ANNEX I

Definitions applicable for Annexes II to V

Definitions related to heat pump space heaters and heat pump combination heaters

(19) 'outdoor temperature' (T_j) means the dry bulb outdoor air temperature, expressed in degrees Celsius; the relative humidity may be indicated by a corresponding wet bulb temperature;

(20) 'rated coefficient of performance' (COP_{rated}) or 'rated primary energy ratio' (PER_{rated}) means the declared capacity for heating, expressed in kW, divided by the energy input, expressed in kW in terms of *GCV* and/or in kW in terms of final energy multiplied by *CC*, for heating provided at standard rating conditions;

(21) 'reference design conditions' means the combination of the reference design temperature, the maximum bivalent temperature and the maximum operation limit temperature, as set out in Annex III, Table 4;

(22) 'reference design temperature' (*Tdesignh*) means the outdoor temperature, expressed in degrees Celsius, as set out in Annex III, Table 4, at which the part load ratio is equal to 1;

(23) 'part load ratio' ($pl(T_j)$) means the outdoor temperature minus 16 °C divided by the reference design temperature minus 16 °C;

(24) 'heating season' means a set of operating conditions describing per bin the combination of outdoor temperatures and the number of hours these temperatures occur per season;

(25) 'bin' (bin_j) means a combination of an outdoor temperature and bin hours, as set out in Annex III, Table 5;

(26) 'bin hours' (H_j) means the hours per heating season, expressed in hours per year, at which an outdoor temperature occurs for each bin, as set out in Annex III, Table 5;

(27) 'part load for heating' ($Ph(T_j)$) means the heating load at a specific outdoor temperature, calculated as the design load multiplied by the part load ratio and expressed in kW;

(28) 'seasonal coefficient of performance' (*SCOP*) or 'seasonal primary energy ratio' (*SPER*) is the overall coefficient of performance of a heat pump space heater or heat pump combination heater using electricity or the overall primary energy ratio of a heat pump space heater or heat pump combination heater using fuels, representative of the designated heating season, calculated as the reference annual heating demand divided by the annual energy consumption;

(29) 'reference annual heating demand' (Q_H) means the reference heating demand for a designated heating season, to be used as the basis for calculating *SCOP* or *SPER* and calculated as the product of the design load for heating and the annual equivalent active mode hours, expressed in kWh;

(30) 'annual energy consumption' (Q_{HE}) means the energy consumption required to meet the reference annual heating demand for a designated heating season, expressed in kWh in terms of *GCV* and/or in kWh in terms of the final energy multiplied by *CC*;

(31) 'annual equivalent active mode hours' (H_{HE}) means the assumed annual number of hours a heat pump space heater or heat pump combination heater has to provide the design load for heating to satisfy the reference annual heating demand, expressed in h;

(32) 'active mode coefficient of performance' ($SCOP_{on}$) or 'active mode primary energy ratio' ($SPER_{on}$) means the average coefficient of performance of the heat pump space heater or heat pump combination heater using electricity in active mode, or the average primary energy ratio of the heat pump space heater or heat pump combination heater using fuels in active mode for the designated heating season;

(33) 'supplementary capacity for heating' ($sup(T_j)$) means the rated heat output *Psup* of a supplementary heater that supplements the declared capacity for heating to meet the part load for heating, if the declared capacity for heating is less than the part load for heating, expressed in kW;

(34) 'bin-specific coefficient of performance' ($COPbin(T_j)$) or 'bin-specific primary energy ratio' ($PERbin(T_j)$) means the coefficient of performance of the heat pump space heater or heat pump combination heater using electricity, or primary energy ratio of the heat pump space heater or heat pump combination heater using fuel specific for every bin in a season, derived from the part load for heating, declared capacity for heating and declared coefficient of performance for specified bins and calculated for other bins by interpolation or extrapolation, corrected where necessary by the degradation coefficient;

(35) 'declared capacity for heating' ($Pdh(T_j)$) means the heating capacity a heat pump space heater or heat pump combination heater is able to deliver, for an outdoor temperature, expressed in kW;

(36) 'capacity control' means the ability of a heat pump space heater or heat pump combination heater to change its capacity by changing the volumetric flow rate of at least one of the fluids needed to operate the refrigeration cycle, to be indicated as 'fixed' if the volumetric flow rate cannot be changed or 'variable' if the volumetric flow rate is changed or varied in series of two or more steps;

(37) 'design load for heating' (*Pdesignh*) means the rated heat output (*Prated*) of a heat pump space heater or heat pump combination heater at the reference design temperature, whereby the design load for heating is equal to the part load for heating with outdoor temperature equal to reference design temperature, expressed in kW;

(38) 'declared coefficient of performance' ($COPd(T_j)$) or 'declared primary energy ratio' ($PERd(T_j)$) means the coefficient of performance or primary energy ratio at a limited number of specified bins;

(39) 'bivalent temperature' (T_{biv}) means the outdoor temperature declared by the manufacturer for heating at which the declared capacity for heating equals the part load for heating and below which the declared capacity for heating requires supplementary capacity for heating to meet the part load for heating, expressed in degrees Celsius;

(40) 'operation limit temperature' (*TOL*) means the outdoor temperature declared by the manufacturer for heating, below which the air-to-water heat pump space heater or air-to-water heat pump combination heater will not be able to deliver any heating capacity and the declared capacity for heating is equal to zero, expressed in degrees Celsius;

(41) 'heating water operation limit temperature' (*WTOL*) means the outlet water temperature declared by the manufacturer for heating, above which the heat pump

space heater or heat pump combination heater will not be able to deliver any heating capacity and the declared capacity for heating is equal to zero, expressed in degrees Celsius;

(42) 'cycling interval capacity for heating' (*Pcych*) means the integrated heating capacity over the cycling test interval for heating, expressed in kW;

(43) 'cycling interval efficiency' (*COPcyc* or *PERcyc*) means the average coefficient of performance or average primary energy ratio over the cycling test interval, calculated as the integrated heating capacity over the interval, expressed in kWh, divided by the integrated energy input over that same interval, expressed in kWh in terms of *GCV* and/or in kWh in terms of final energy multiplied by *CC*;

(44) 'degradation coefficient' (*Cdh*) means the measure of efficiency loss due to cycling of heat pump space heaters or heat pump combination heaters; if *Cdh* is not determined by measurement then the default degradation coefficient is *Cdh* = 0,9;

(45) 'active mode' means the condition corresponding to the hours with a heating load for the enclosed space and activated heating function; this condition may involve cycling of the heat pump space heater or heat pump combination heater to reach or maintain a required indoor air temperature;

(46) 'off mode' means a condition in which the heat pump space heater or heat pump combination heater is connected to the mains power source and is not providing any function, including conditions providing only an indication of off mode condition and conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC of the European Parliament and of the Council[(1)];

(47) 'thermostat-off mode' means the condition corresponding to the hours with no heating load and activated heating function, whereby the heating function is switched on but the heat pump space heater or heat pump combination heater is not operational; cycling in active mode is not considered as thermostat-off mode;

(48) 'crankcase heater mode' means the condition in which a heating device is activated to avoid the refrigerant migrating to the compressor so as to limit the refrigerant concentration in oil when the compressor is started;

(49) 'off mode power consumption' (P_{OFF}) means the power consumption of a heat pump space heater or heat pump combination heater in off mode, expressed in kW;

(50) 'thermostat-off mode power consumption' (P_{TO}) means the power consumption of the heat pump space heater or heat pump combination heater while in thermostat-off mode, expressed in kW;

(51) 'crankcase heater mode power consumption' (P_{CK}) means the power consumption of the heat pump space heater or heat pump combination heater while in crankcase heater mode, expressed in kW;

(52) 'low-temperature heat pump' means a heat pump space heater that is specifically designed for low-temperature application, and that cannot deliver heating water with an outlet temperature of 52 °C at an inlet dry (wet) bulb temperature of – 7 °C (– 8 °C) in the reference design conditions for average climate;

(53) ‘low-temperature application’ means an application where the heat pump space heater delivers its declared capacity for heating at an indoor heat exchanger outlet temperature of 35 °C;

(54) ‘medium-temperature application’ means an application where the heat pump space heater or heat pump combination heater delivers its declared capacity for heating at an indoor heat exchanger outlet temperature of 55 °C;

(**1**) OJ L 390, 31.12.2004, p. 24.