related products data .....   | 34          |
| 10.1                    | Water heating energy efficiency .....  | 34          |
| 10.2                    | Annual fuel consumption (AFC) .....  | 35          |
| 10.3                    | Annual electricity consumption (AEC) .....   | 35          |

|                               |  |           |
|-------------------------------|--|-----------|
| <b>11</b>                     | <b>Marking and instructions .....</b>  | <b>36</b> |
| <b>11.1</b>                   | <b>Marking of the boiler and/or the tank .....</b>   | <b>36</b> |
| <b>11.2</b>                   | <b>Instructions .....</b>  | <b>36</b> |
| <b>Annex A (informative)</b>  | <b>Test conditions .....</b>   | <b>38</b> |
| <b>Annex B (informative)</b>  | <b>Test rig and measurement devices .....</b>  | <b>41</b> |
| <b>Annex ZA (informative)</b> | <b>Relationship between this European Standard and the eco-design requirements of Commission Regulation (EC) No 814/2013 aimed to be covered .....</b> | <b>45</b> |
| <b>Annex ZB (informative)</b> | <b>Relationship between this European Standard and the eco-design requirements of Commission Regulation (EC) No 812/2013 aimed to be covered .....</b> | <b>46</b> |
| <b>Annex ZC (informative)</b> | <b>Relationship between this European Standard and the eco-design requirements of Commission Regulation (EC) No 813/2013 aimed to be covered .....</b> | <b>47</b> |
| <b>Annex ZD (informative)</b> | <b>Relationship between this European Standard and the eco-design requirements of Commission Regulation (EC) No 811/2013 aimed to be covered .....</b> | <b>48</b> |