

# Heat sources and system dimensions

## **SOURCES:**

- ▶ **Fossile fuels (coal, oil, gas)**
- ▶ **Electricity (fossile, nuclear or renewable)**
- ▶ **Renewable fuels (biomass, wooden chips, solar systems, geothermal)**

## **System dimensions:**

- ▶ **District heating**
- ▶ **Small district heating**
- ▶ **Central heating**
- ▶ **Decentralysed heating (flatwise)**
- ▶ **Roomwise heating**

# Heat supply units

## DISTRICT HEATING:

- ▶ Heating plants
- ▶ Co-generation plants
- ▶ Geothermal plants

## BOILERS:

- ▶ Atmospheric boilers
- ▶ Low-temperature boilers
- ▶ Condensing boilers
- ▶ Wood gasifying boilers, wooden-chip boilers

## OTHER HEAT SUPPLY UNITS:

- ▶ Conventional stoves
- ▶ Electric units
- ▶ Heat pumps
- ▶ Solar collectors (flat collectors, vacuum collectors)

## PASSIVE SOLAR SYSTEMS

# Heating networks and emitters

## HEATING NETWORKS:

- ▶ Single-pipe systems
- ▶ Double-pipe systems
- ▶ Flatwise systems

## HEAT EMITTERS

- ▶ Radiators
- ▶ Convectors
- ▶ Radiating heating systems
- ▶ Air heating (with heat recovery)
- ▶ Low-temperature heat emitters (Floor heating, wall heating, thermal active buildings)

## CONTROL AND METERING:

- ▶ Heat cost allocation
- ▶ Flatwise metering, metering of the consumption of a building
- ▶ Central and roomwise control, thermostatic valves,
- ▶ Programmed (intermittent) heating