

Example of description & warranty, which is part of EACH contract:

C). Achievement list of features, material & work:

- Inclusive all **preparation** in Germany.
- **Material** and all of our **work** is inclusive!
- Inclusive transport, controlling and expenses (*travel expenses, B&B, meals, phone calls, etc.*)!
- The **Wamsler** pellet heating system, radiators, **sanitary** in standard quality is inclusive.
- Inclusive 12m2 **GPO-TEC** solar-system for warm water and heating.
- Much **better** than Irish, European & German low energy standards & requirements.
- Inclusive **HMD** (*Hierarchical-Modular Decoupled/see separate information - patented system*)
- WITHOUT any **load** bearing interior wall changes are no problem (*patented system*)
- Inclusive **breathable** construction *(optimised for Irish climate)* = NO condensation = NO MOULD!
- Inclusive 95% of all exterior screws & nails are out of **Stainless Steel** (V2A)
- Inclusive **high sound-protection**: outside/inside & room/room (*patented system*).
- Inclusive **100% health-protection**/no chemicals inside only ecological performance
- Inclusive **Blower-Door-Test** with **airtight-warranty** /n50-value better than 1,0 & breathable construction
- Inclusive **Thermal-Image-Control** (infra-red)
- **5 years warranty** for everything
- **30 years warranty** for construction and hidden mistakes
- **Health-Care-Warranty**
- Inclusive **'House-Book'** / Manual with image documentation, all plans, all details of house, etc.
- INCLUSIVE **Structural Engineering** & plan for foundation & concrete slab with inputs for all service

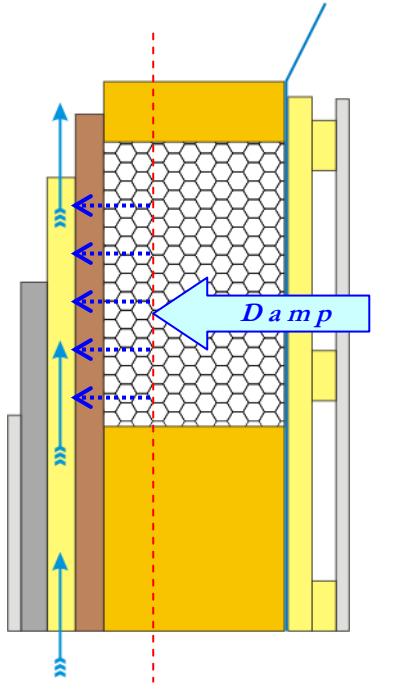
S o l u t i o n i n s t e a d o f c o n f u s i o n !

D). Details

1. BREATHABLE Exterior Wall (from inside to outside)

/ copyright by Phoenix Solution Center Ltd. & Co. KG

- 1.1 12,5mm **fermacell** *TB-Kante* gypsum fibre boards (each single screw with plug can keep up to **50kg**)
 - 1.1.1 with *human-friendly* primer and -cotton-render (= warm surfaces)
 - 1.1.2 or *human-friendly* primer with  plaster effect paint
- 1.2 40mm x 60mm **cross-batten** construction & service area
- 1.3  **PROCLIMA DB+** membrane & airtight system out of acid free and reinforced paper
- 1.4 180mm x 80mm **PHOENIX-Timber-Wall System** (CCS & CCA FREE!) with (best) **timber dove-tail** connections (copyright by POBS) **NO** glue-bounded boards!
- 1.5 180mm **cellulose**-insulation
- 1.6 22mm **rain-tight** soft **wood-fibre-board** (**without** any glue | NO OSB or MDF boards)
- 1.7 40mm x 60mm **counter-batten** (CCS & CCA FREE!) out of German Spruce all nails & screws out of **Stainless Steel (V2A)** with 40mm **background ventilation**
- 1.8 35mm **Heraklith** plasterboards
- 1.9 12-15mm **plaster with reinforcing, 5-8mm render for surface & `silicon-resin`-paint.**



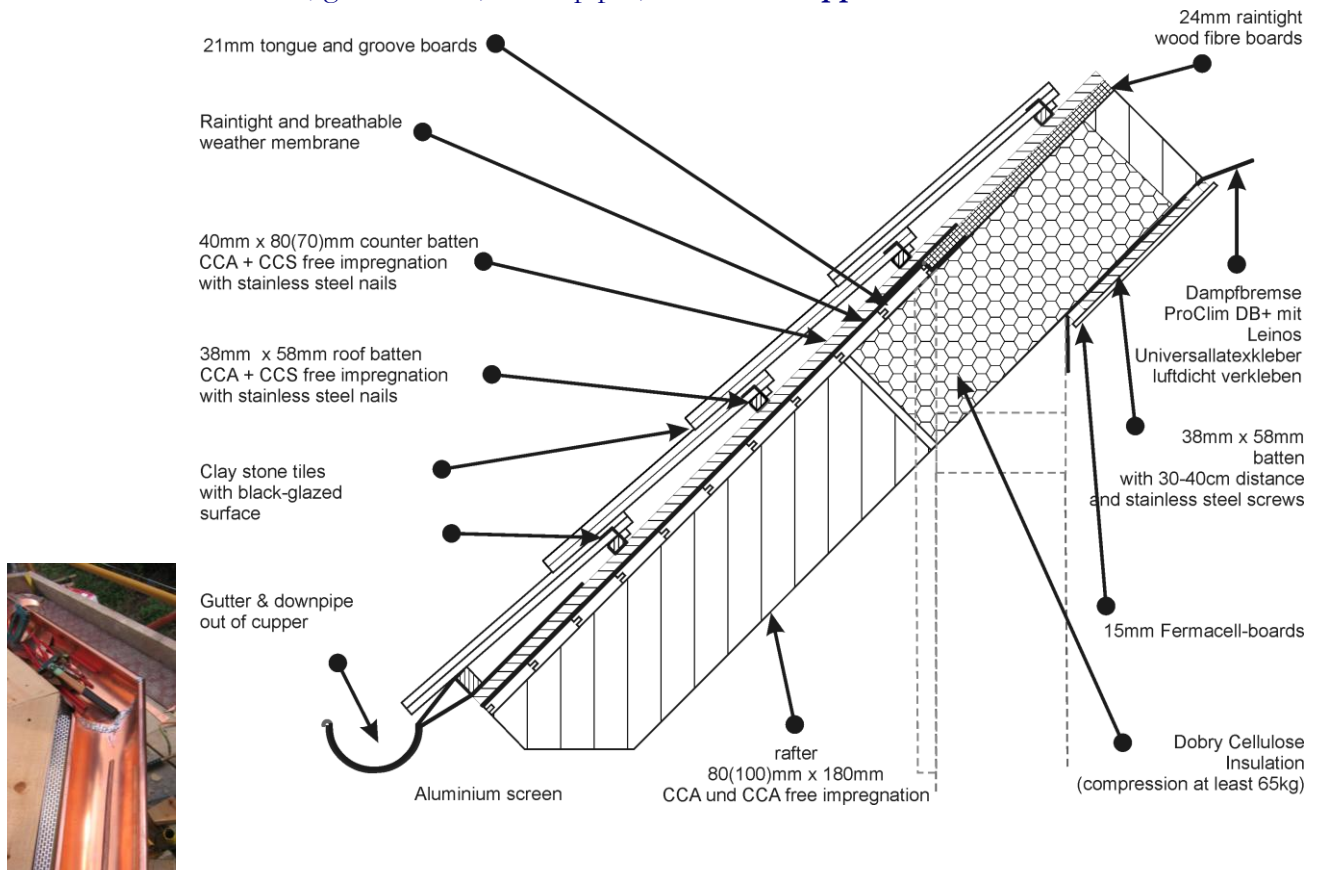
BREATHABLE Timber Construction = Membrane effect as our skin!

- ⇒ from inside to outside more & more diffusion open
- ⇒ Inside, damp is passing the **membrane slowly** into insulation area (on the way to outside)
- ⇒ At the dew-point-area (red line), instead of condensation of damp to micro-drops, the moisture is **absorbed** by high compressed cellulose insulation (=character of solid material / in case of space as by rockwool, glass- & granitwool, sheepwool, hemp, etc. we would have micro-drops as well)
- ⇒ In exterior ventilation area, between soft-wood-fibre-boards (they are without any glue, you can blow through them slowly, but they are still watertight) and plaster-boards, we have **movement** of air from bottom to top **always** (without wind as well)!
- ⇒ This movement of air is causing a small under pressure at surface of soft wood-fibre boards.
- ⇒ This small **under pressure** together with **capillary-effect** is causing a movement of moisture (which is absorbed at dew-point) to outside.
- ⇒ The **roof** construction is the SAME!

Some people may think it sounds like „Mickey Mouse“, but this effect we can see impressively at **trees**. Water is drying out at surface of leaves, which is causing an under-pressure, but strong enough to move water **100m** high and more! Water wells in mountains are based on same natural law. This concept we call **“osmotic pump”** and it is proved since millions of years and, we are sure, it will work for next million of years.

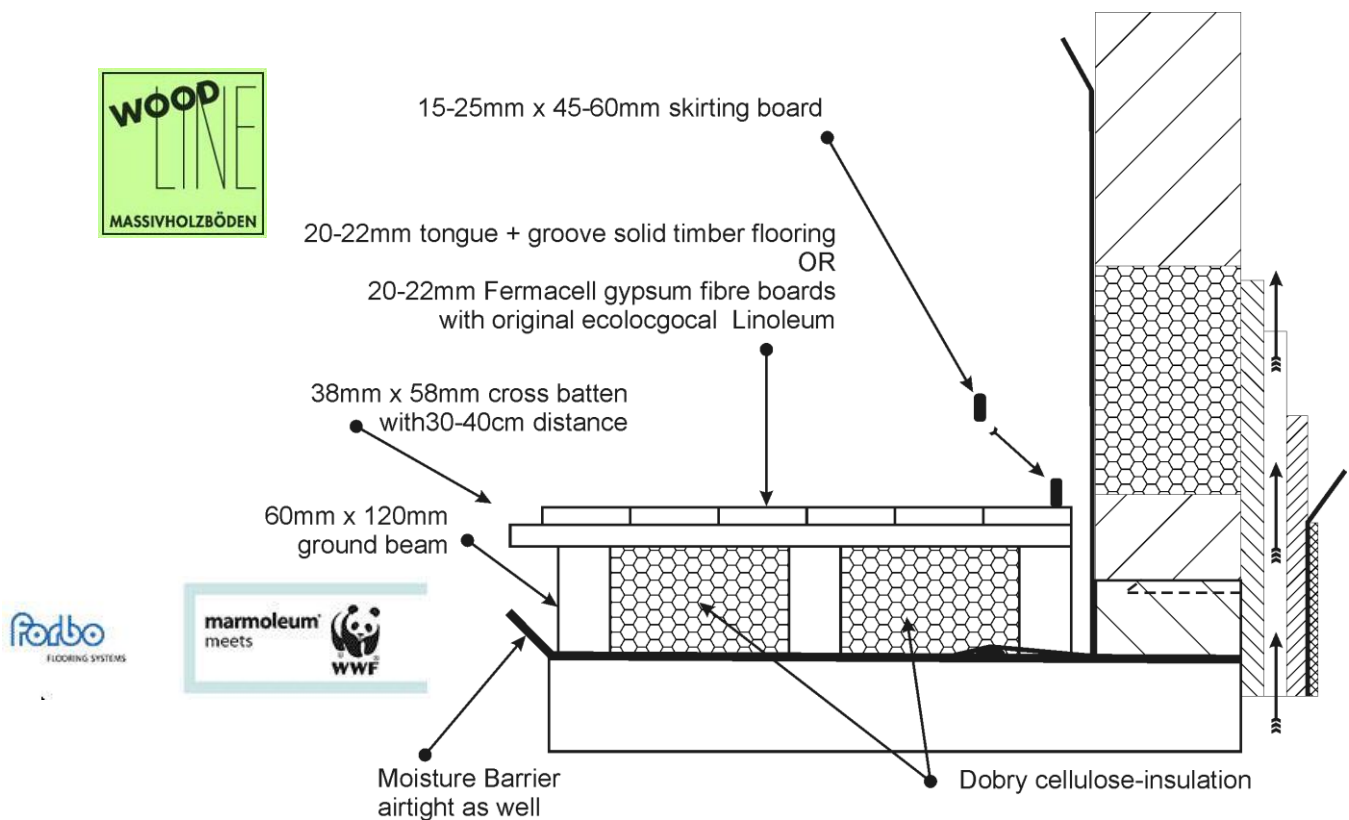
2. Breathable (see p4) Roof-Construction - (from inside to outside)

- 2.1 12,5mm **fermacell** **TB-Kante** gypsum fibre boards (*each single screw with plug can keep up to 50kg*)
 - 2.1.1 with **human-friendly** primer and **FASER MIX** -cotton-render (= *warm surfaces*)
 - 2.1.2 and/or **human-friendly** primer with **LEINOS** plaster effect paint
(*Everything is possible*)
- 2.2 40mm x 60mm **cross-batten** construction & service area
- 2.3 **PROCLIMA DB+ membrane** & airtight system out of acid free and reinforced paper
- 2.4 **220mm x 80mm rafter** (*CCS & CCA FREE!*)
- 2.5 **220mm high compressed** (*60-70kg/ m2*) **cellulose**-insulation
- 2.6 22mm rain-tight wood-fibre-board (*without any glue | NO OSB or MDF boards*)
- 2.7 60mm x 40mm counter-batten (*CCS & CCA FREE!*) out of German Spruce all nails & screws out of **Stainless Steel (V2A)** = 40mm **background ventilation**
- 2.8 50mm x 30mm impregnated roof-batten - all nails/screws are out of **Stainless Steel (V2A)**
- 2.9 **MEINDL Clay Roofing Tiles** with **hot-glazed ceramic surface** (*black is standard, 5 different colours possible*). EACH roof-tile has an extra storm-clip! (*Storm-Warranty up to 180-200km/h!*)
- 2.10 **all sheet-metal, gutter/eaves, down-pipes, etc. out of copper**



3. Floor-construction - ground floor (from bottom to above)

- 3.1 bitumen moisture-barrier
- 3.2 60mm x 100mm ground beams (*CCS & CCA FREE!*)
- 3.3 30-40mm x 50-60mm cross batten
- 3.4 **100-120mm cellulose-insulation**
- 3.5a **20mm solid timber flooring** out of **Sea-Pine** (*tongue & groove*) with timber floor-oil
- 3.5b and dry-pavement with **Forbo Linoleum**/Marmoleum in bathroom, toilet, utility & entrance area.



Inside of floor insulation area is for all services as well. If house is heated up and people are living inside, the floor is always nice & warm (*without underfloor heating*).

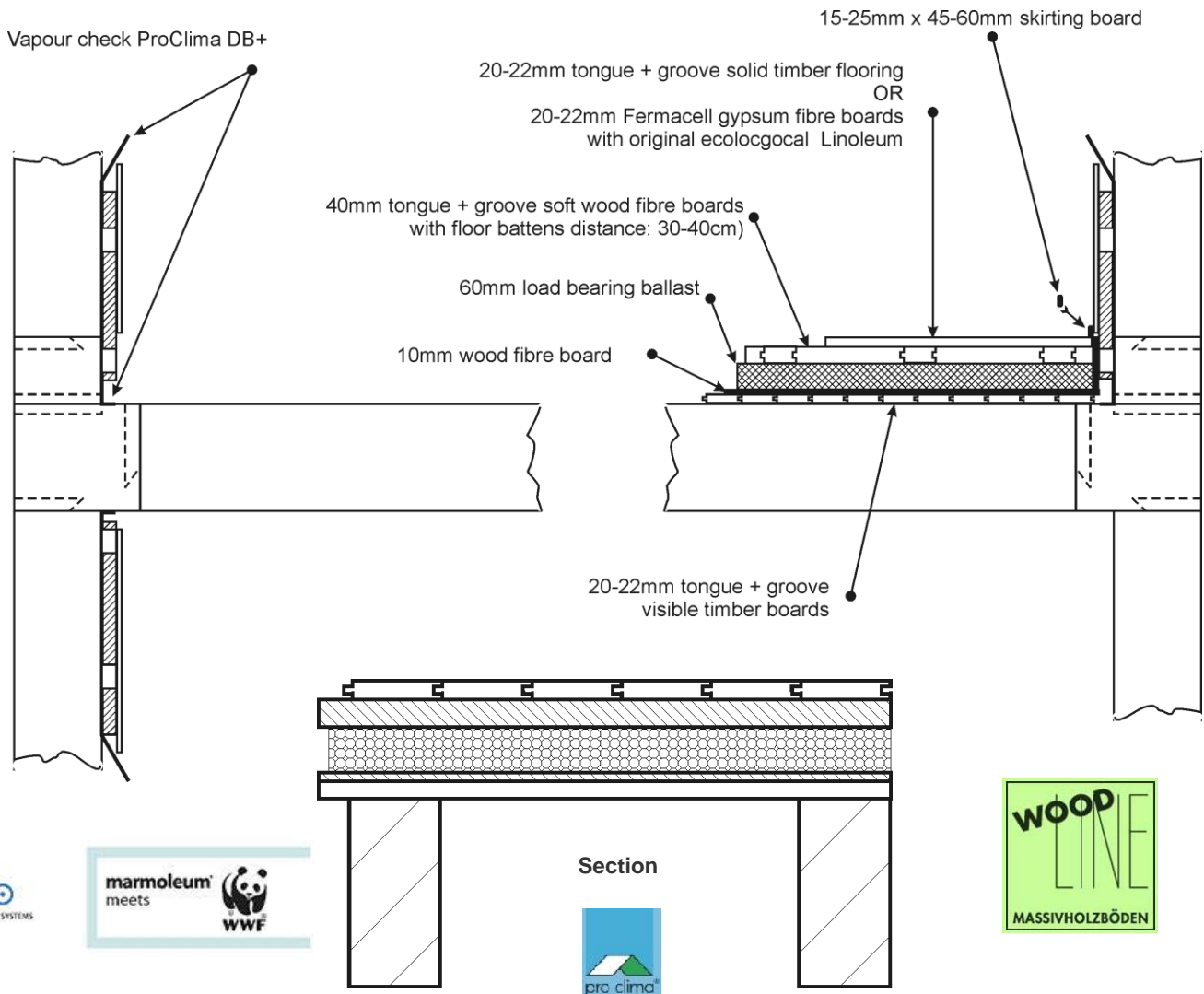
In bathroom (ceiling) only:

- 3.6 ceiling with 12,5mm **fermacell TB-Kante** gypsum fibre boards, airtight assembly and painted with **Leinos** plaster effect paint
- 3.7 **ProClima DB+** membrane out of acid-free paper reinforced with cellulose insulation




4. Ceiling-construction / floor construction - 1st floor (from bottom to above)

- 4.1 Ground floor with visible ceiling beams (*non-treated*)
- 4.2 **20mm** tongue & groove boards (*non-treated*)
- 4.3 special paper to stop dust
- 4.4 **10mm** soft wood fibre boards
- 4.5 **50-60mm** dry gravel compressed
- 4.6 **40mm** soft wood fibre boards with timber batten
- 4.7 **20mm solid timber flooring** out of Sea-Pine (*tongue & groove*) with timber floor-oil.
- 4.8 and dry-pavement with **Forbo Linoleum**/Marmoleum in bathroom.
- 4.9 All rooms at first floor are **open** up to the roof.

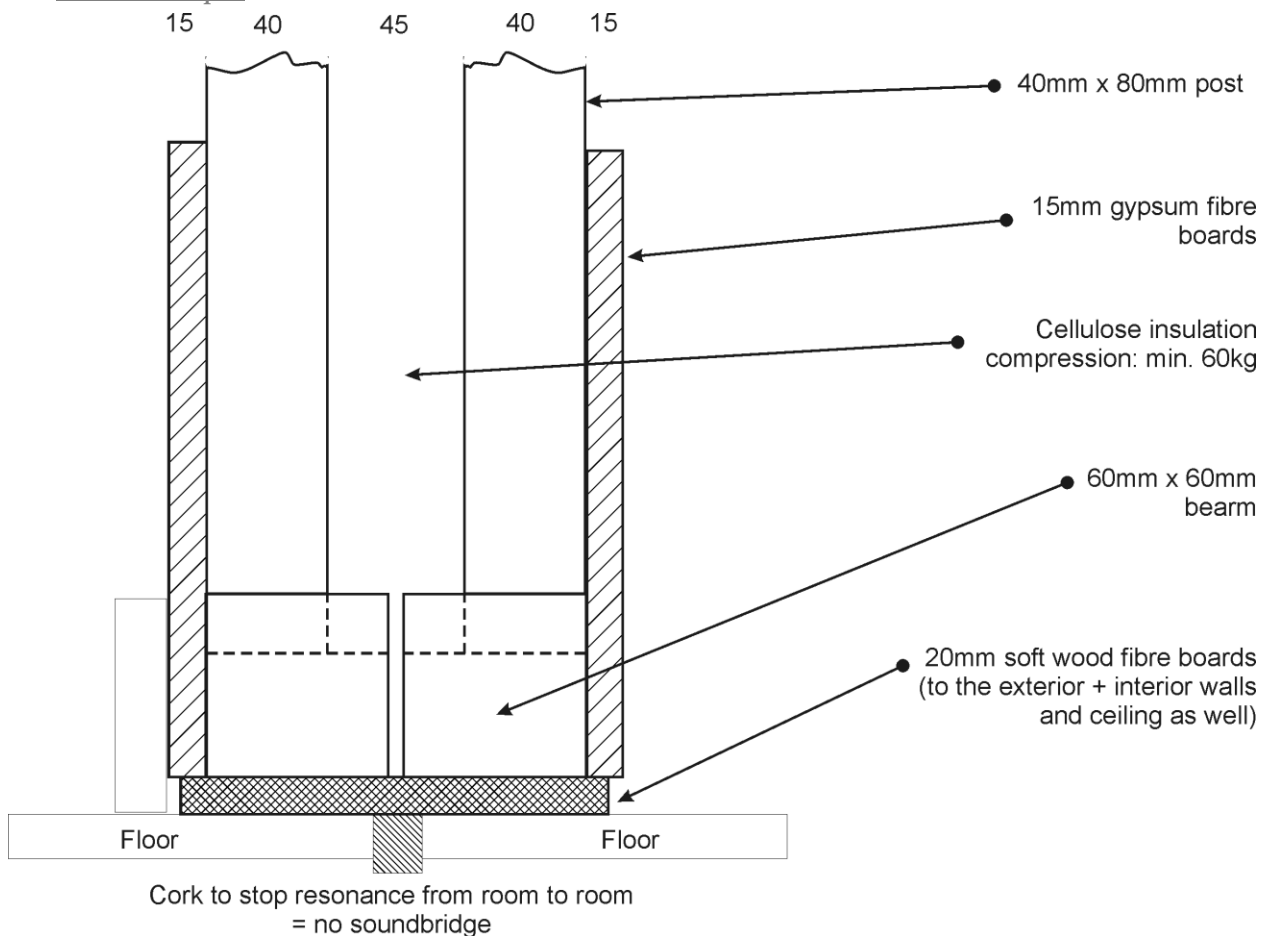


5. Construction of interior-walls (*HMD/copyright & patents system by POBS*)

Not load bearing! Future changes are easy! High sound protection!

- 5.1 **12,5mm fermacell** gypsum fibre boards (*each single screw with plug can keep up to 50kg*)
 - 5.1a.1 with *human-friendly* primer **FASER MIX**-cotton-render (= *warm surfaces*)
 - 5.1a.2 or *human-friendly* primer with **Leinos** plaster effect paint
 - 5.1a.3 bathroom and toilet: *ecological* primer and 2/3 tiles and 1/3 **Leinos** plaster effect paint
 - 5.1a.4 kitchen & living room: *ecological* primer and **maxit airfresh-render** (*white | see information about material*) and/or **Leinos** paint and/or **Fasermix** cotton-render.
- 5.2 55mm x 75mm **post-beam** construction (*total thickness of interior regular walls: 140mm*) 
- 5.3 insulated with **cellulose**-insulation
- 5.4 all floor-, ceiling- and wall-shoulders are **decoupled by HMD**

Similar example:



Copyright, patent, etc. by Phoenix Solutions Center Ltd. & Co. KG

6. Windows and doors in exterior walls *(made in Germany)*

- 6.1 front-door out of solid **larch** with glass and **3-point-closing** and **locking-system** with **Leinos** natural varnish



- 6.2 **all** windows: regular **and** tilt opening/ windows with special outline are **fix**

- 6.3 **all** windows out of solid **larch** with **all-around-closing** mechanism and **Leinos** natural varnish



- 6.4 inside intrados/sill and window-board out of solid **larch** with **Leinos** natural varnish or oil

- 6.5 outside intrados/sills out of plasterboards, plaster + silicate paint and window-board out of aluminium.

7. More details

- 7.1 **incl. 1 METALLTEC** double skin stainless-steel-flue-pipes solid German laser-melted quality!
(Can be covered with masonry, etc.).

- 7.2 **incl. all** electricity, light, TV, network (cable: CAT7), communication & smoke-alarm

- nearly **each** light and (**double**) socket gets an **own** fuse/breaker.

- **Advantages:**

- In case of producing own electricity with photovoltaic-system (*electricity from sun*), wind-power, biogas, wood gas, etc. it is very easy to change a special/**single** (**double**) socket or light circulation (*everything you like*) to **LOW ENERGY (24V)**.
- Together with an **OPTIONAL** (*not inclusive*) electrical **Back-Up system** for **Power-Break**, which is based on 2x High Performance Gel-Accu (*loaded by charger from socket*) we can realize a **very high standard** of **independence, comfort** and **security**.

- You also can **update** complete electrical system with **BUS** system, to realize all time you like an **intelligent house**
- **CAT7 wiring! Security System** with all kind of data transfer to **mobile** and/or **internet**
 - All rooms with network & **phone** sockets done with **CAT7** wires (*without bathroom & toilet, bus station and network distributor*)
 - **Inter-Com** by phones possible
 - **Door-Bell-System** with **CAT7** wires and connected to **phone** system

Please NOTE again: The connection of main wire from ESB-box to the grid and Eircom/SAT main connection are NOT inclusive. The client/his Eng.or Arch. has to take care for it. The temporary pole station with 3x 220V need to be very near to future position of final ESB box at house wall.

7.3 **incl. 1,000 litre hot water buffer level storage tank**

with 3 stainless steel coils/heat exchanger:

- 1 for freshwater,
- 2 for solar &
- 1 extra circulation for burner & radiator



WIKOSOL
HOCHLEISTUNGS
SPEICHER



7.4 **incl. all sanitary facilities** for bathroom & toilet in good standard quality NO designer-ware. There is a wide range of selection possible but the range of cost is given by POBS.

Basins, toilets, shower walls are out of special with security glass a, bidet, modern acrylic bath, good quality taps and tiles, special bathroom radiator, etc. ready for living (*without boards, towels, toilet paper, etc.*) | **INCLUSIVE** nice **Walk-In Shower** in 1 Bathroom!

7.5 **incl.** good quality standard radiators (*white*)

7.6 **incl.** good quality radiators & special bathroom-radiators

7.7 **incl.** 1 high quality **WAMSLER**  **pellet-stove-system** for central heating and warm water plus 1 palette of pellets (*please note: automatic feed for pellets is possible -> see update*).

incl. 1 high quality automatic **14,9kw pellet-boiler-system** for central heating and warm water with 1t of **FIRESTIXX** pellets with German/Austrian certification

7.8 **incl. 6 high quality**  **solar-panels** for **central heating** as well and **PVC-Free**, high insulated **Stainless Steel** pipe to hot-water-storage-tank.



7.9 **incl. German**  **roof-light windows**

7.10 **incl.** non-treated **timber indoors** with profile & **rubber-sealing** (*German-standard, out of spruce or pine*)

7.11 **incl.** solid timber German staircase out of solid beech with good solid standard railing

7.12 **incl.** balustrade (*timber*) of gallery/void in staircase railing style



Made in Germany

7.13 The quotation is **incl. transport.**

7.14 **incl. Storm-warranty** up to 180km/h

7.13 **incl. Blower-Door-Test (BDT)**

7.14 **incl. Thermal-Image-Control (TIC)** with infrared

7.15 **incl. Health-Care Warranty** | For more warranty please see page 15 & 16

More details

you can download it at: www.project-oecotop.com/005_download.htm

Features

Comments:

- Without any groundwork, foundation, scaffold, crane hire, etc. & without kitchen and lamps. This light fitting we can do also, but this need to be paid extra with 55.-
- Since June 2007 we can offer TOXIC-FREE, individual, high quality, super-solid kitchens with best appliances and extraordinary furniture made in Germany as well (*made by Wolfgang Weber Holzwerkstatt*). If you compare the Irish quotes with the German, the German are most time up to 40-60% cheaper for the same!
- We X C work with slates. If you like to have slates it most be arranged by your engineer. We only give total warranty for the tile system we trust & recommend.

NEW standards inclusive:

- **Inclusive Control System for Heating-Control with Remote Control Service**
The control-system for heating and hot water can be checked and set up from Germany.. If phone-line connected and internet is installed, 99.9% of all service & settings can be done from Germany day & night. We can check & make nearly all changes at your heating & solar system.
- **Inclusive Ready4Online**
All CAT 7 network wires in utility are connected into a CAT 6 Patch Panel. With this you only need to connect it direct to your Router or switch panel / Server and you are online.
- **Inclusive Gate- & Door-2-Phone Communication System**
This is a very nice solution as well, because if somebody is ringing at your gate or front door, your regular landline phone is ringing (with special sound). So you can talk to the person in front of gate or front door by phone. By pushing a number you can open the gate or front door or switching light on.
You also can redirect it to your neighbour or **to your mobile**. This is **very handy** if you are at work or in holiday. Everywhere with coverage for your mobile, you can talk with person who is in front of your house..
- **Inclusive all wiring for exterior AND interior CCTV-Security System**
- **Inclusive all wiring for Audio/Speaker System (*all rooms*)**
- **RECI Certification inclusive!**
- **BERBEL kitchen extractor system for passive houses!**
This system is a absolute professional kitchen solution and the best we ever seen before. Instead of blowing out 500-800 m3 air per HOUR, this system is cleaning & keeping the air inside the house. It is easy to clean and a long intervall of maintenance.



www.berbel.de (English section)

- **SPECIAL Discount** in case you like a **PHOENIX Kitchen made by 'Wolfgang Weber'**
- **Last not least: Inclusive VOICE Control & Data Storage (www.amuletdevices.com)**
For all **multimedia** (*images, music, videos, TV*), internet, email, computer and **LIGHT**(!).



S e r v i c e

1. - **DVD.** This is a book with all information about your house:
 - 1.1 all **plans**
 - 1.2 all **construction** details
 - 1.3 plans with **all pipes** of heating, fresh- & waste-water, electricity, network, phone, etc.
 - 1.4 **details** about the colours and finishing
 - 1.5 manual for **checking** the house
 - 1.6 certification of the need of **primary energy** for heating & hot water
 - 1.7 certification of **‘Blower-Door-Test’/BWT**
 - 1.8 certification of **‘Thermal-Image-Control’/TIC**
 - 1.9 **manuals** of the heating and solar system
 - 1.10 **tips** for cleaning, etc.
 - 1.11 and **more**
2. The whole work (*preparation work in Germany as well*) will be documented by digital images in - **DVD.**
3. **5 years: once/twice per year** one of our specialists is coming and **checking** the house completely.
4. **10 years:** 24 hour emergency call back service
 - For private clients: the service from 1.-4. is always **FREE (inclusive)**.

S e r v i c e | U p g r a d e

for private customer only

1. 5th-10th year: once per year one of our specialists is coming and checking your house.
2. 10th-20th year: all 2 years one of our specialists is coming and checking your house.

The customer like to have the ‘Service-Upgrade’:

The ‘Service-Upgrade’ costs (*incl. VAT*): ×

St. Georgen (*Germany*), of

.....
(Customer)





W a r r a n t y

for all 'Project OECOTOP' houses!

*All contracts are made in Germany. They based on German law.
Place of jurisdiction is 78048 Villingen-Schwenningen & Konstanz (Germany).*

Health-Care-Warranty

In case of right use of the house, **NO** healthy person is getting **sick** by construction, materials & components of our *Project Oecotop Homes of Health*.

If someone has **allergy** or anything else and we know it (*before we make you a quotation*), than we give **warranty** for **NO pain/sickness** caused by our houses or materials we used.

Warranty based on German law

In Germany quality and warranty for every kind of building is determined and regulated by DIN and German **law**!

➤ **DIN**

German Institute for standardization e.V. (reference number DIN) with place in Berlin the national standardization organization is in Germany. The association develops technical standards (standards) in co-operation with trade, industry, science, consumers and authorities for the rationalization and quality assurance. DIN represents the German interests in the standard international standards (ISO, International Electronic Commission, CEN).
Determination of quality!

➤ **VOB**

is the contracting regulation for building works and supplies. The guarantee after VOB amounts to 4 years.

Warranty: **4 years** for everything!

30 YEARS for **CONSTRUCTION** and **hidden mistakes!**

➤ Warranty by German **manufacturer** (*examples*):

10 | 15 years: windows, doors, air-

50 years: pipes for freshwater and heating (*Aquatherm SHT-System*)

& More

The warranty of all 'Project OECOTOP' houses based on manufacturer warranty, DIN, ISO, EUS & VOB.

The standard of all 'Project OECOTOP' is much better than postulated by European Energy Standard, DIN + ENEC. (*See German magazines of German FRAUNHOFER institutes and more at www.projekt-oecotop.de*)

