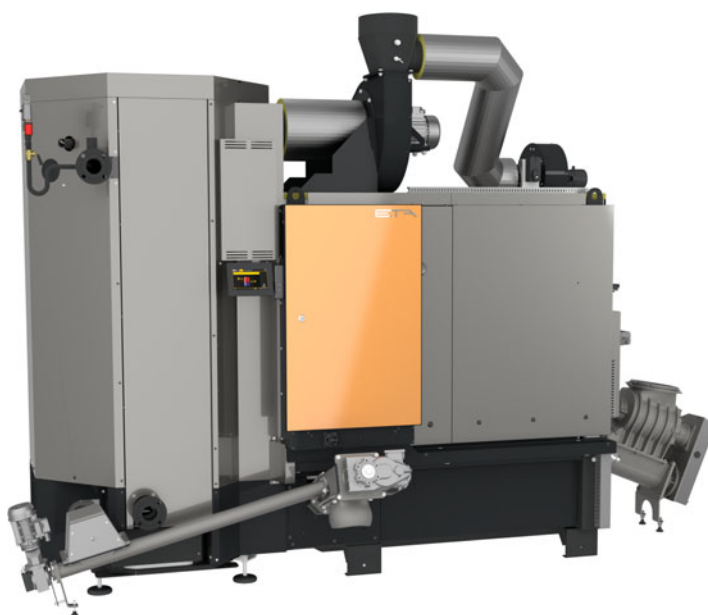


# HACK VR moving grate boiler 463-500 kW

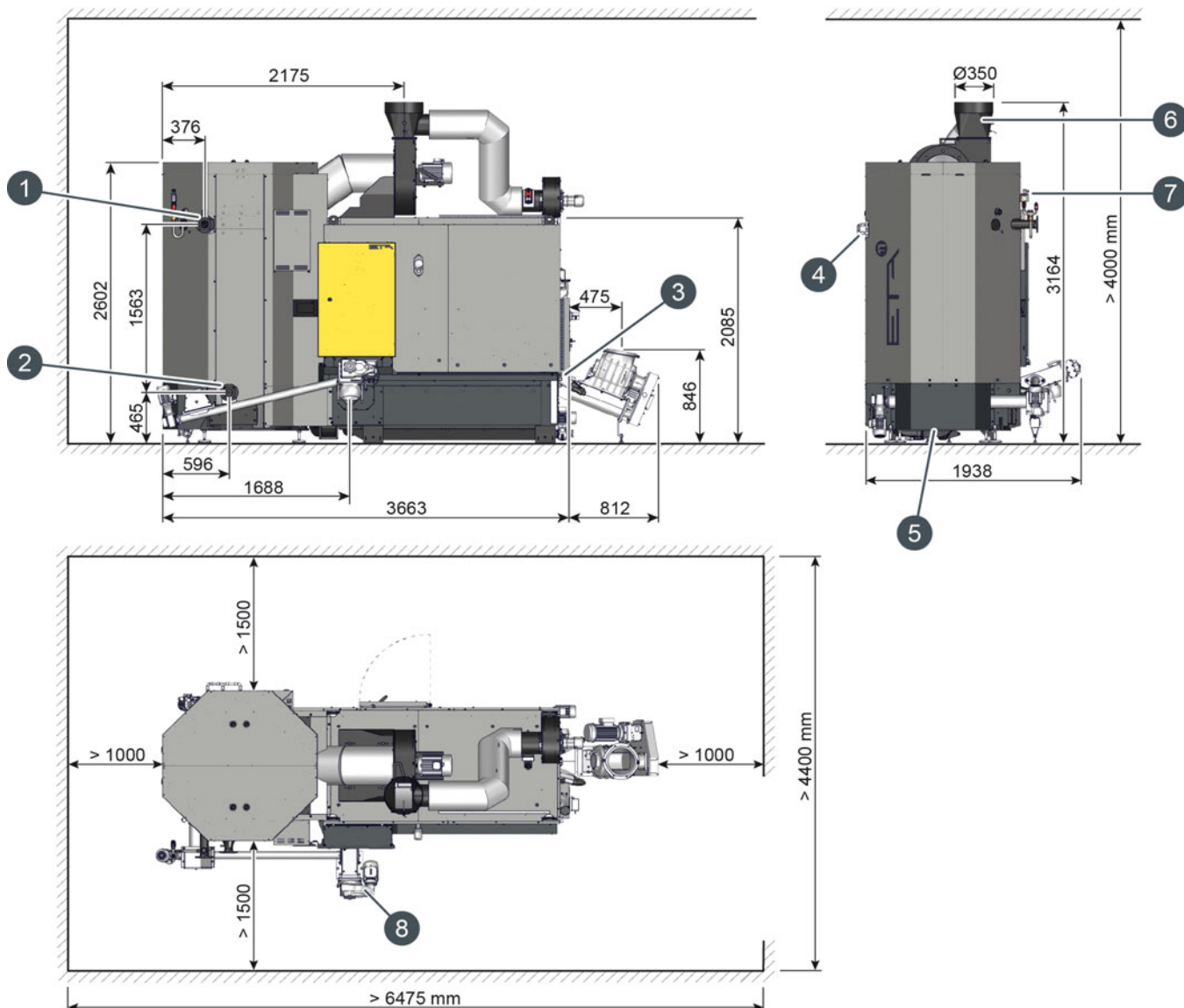


## Technical data



# 1 Technical data

## Data sheet moving grate boiler 463 - 500 kW



- 1 Flow with DN65 connecting flange
- 2 Return with DN65 connecting flange
- 3 Safety heat exchanger of the grate duct, connection R1/2" internal thread
- 4 Safety heat exchanger for heat exchanger, connection R1/2" internal thread
- 5 Filling and drainage valve (under the panel)
- 6 Flue tube connector pivotable in 45° steps
- 7 Connection for safety valve 6/4" external thread
- 8 De-ashing connection (left or right)



The flue gas connection on the boiler does not yet give any indication of the required chimney diameter. Information on the required chimney diameter can be found in the installation instructions for the boiler in the Chimney chapter.

| Moving-grate boiler                                                                                                               | Unit                                                                                                      | 463 kW             | 500 kW        |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------|---------------|
| Rated heat capacity range, wood chips M25 BD 150 (W25-S160)                                                                       | kW                                                                                                        | 126 - 463          | 135 - 499     |
| Combustion capacity wood chips M25 BD 150 (W25-S160)                                                                              | kW                                                                                                        | 134 - 497.8        | 143.6 - 536.6 |
| Rated heat capacity range, pellets                                                                                                | kW                                                                                                        | 126 - 463          | 135 - 499     |
| Combustion capacity pellets                                                                                                       | kW                                                                                                        | 134.3 - 496.8      | 143.9 - 535.4 |
| Efficiency with spruce wood chips at partial / full load                                                                          | %                                                                                                         | 95 / 95.1          | 95 / 95       |
| Efficiency with pellets at partial / full load                                                                                    | %                                                                                                         | 93.6 / 93.1        | 93.8 / 93.2   |
| Retort transport dimensions W x D x H                                                                                             | mm                                                                                                        | 1450 x 2500 x 2150 |               |
| Heat exchanger transport dimensions W x D x H                                                                                     | mm                                                                                                        | 1650 x 1600 x 2600 |               |
| Weight of the retort                                                                                                              | kg                                                                                                        | 3170               |               |
| Weight of heat exchanger                                                                                                          | kg                                                                                                        | 1980               |               |
| Weight of one-chamber rotary valve with stoker                                                                                    | kg                                                                                                        | 221                |               |
| Total weight                                                                                                                      | kg                                                                                                        | 5371               |               |
| Water content                                                                                                                     | Litres                                                                                                    | 1095               |               |
| Water-side resistance ( $\Delta T = 20\text{ }^{\circ}\text{C}$ )                                                                 | Pa / mWs                                                                                                  | 12 000 / 1.2       |               |
| Flue gas mass flow rate with spruce wood chips at partial / full load                                                             | g / s                                                                                                     | 84 / 278           | 84 / 302      |
| Flue gas mass flow rate with pellets at partial / full load                                                                       | g / s                                                                                                     | 75 / 255           | 75 / 274      |
| CO <sub>2</sub> content in dry flue gas at partial / full load                                                                    | %                                                                                                         | 14.4 / 14.5        |               |
| Flue gas temperature at partial / full load                                                                                       | $^{\circ}\text{C}$                                                                                        | ~80 / ~150         |               |
| Required flue draught                                                                                                             | Pa                                                                                                        | > 5                |               |
|  A draught limiter is recommended above 25 Pa. |                                                                                                           |                    |               |
| Electrical power consumption in standby                                                                                           | W                                                                                                         | 19                 |               |
| Maximum permissible operating pressure                                                                                            | bar                                                                                                       | 6                  |               |
| Temperature adjustment range                                                                                                      | $^{\circ}\text{C}$                                                                                        | 70 – 90            |               |
| Maximum permissible operating temperature                                                                                         | $^{\circ}\text{C}$                                                                                        | 95                 |               |
| Minimum return temperature                                                                                                        | $^{\circ}\text{C}$                                                                                        | 60                 |               |
| Boiler class                                                                                                                      | 5 acc. to EN 303-5:2021                                                                                   |                    |               |
| Suitable fuels                                                                                                                    | Wood chips ISO 17225-4, P16S-P31S (G30-G50), maximum water content 40%; Pellets ISO 17225-2-A1, ENplus-A1 |                    |               |
| Electrical connection                                                                                                             | 400 V AC / 50 Hz / 16 A / 3P+N+PE                                                                         |                    |               |
| Operating mode                                                                                                                    | non-condensing                                                                                            |                    |               |
|                                                                                                                                   |                                                                                                           |                    |               |
| <b>Emission values at partial / full load with fuel: wood chips</b>                                                               |                                                                                                           |                    |               |
| The emission values refer to a residual oxygen content of 13% O <sub>2</sub> .                                                    |                                                                                                           |                    |               |
| Carbon monoxide (CO)                                                                                                              | mg/MJ                                                                                                     | 4 / 5              | 2 / 5         |
|                                                                                                                                   | mg/m <sup>3</sup>                                                                                         | 6 / 7              | 3 / 7         |
| Dust                                                                                                                              | mg/MJ                                                                                                     | 5 / 6              | 5 / 6         |
|                                                                                                                                   | mg/m <sup>3</sup>                                                                                         | 7 / 8              | 7 / 8         |
| Unburnt hydrocarbons (CxHy)                                                                                                       | mg/MJ                                                                                                     | 0 / 0              | 0 / 0         |
|                                                                                                                                   | mg/m <sup>3</sup>                                                                                         | 1 / 0              | 1 / 0         |

| Moving-grate boiler                                                            | Unit              | 463 kW  | 500 kW  |
|--------------------------------------------------------------------------------|-------------------|---------|---------|
| <b>Emission values at partial / full load with fuel: pellets</b>               |                   |         |         |
| The emission values refer to a residual oxygen content of 13% O <sub>2</sub> . |                   |         |         |
| Carbon monoxide (CO)                                                           | mg/MJ             | 13 / 7  | 12 / 7  |
|                                                                                | mg/m <sup>3</sup> | 20 / 10 | 18 / 10 |
| Dust                                                                           | mg/MJ             | 4 / 10  | 4 / 10  |
|                                                                                | mg/m <sup>3</sup> | 7 / 16  | 7 / 16  |
| Unburnt hydrocarbons (CxHy)                                                    | mg/MJ             | <1 / <1 | <1 / <1 |
|                                                                                | mg/m <sup>3</sup> | <1 / <1 | <1 / <1 |

*Subject to technical changes and errors*