EcoFlex™ pre-engineered WtE plant design

Principles

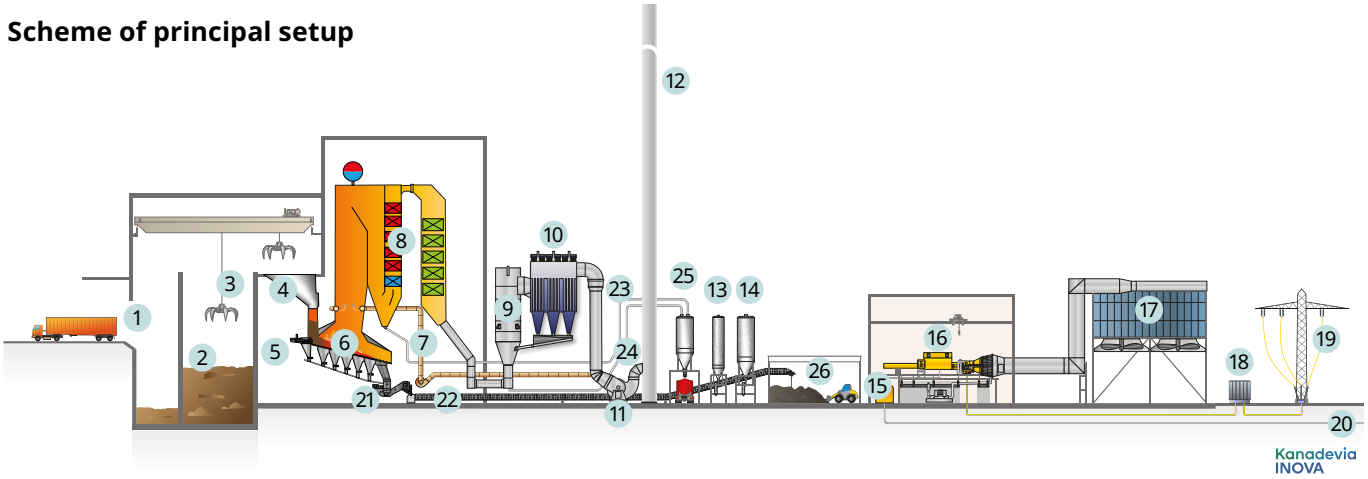
The pre-engineered WtE plant solution EcoFlex™ is based on proven in-house technologies, for instance the Inova Grate, SemiDry sorption and Autaro™ combustion control, allowing a cost optimised design of single-line Waste to Energy plant construction and operation. This Swiss-engineered solution fully complies with EU regulation standards.

The design is extendable with retrofit solutions for future emission limit reductions and further process technologies. It represents a cost effective modern waste infrastructure solution, designed for the municipal and industrial non-hazardous waste with a net calorific value of 11 MJ/kg.

Key figures

- Nominal operation load point (LPN):
  120,000 tons/a of waste at a NCV of 11 MJ/kg
- Thermal capacity at LPN:
  Approx. 46 MW_{th}
- Operational range of waste throughput:
  Approx. 80,000–130,000 tons/a
- Operational range of NCV:
  8,5–15 MJ/kg
- Performance at ISO conditions:
  Approx. 12 MW_{el} generator output at
  12 MW_{th} district heating capacity

Scheme of principal setup



Waste reception and storage
1 Tipping area
2 Waste bunker
3 Waste crane

Combustion and boiler
4 Feed hopper
5 Ram feeder
6 Inova Grate
7 Recirculation air
8 Four-pass boiler

Flue gas treatment
9 SemiDry reactor
10 Fabric filter
11 Induced draught fan
12 Stack
13 PAC silo
14 $Ca(OH)_2$ silo

Energy recovery
15 District heat exchanger
16 Turbine and generator
17 Air cooled condenser
18 Transformer
19 Grid connection
20 District heat connection

Residue handling and treatment
21 Bottom ash extractor
22 Bottom ash conveyer
23 Boiler ash extractor
24 Residue conveyer
25 Residue silo
26 Bottom ash hall

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