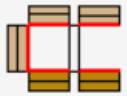
IDA ICE model inputs

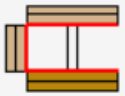
This document describes input values and boundary conditions of the IDA ICE model inputs.

Apartments	**Left**	**Right**
Internal loads		
No. of occupants	1 (Gr. fl.) 2 (1st fl.) 1 (2nd fl.)	1 (all apt.)
Activity	1 MET	
Occupancy	100 % (Gr. fl.) 100 % [17-07] (1st fl.) 100 % [17-07] (2nd fl.)	100 % (all apt.)
Equipment	1 (Gr. fl.) 2 (1st fl.) 1 (2nd fl.)	1 (all apt.)
Shading contr. / window opening	Shading – always up; windows – always closed	
Eq. load	82 W per unit	
Eq. schedule	100 % (Gr. fl.) 100 % [17-07] (1st fl.) 100 % [17-07] (2nd fl.)	100 % (all apt.)
Systems		
Ventilation	20 m^3/h	20 m^3/h
Setpoints	Actual setpoints	
Heating power	99 W/m^2, dT = 5 °C	

Envelope area definition



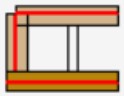
(•) Internal



( ) Overall internal

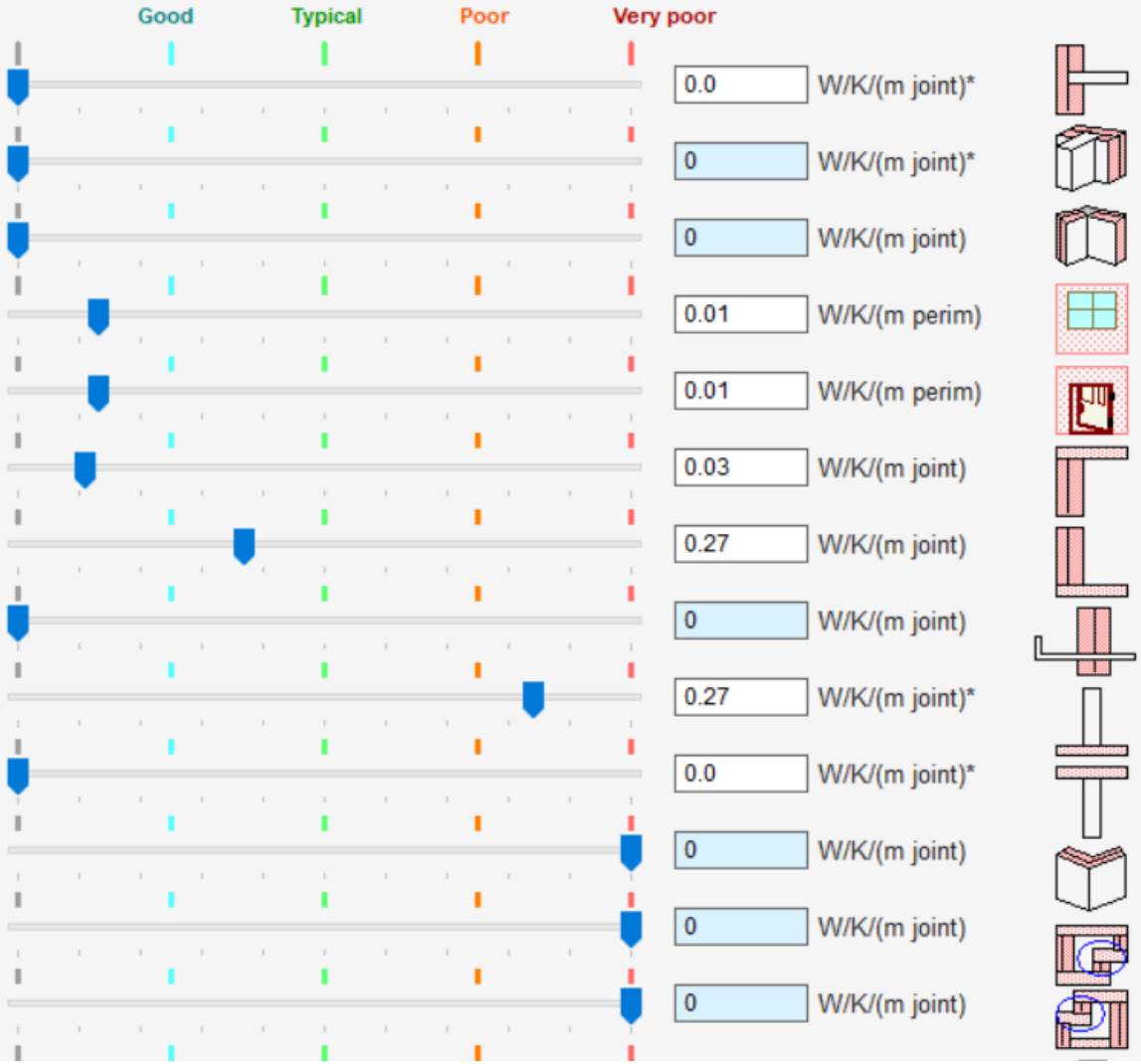
( ) External

( ) External incl. floor slab



( ) Preserve wall volume

Thermal bridges



Infiltration

Method

Infiltration units: L/(s.m2 floor)

Wind driven flow

Air tightness: 1.5 L/(s.m2 floor)

at pressure difference: 50 Pa

Pressure coefficients

Fixed infiltration

Flow: n.a. L/(s.m2 floor)

Zone Distribution

Distribute proportional to: External surface area

Wind driven flow

Air tightness in zones: 1.2285 L/(s.m2 ext. surf.)

at pressure difference: 50 Pa

Fixed infiltration

Fixed flow in zones: n.a. L/(s.m2 ext. surf.)

Extra energy and losses

Domestic hot water use

Average hot water use: 100 L/m2 floor area and year

Distribution of hot water use: © Uniform

[T_DHW = 55°C (incoming 5°C); find further details in Plant and Boiler; DHW can, optionally or additionally, also be defined at the zone level]

[The curve is automatically rescaled to render given average total usage]

Distribution System Losses

Domestic hot water circuit	0.212	W/(m2 floor area)	50 % to zones*
Heat to zones	2.16	% of heat delivered by plant (incl. delivered to ideal heaters)	50 % to zones*
Cold to zones	0.224	W/m2 floor area	50 % to zones*
Supply air duct losses	0.264	W/m2 floor area, at dT_duct _to_zone 7 °C	50 % to zones*

None Good Typical Poor Very poor

[*Share of loss deposited in zones according to floor area]

Plant Losses

Chiller idle consumption: 0 W

Boiler idle consumption: 0 W