

**zehnder**

always the  
best climate

Always the best climate for

# SAFE INSTALLATION

Zehnder air distribution systems: Always the right solution

# Zehnder can meet all your residential ventilation needs: Perfectly planned, perfectly installed – for maximum customer satisfaction

Anyone purchasing a comfort ventilation system wants one thing above all else: fresh air at all times, without having to worry about the details. This requires a system that works. We can meet this need with expert planning and installation and a complete modular system consisting of ventilation unit and air distribution. With Zehnder, you benefit from decades of experience and a uniquely comprehensive product portfolio. You can be assured of best possible planning, fastest possible installation and maximum functionality. This will make your work significantly easier and your customers can be assured of a reliable system with a long service life.





## Zehnder stands for perfect installation without compromise

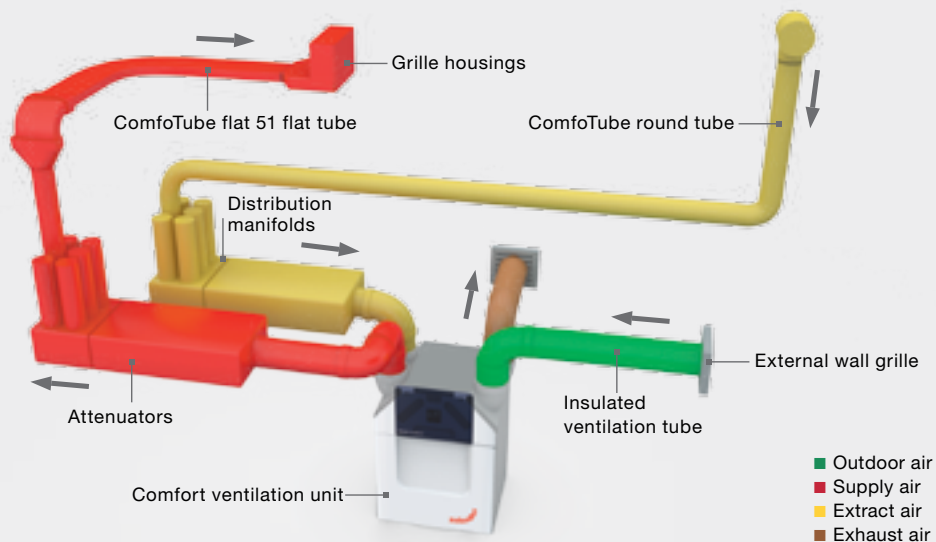
- **Flexible installation in every situation:** to cope with varying installation conditions, you need flexible products – in particular where air distribution, which accounts for 90% of the components, is concerned. Zehnder offers a full modular product portfolio and multifunctional products which are ideal to install and have been tried and tested in practical applications. For you, this means always having the right products on site and the flexibility to install them providing the best fit for prevailing conditions.
- **Quick and easy installation:** because time is money, you need a system that is quick and easy to install. Zehnder products and systems for comfortable indoor ventilation are self-explanatory. You won't have to spend time reading complex installation instructions and carrying out time-consuming tasks. You'll save time during installation which you can then invest in other projects in order to gain maximum benefit.
- **Complete systems that work perfectly:** you have to be able to rely on the equipment functioning correctly so that errors can be avoided during planning and dimensioning. Zehnder supports you by creating tailor-made ventilation concepts including a proposal for installing the air distribution.
- **Safety:** you need to install systems that will function perfectly even after decades of operation. All of the components, in particular the air distribution, must be durable and capable of withstanding exposure to all manners of stress. Zehnder can ensure top quality components due to high internal quality standards to meet the requirements of our customers for a safe and reliable use of our system.
- **At your side at all stages of the build:** to avoid potential follow-up costs, installation must be completed with zero errors and in compliance with standards. Zehnder will be at your side at all stages of the build, from individual planning through instructions for work being carried out on site and beyond to commissioning and maintenance.

# A ventilation system is only as good as its air distribution system

Even the best ventilation unit can only work at full capacity if it is connected to a suitable air distribution system. Zehnder products for air distribution are of high quality and clever in terms of their design and function, as well as being able to stand up to any installation situation. As the “veins” of the comfortable indoor ventilation system, Zehnder ComfoFresh air distribution can be relied upon to exchange fresh air and used air, providing a holistically powerful and efficient ventilation system.



## Zehnder ComfoFresh air distribution system



Air distribution system with round tube and flat tube combined



## Checklist: What to consider in the context of air distribution

- Space requirement:** a space-saving installation of the air distribution system takes up as little living space as possible and saves space for other technology. Zehnder has developed clever products for this purpose: Zehnder ComfoWell, the modular system for attenuators, filters and distribution manifolds, takes up very little installation space, for example. A cross-piece enables pipes to be crossed without taking up additional space. The height remains at just 50 mm instead of 120 mm.
- Planning & installation:** unlike many providers, Zehnder will plan and lay out the complete ventilation system with a view to achieving optimum energy efficiency and best possible sound values at every stage. As a result of products that are optimised for installation and self-explanatory, installation overheads can be kept relatively low, saving you valuable time and your customer money.
- Attenuation:** Zehnder ventilation units deliver very good sound values as standard. They are achieved with the assistance of a well-matched air distribution system. Sound values during operation are reduced still further by optimum installation and the selection of the right components (e.g. attenuators). Zehnder ComfoTube ventilation tubes, for example, feature Clinside smooth inner skin to reduce air resistance. The unit can be operated at a lower setting and sound is reduced to a minimum.
- Comfort & health:** good ventilation systems are easy to use, quiet during operation and never cause draughts. A system for comfortable indoor ventilation from Zehnder meets all of these requirements for user comfort and convenience.
- Maintenance & hygiene:** Zehnder makes sure that the products arrive on site in a hygienically flawless condition. The grille housings, for example, have cover caps that are not removed until after installation is complete. This ensures that dirt from the site cannot get into the tubes. Furthermore, all relevant parts feature inspection openings which make it easy to carry out checks. The ventilation system will thus remain hygienically flawless for many years to come.
- Design:** although ventilation units are usually positioned in cellars, in addition to the control panel there are also outlets for supply air and extract air in the living areas. Zehnder designer grilles in various models discreetly conceal these outlets, blending in perfectly with the décor of the living space.

# Proven a thousand times over: Zehnder air distribution systems in practice

Decades of experience in the development and production of comfortable indoor ventilation along with thousands of Zehnder products sold and put into operation testify to the high quality and functionality of our air distribution systems.

Representative of numerous solutions from practical applications, the five example systems below illustrate the installation of Zehnder air distribution systems and the products used in and for them.



Example system 1



## Large house featuring cutting edge design

Page 8

**Building data:** single-family home, 220m<sup>2</sup>, new build  
**Comfort ventilation unit:** Zehnder ComfoAir Q450 with Zehnder ComfoFond-L Q sub-soil heat exchanger  
**Air distribution system:** Zehnder ComfoTube 90 round tube with Zehnder ComfoTube flat 51 flat tube combined  
**Unit installed in:** cellar  
**Type of installation:** riser pipes in wall, further distribution on concrete floor, Zehnder ComfoWell distribution manifolds and attenuators

Example system 2



## Compact single-family home for young families

Page 12

**Building data:** single-family home, 140m<sup>2</sup>, new build  
**Comfort ventilation unit:** Zehnder ComfoAir Q350  
**Air distribution system:** Zehnder ComfoTube 75 round tube  
**Unit installed in:** utility room  
**Type of installation:** in bare floor (concrete), Zehnder ComfoWell distribution manifolds and attenuators

Example system 3



## Large accessible bungalow

Page 16

**Building data:** bungalow, 180m<sup>2</sup>, new build  
**Comfort ventilation unit:** Novus 300, horizontal  
**Air distribution system:** Zehnder ComfoTube 90 round tube  
**Unit installed in:** loft  
**Installation:** on the floor of the loft, attenuators, module manifolds

Example system 4



## Clever modernisation of an existing apartment

Page 20

**Building data:** apartment, 80m<sup>2</sup>, renovation  
**Comfort ventilation unit:** Zehnder ComfoAir 180  
**Air distribution system:** Zehnder ComfoTube flat 51 flat tube  
**Unit installed in:** kitchen cabinet  
**Type of installation:** in suspended ceiling, attenuators, 4x flat 51 distribution manifolds

Example system 5



## Simple system for a standard apartment

Page 24

**Building data:** apartment, 70m<sup>2</sup>, renovation  
**Comfort ventilation unit:** Climos 200, installation in suspended ceiling  
**Air distribution system:** Zehnder ComfoTube 75 round tube  
**Unit installed in:** bathroom, suspended ceiling  
**Type of installation:** in bare floor (concrete), Zehnder ComfoWell distribution manifolds and attenuators

## Example system 1

# Large house featuring cutting edge design

1



### Hygienic and reliable in operation

**Zehnder ComfoVent façade system:** sucks in outdoor air in compliance with standards 1 m above ground. For clean, radon-free outdoor air and maximum hygiene. No building work has to be carried out inside the building, leaving more space for other technology.

2



### More efficient, quieter and more intelligent

**Zehnder ComfoAir Q450 comfort ventilation unit:** the new generation of ventilation units – efficient heat exchanger for maximum energy efficiency, innovative air volume balancing for maximum heat recovery, the very latest ventilator technology for quiet and energy-saving operation.

3



### The cleanest attenuator

**Zehnder ComfoWell system:** modular system consisting of any combination of attenuators, filters and distribution manifolds, each available in three widths. Combined attenuator/distribution manifold needs only 75 cm of space and can fit into 55 cm if necessary. The only attenuator on the market which can be cleaned.

4



### Flexible for extension in any direction

**Junction round tube to flat tube:** can be rotated through 360°. Can be installed anywhere without fixed outgoing direction and keeps space requirement low in riser pipe or shaft.

5



### Exactly to your taste

**Zehnder designer grilles:** discreet design for a harmonious overall appearance, available in white or stainless steel, round or angular. The designer grilles are connected to the air distribution with the CLF and CLRF grille housings for fresh air without draughts.





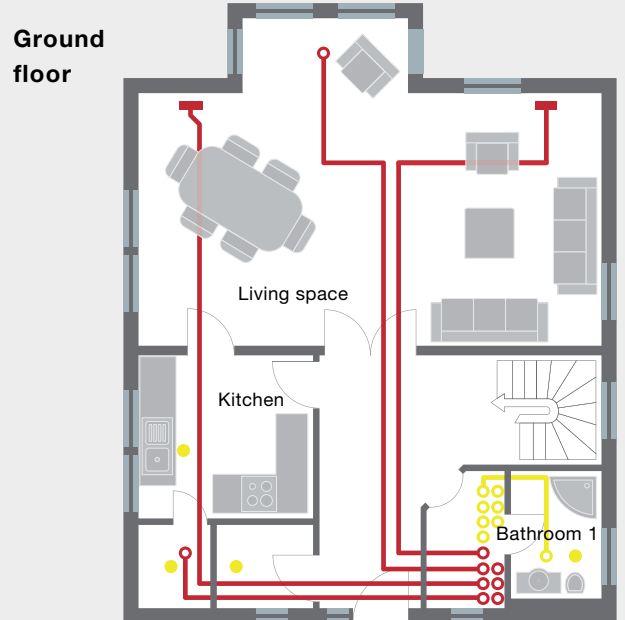
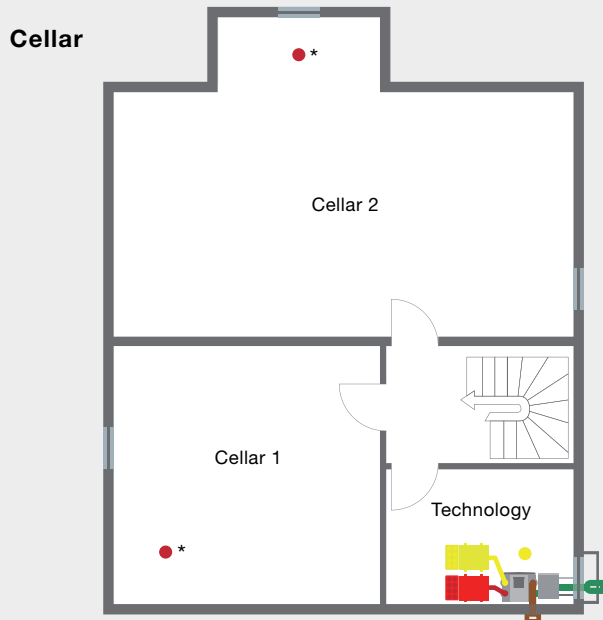
**Single-family home, 220 m<sup>2</sup>, new build.**

Zehnder also offers solutions that are suitable for large properties with many rooms and installation on multiple levels. As a result of distribution manifolds with a variable number of connectors, up to twelve pipes can run off from a single distribution manifold. Round tubes ensure that risers lose little pressure and

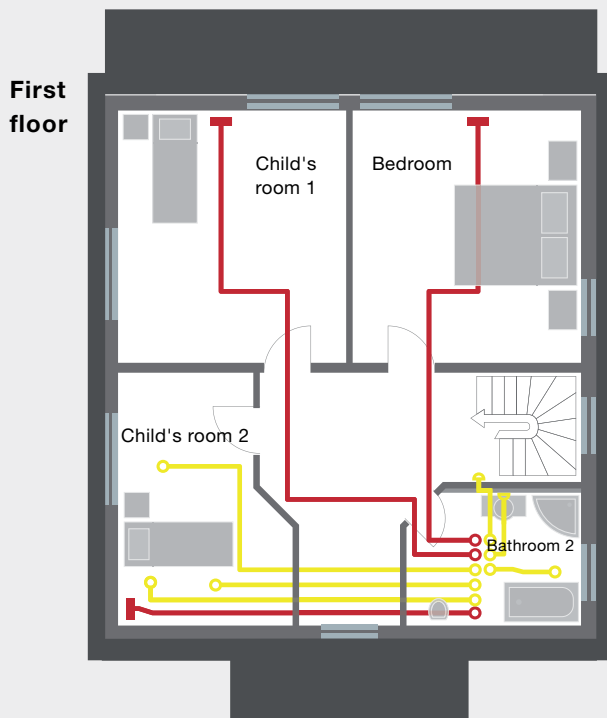
are flexible. Horizontal installation with flat tubes takes up little space and is flexible due to a large number of moulded parts. The layout of the pipes and the positioning of the outlets are also compact and flexible. The ventilation unit and attractive designer grilles meet the clients' requirement for a cutting edge design.



# Example system 1 – Plan



\*Note: Cellars are inside the thermal building fabric and are heated.



Note: Plans shown are not to scale

## Example system 1 – List of materials

Item	Article no.	Description	Quantity	Unit price in €	Total in €
<b>Ventilation unit with accessories</b>					
1	471 502 112	ComfoAir Q450 TR comfort ventilation unit, energy efficiency class A+*	1	3,349.00	3,349.00
2	400 502 007	Pre-heater for ComfoAir Q	1	300.00	300.00
3	990 201 330	Dry siphon 5/4" for ComfoAir Q	2	45.70	91.40
4	990 328 704	ComfoPipe Plus adapter for ComfoAir Q350/450 TR, DN 160, contains 2 adapters	1	42.20	42.20
5	471 310 083	ComfoFond-L Q TR sub-soil heat exchanger, right	1	1,775.00	1,775.00
6	990 328 750	ComfoPipe Plus connector set for ComfoFond-L Q TR	1	52.70	52.70
<b>Air distribution</b>					
<b>Tubes for outdoor air and exhaust air</b>					
7	990 328 701	ComfoPipe Plus elbow, DN 160, 45 degrees, D = 246/160	6	20.60	123.60
8	990 328 700	ComfoPipe Plus tube, DN 160, L = 1000 mm, D = 246/160	2	47.50	95.00
9	990 328 702	ComfoPipe Plus straight connector, DN 160, D = 277/246	1	17.00	17.00
<b>Tubes for supply air and extract air</b>					
10	990 328 632	ComfoPipe elbow, DN 160, 45 degrees, D = 190/160	1	20.00	20.00
11	990 328 633	ComfoPipe elbow, DN 160, 90 degrees, D = 190/160	2	26.00	52.00
12	990 328 631	ComfoPipe tube, DN 160, L = 1000 mm, D = 190/160	2	34.00	68.00
<b>Attenuators/Distribution manifolds</b>					
13	990 323 504	ComfoWell attenuator CW-S 420	2	170.00	340.00
14	990 323 620	ComfoWell manifold box CW-D 420	2	136.00	272.00
15	990 323 622	ComfoWell mounting plate CW-M 420, 8 x DN 90/P	2	85.80	171.60
16	990 323 627	ComfoWell end plate CW-P 420, DN 160	2	50.50	101.00
<b>Pipes/Moulded parts</b>					
17	990 328 009 X	ComfoTube 90 round tube, 1 m	30	5.82	174.60
18	990 328 363 X	O-ring seal, DN 90, 1 seal	16	2.27	36.32
19	990 328 063 X	ComfoTube flat 51 flat tube, 1 m	120	12.94	1,552.80
20	990 322 015	ComfoSet flat 51 air flow regulator	4	17.20	68.80
21	990 322 016 X	flat 51 adjustable wall bracket, 1 bracket	120	3.28	393.60
22	990 322 014	flat 51 straight connector	4	12.50	50.00
23	990 322 012	flat 51 H elbow, 90 degrees, horizontal	21	18.70	392.70
24	990 322 011	flat 51 V elbow, 90 degrees, vertical	2	17.20	34.40
25	990 328 252 X	flat 51 end cap, 1 cap	11	4.86	53.46
26	990 322 046	Junction 90 to flat 51, 90-degree elbow	14	15.30	214.20
<b>Vents/Designer grilles/Valves</b>					
27	990 322 060	CLRF grille housing, DN 125, flat 51 side	9	39.00	351.00
28	990 322 000	CLF grille housing, flat 51	5	39.20	196.00
29	990 322 095	Cross-bracing floor insert for CLF designer grille	5	11.30	56.50
30	990 322 087	Venezia designer grille, CLF, stainless steel, 350 x 130 mm	5	48.10	240.50
31	705 512 592	Supply air valve STH 1-125, DN 125, 156 mm	2	27.30	54.60
32	990 320 780	Venezia designer grille, CLRF/TVA, stainless steel, D = 160 mm	7	35.50	248.50
<b>Outdoor air connection</b>					
33	990 430 733	ComfoVent 150 system 1, above ground level	1	562.00	562.00
34	990 430 725	ComfoVent 150 junction to plastic tube, DN 150/160	1	95.30	95.30
35	990 430 584	External wall grille, DN 160, up to 350 m³/h	1	75.60	75.60
<b>Optional</b>					
37	655 011 100	ComfoConnect LAN C for app control and web portal	1	195.00	optional
				<b>Total</b>	<b>11,721.38</b>

**Note:** All article numbers marked "X" correspond to the estimated requirements for this property. When ordering, please note the corresponding delivery sizes / packaging units. All articles are exclusive of installation and VAT. Valid as of: 2016 price list

\*Depending on the control unit/sensor technology chosen. For detailed information, visit [international.zehnder-systems.com](http://international.zehnder-systems.com)

# Compact single-family home for young families



1

## Quick and easy installation

**Zehnder ComfoAir Q350 comfort ventilation unit:** three steps to a perfectly matched ventilation system with the commissioning wizard. As the connections can be changed, it will always be possible to have the right unit on site. User-friendly operating concepts, from a simple switch to an app, are available to your customers.



2

## Neat tubes, neat installation

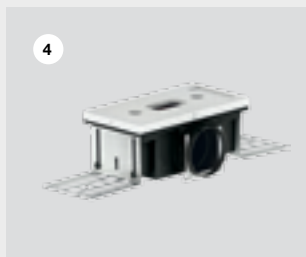
**Concrete mounting plate:** no pipes are visible in the space in which the equipment is installed. Clean installation means that none of the components will cause contamination. No additional overheads for additional lining.



3

## Practically everything covered

**TVA-P grille housing:** hygienic as a result of being delivered fully sealed with protection plugs. This prevents contamination during construction (the valve is not connected until final assembly). Housing is suitable for lightweight and solid constructions. Available for ComfoTube 75 or 90.



4

## Compact and adaptable

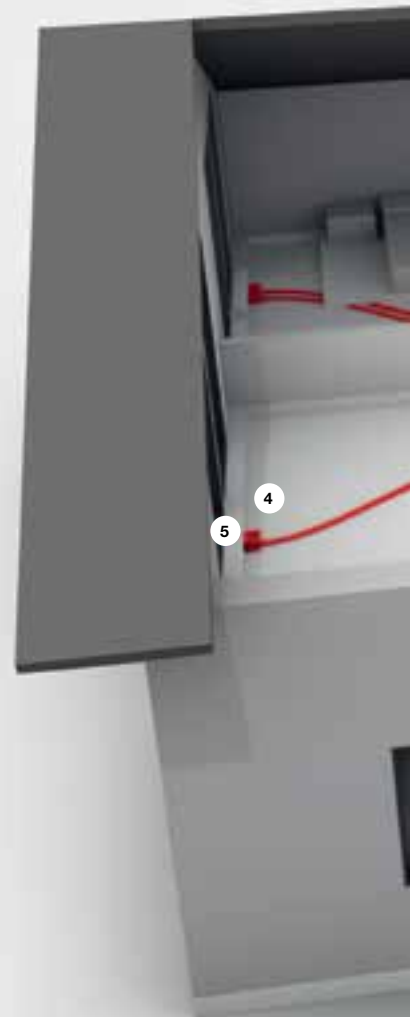
**CLD-P grille housing:** connects a round tube to a designer grille. Available as a floor or wall outlet. Hygienic and non-corrosive plastic version. Sealed until final assembly to prevent the ingress of water on site.



5

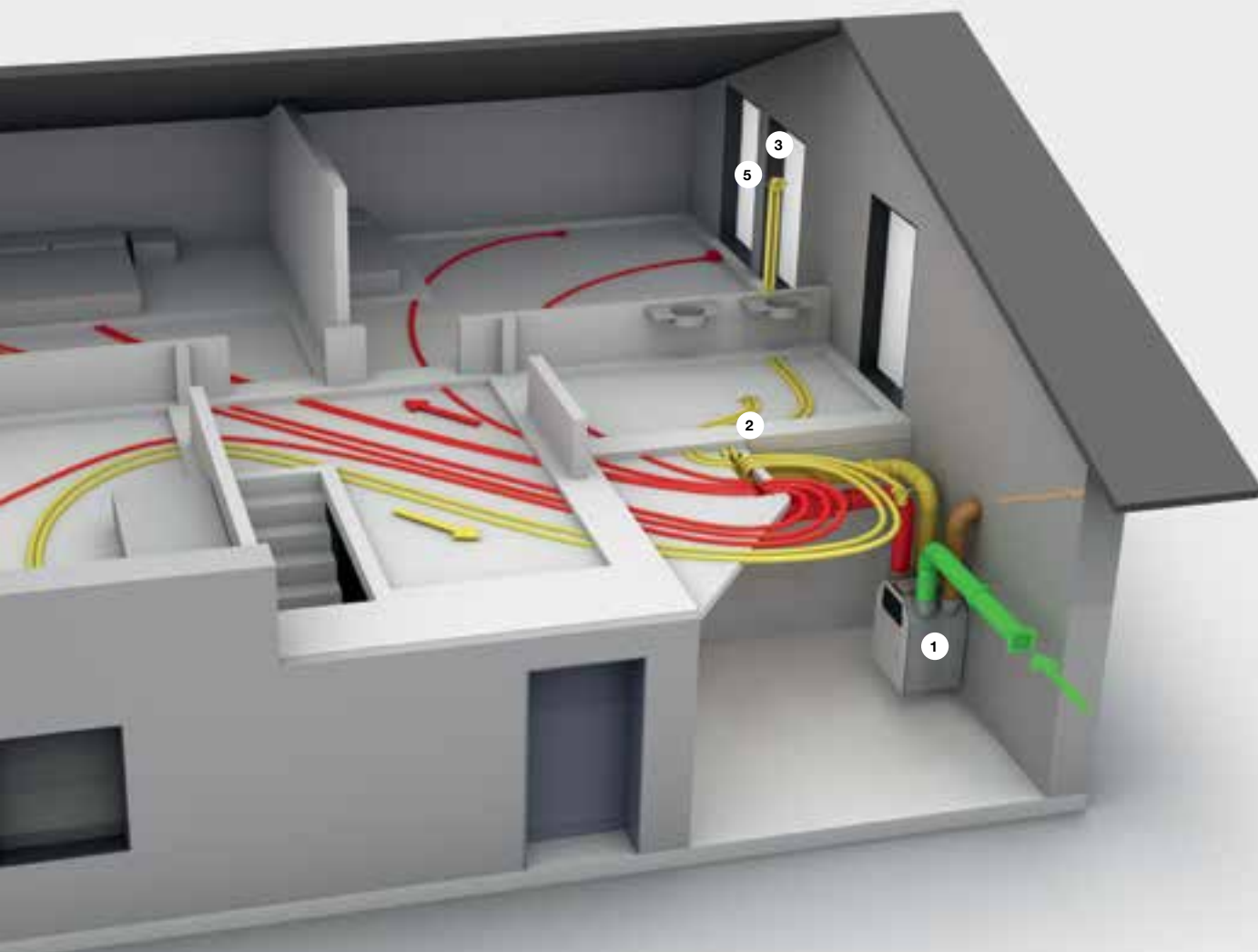
## Fresh air, distributed quietly

**STH 1-125 induction valve:** quick, draught-free and thus silent mixing of supply air with the air inside the room. Suitable designer grilles for the extract air complete the air distribution system.



**Single-family home, 140 m<sup>2</sup>, new build.** A compact design requires a compact ventilation system. Reduction to essential components results in a ventilation system that is easy to install yet well thought out – with a ventilation unit that is integrated into the utility room or equipment room. A wide range

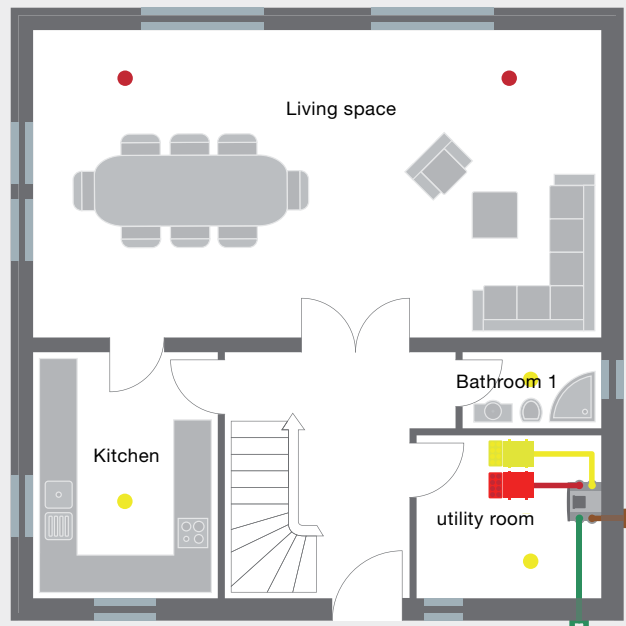
of Zehnder air outlets, designer grilles and valves enables the air distribution to be installed on one level, as shown here in the floor of the first floor. This means that the ground floor and the first floor can be aerated and ventilated at the same time. For fresh and comfortable air in all rooms.



- Outdoor air
- Supply air
- Extract air
- Exhaust air

Example system 2 – Plan

Ground floor



First floor



Note: Plans shown are not to scale

## Example system 2 – List of materials

Item	Article no.	Description	Quantity	Unit price in €	Total in €
<b>Ventilation unit with accessories</b>					
1	471 502 110	ComfoAir Q350 TR comfort ventilation unit, energy efficiency class A+*	1	2,549.00	2,549.00
2	400 502 007	Pre-heater for ComfoAir Q	1	300.00	300.00
3	990 201 330	Dry siphon 5/4" for ComfoAir Q	1	45.70	45.70
4	990 328 704	ComfoPipe Plus adapter for ComfoAir Q350/450 TR, DN 160, contains 2 adapters	1	42.20	42.20
<b>Air distribution</b>					
<b>Tubes for outdoor air and exhaust air</b>					
5	990 328 701	ComfoPipe Plus elbow, DN 160, 45 degrees, D=246/160	4	20.60	82.40
6	990 328 700	ComfoPipe Plus tube, DN 160, L=1000 mm, D=246/160	3	47.50	142.50
7	990 328 702	ComfoPipe Plus straight connector, DN 160, D=277/246	1	17.00	17.00
<b>Tubes for supply air and extract air</b>					
8	990 328 631	ComfoPipe tube, DN 160, L=1000 mm, D=190/160	4	34.00	136.00
9	990 328 630	ComfoPipe tube, DN 160, L=500 mm, D=190/160	2	24.00	48.00
10	990 328 633	ComfoPipe elbow, DN 160, 90 degrees, D=190/160	3	26.00	78.00
<b>Attenuators/Distribution manifolds</b>					
11	990 323 504	ComfoWell attenuator CW-S 420	2	170.00	340.00
12	990 323 620	ComfoWell manifold box CW-D 420	2	136.00	272.00
13	990 323 621	ComfoWell mounting plate CW-M 420, 8 x DN 75/P	2	73.50	147.00
14	990 323 627	ComfoWell end plate CW-P 420, DN 160	2	50.50	101.00
<b>Pipes/Moulded parts</b>					
15	990 328 007 X	ComfoTube 75 round tube, 1 m	100	4.20	420.00
16	990 328 362 X	O-ring seal, DN 75, 1 seal	3	2.24	6.72
17	990 328 107 X	Click sleeve, DN 75	2	7.00	14.00
18	990 328 262 X	End cap, DN 75, 1 cap	17	3.06	52.02
19	990 327 820	Cable ties 7.6 x 365 mm, contains 100 cable ties	1	20.30	20.30
20	990 320 026	ComfoSet 75 air flow regulator	3	10.20	30.60
<b>Vents/Designer grilles/Valves</b>					
21	990 326 121	TVA-P 75 grille housing, DN 125, 2 x 75, H 150	6	44.40	266.40
22	990 326 127	TVA-P fixing kit, DN 125, for mounting in concrete	5	10.30	51.50
23	990 320 850	CLD-P 75 grille housing, 1 x DN 75, side, H=140 mm	2	95.70	191.40
24	990 320 371	CLD telescopic frame for floor installation, height 90 – 160 mm	2	76.50	153.00
25	988 320 526	CLD 75 grille housing wide 3 x 75, side, height 140 mm	1	168.00	168.00
26	988 320 379	CLD telescopic frame for floor installation wide, height 90 – 160 mm	1	161.00	161.00
27	705 512 592	STH 1-125 supply air valve, DN 125, 156 mm	2	27.30	54.60
28	990 320 780	Venezia designer grille, CLRF/TVA, stainless steel, D=160 mm	4	35.50	142.00
29	990 320 640	Venezia designer grille, CLD, stainless steel, 260 x 160 mm	2	35.90	71.80
30	990 320 648	Venezia designer grille, CLD wide, stainless steel, 430 x 160 mm	1	45.70	45.70
<b>Outdoor air connection</b>					
31	990 430 584	External wall grille, DN 160, up to 350 m <sup>3</sup> /h	2	75.60	151.20
<b>Optional</b>					
33	655 011 100	ComfoConnect LAN C for app control and web portal	1	195.00	optional
				<b>Total</b>	<b>6,301.04</b>

**Note:** All article numbers marked "X" correspond to the estimated requirements for this property. When ordering, please note the corresponding delivery sizes / packaging units. All articles are exclusive of installation and VAT. Valid as of: 2016 price list

\*Depending on the control unit/sensor technology chosen. For detailed information, visit [international.zehnder-systems.com](http://international.zehnder-systems.com)

# Large accessible bungalow

1



## Championing efficiency everywhere

**Novus 300 comfort ventilation unit:** can be installed standing on the floor with mounting base or lying down in rooms with low ceiling heights. Unique values: heat output 93%, energy efficiency 0.24 Wh/m<sup>3</sup>. Best-in-class ventilation unit is ideal for passive houses.

2



## Lots of air over long distances

**ComfoTube 90 round tube:** can be installed over long routes with low pressure loss. This enables high air volumes to be achieved even without high fan output. Highly reliable planning and implementation. Also available with 75 mm diameter for smaller residential units.

3



## Low pressure loss and more flexibility

**Elbow 90 degrees:** flexible moulded part, ideal for low space requirement. Can be shortened and inserted directly into connectors. Lower pressure loss than a curved ventilation tube.

4



## Keeping dust and dirt out

**TVA-P grille housing:** hygienic as a result of being delivered fully sealed with protection plugs, no contamination during construction. Suitable for almost any installation situation.

5



## Fresh air, distributed quickly and quietly

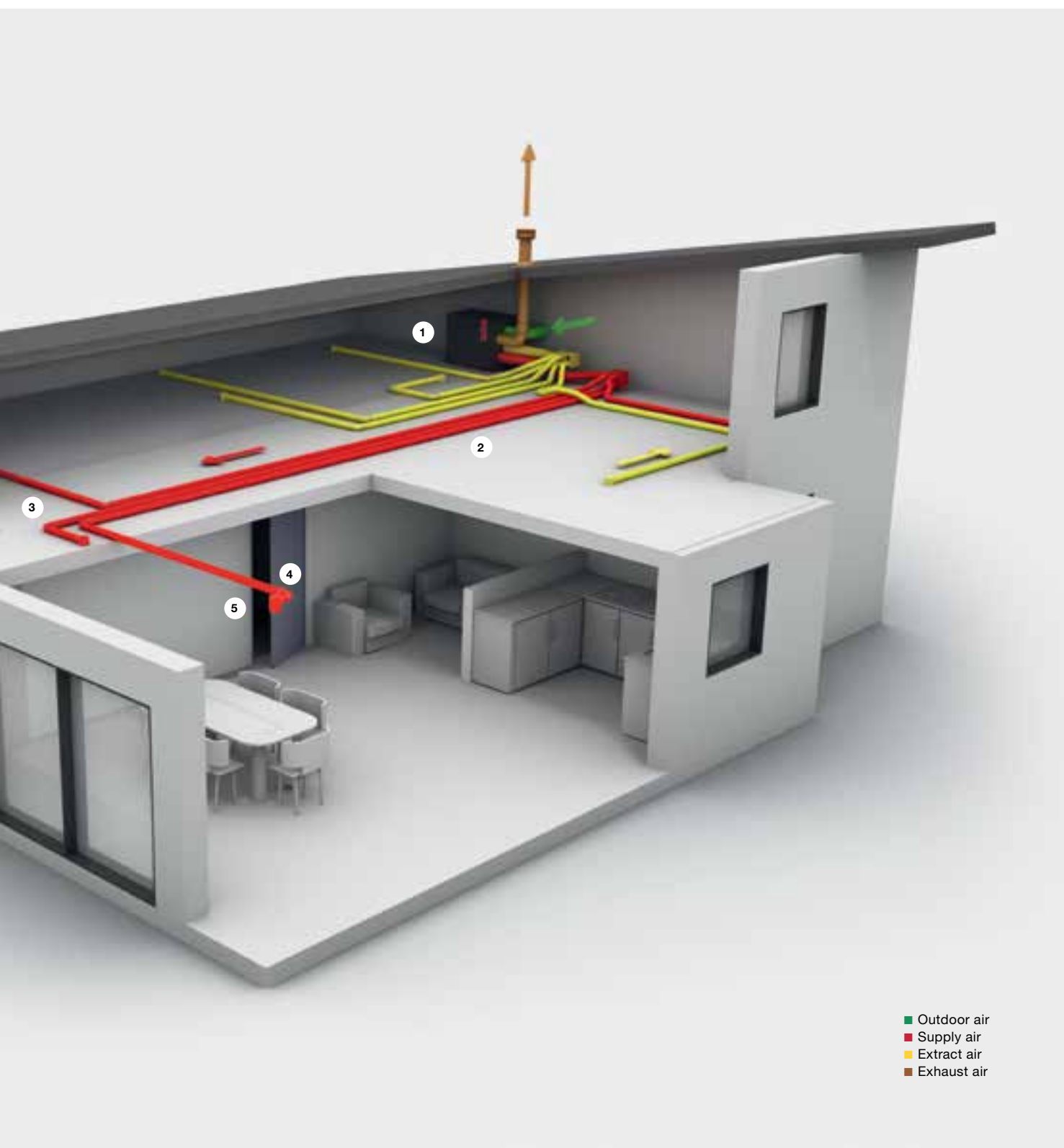
**STH 1-125 induction valve:** quick, draught-free and thus silent mixing with the air inside the room. Special flow pattern means that the wall and ceiling do not get dirty.





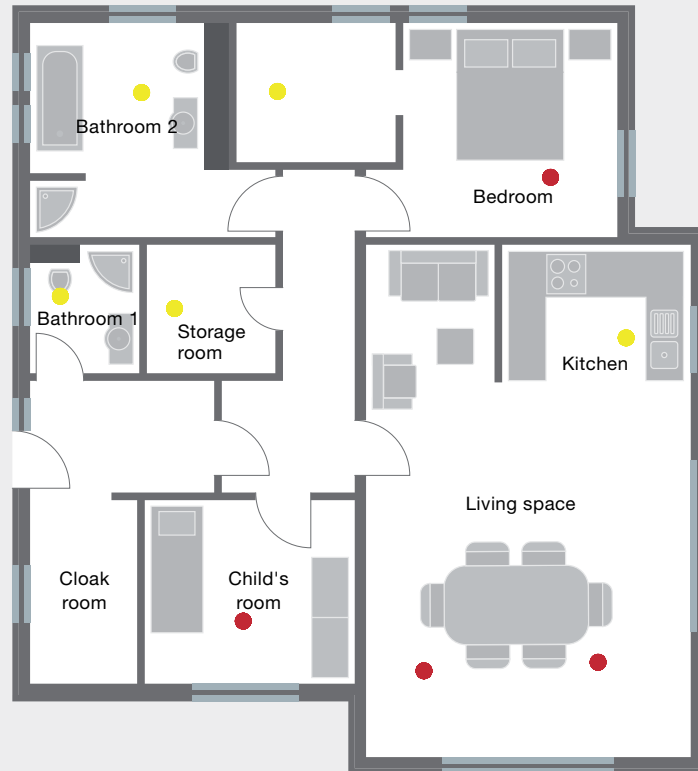
**Bungalow, 180 m<sup>2</sup>, new build.** A large footprint with many rooms distributed on one level – resulting in relatively long pipe routes. Zehnder ComfoTube 90 with low pressure loss ensures that the overall air output is actually achieved in all rooms. The practical cross section of the tubes minimises the space

requirement. Positioned horizontally on the tank, the ventilation unit also takes up little space. Furthermore, it is ideal for passive houses. As the pipes are installed lying on the surface, they can easily be rerouted should the use of a room change.

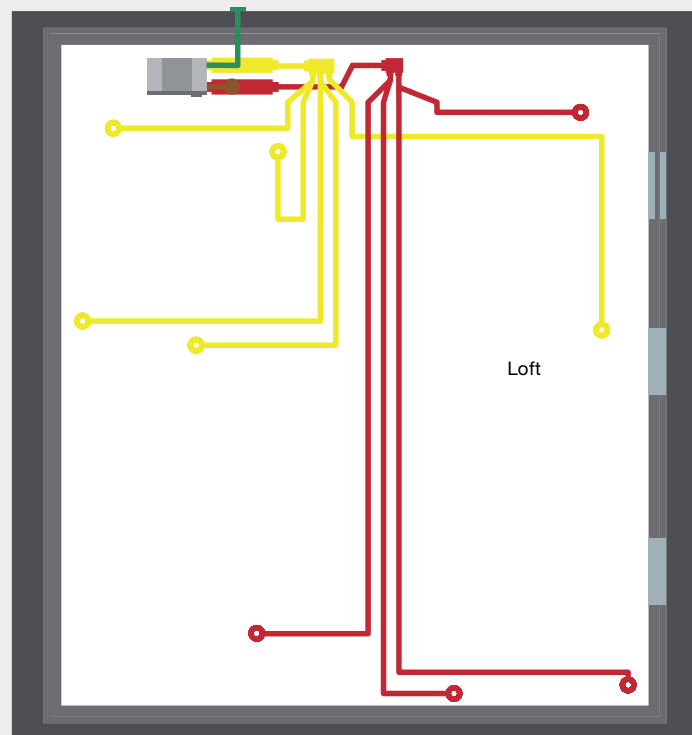


Example system 3 – Plan

Ground floor



First floor



Note: Plans shown are not to scale

### Example system 3 – List of materials

Item	Article no.	Description	Quantity	Unit price in €	Total in €
<b>Ventilation unit with accessories</b>					
1	527 003 830	Novus 300 LR comfort ventilation unit horizontal, energy efficiency class A*	1	2,757.00	2,757.00
2	521 014 140	TFT RD control panel	1	359.00	359.00
3	990 201 330	Dry siphon 5/4" for ComfoAir Q 350/450/600	1	45.70	45.70
4	990 326 331	Connection nipple, DN 160, with seal	5	7.60	38.00
<b>Air distribution</b>					
<b>Tubes for outdoor air and exhaust air</b>					
5	990 328 631	ComfoPipe tube, DN 160, L = 1000 mm, D = 190/160	2	34.00	68.00
6	990 328 633	ComfoPipe elbow, DN 160, 90 degrees, D = 190/160	2	26.00	52.00
<b>Tubes for supply air and extract air</b>					
7	990 319 016 X	Flexible duct, DN 160, length 1 m	3	10.10	30.30
8	990 319 321 X	Tube clamp, 9 mm, 1 clamp	4	4.13	16.52
<b>Attenuators/Distribution manifolds</b>					
9	990 318 033	Flexible attenuator, DN 160, length = 1000 mm	2	85.10	170.20
10	990 323 061	4x module manifold box DN 160, 4 x 90	1	182.00	182.00
11	990 323 062	6x module manifold box DN 160, 6 x 90	1	277.00	277.00
<b>Pipes/Moulded parts</b>					
12	990 328 009 X	ComfoTube 90 round tube, 1 m	80	5.82	465.60
13	990 328 363 X	O-ring seal, DN 90, 1 seal	19	2.27	43.13
14	990 322 153	ComfoTube 90 elbow, 90 degrees	6	19.50	117.00
15	990 328 109	Click sleeve, DN 90	2	8.00	16.00
16	990 328 263 X	End cap, DN 90, 1 cap	10	3.77	37.70
17	990 320 027	ComfoSet 90 air flow regulator	4	12.20	48.80
<b>Vents/Designer grilles/Valves</b>					
18	990 326 126	TVA-P 90 grille housing, DN 125, 1 x 90, H 400	9	44.40	399.60
19	990 322 085	Torino designer grille, CLF, stainless steel, 350 x 130 mm	5	48.10	240.50
20	990 320 781	Venezia designer grille, CLRF/TVA, white, D = 160 mm	4	35.50	142.00
<b>Outdoor air connection</b>					
21	990 430 600	Roof housing 160 for pitched roof, DN 160, red, 25 – 45 degrees	1	471.00	471.00
22	990 430 584	External wall grille, DN 160, up to 350 m <sup>3</sup> /h	1	75.60	75.60
<b>Optional/Alternative</b>					
23	527 003 840	Novus 300 VLR comfort ventilation unit horizontal, energy efficiency class A	1	3,090.00	alternative
24	527 002 550	Enthalpy exchanger for Novus 300/450	1	830.00	optional
				<b>Total</b>	<b>6,052.65</b>

**Note:** All article numbers marked "X" correspond to the estimated requirements for this property. When ordering, please note the corresponding delivery sizes / packaging units. All articles are exclusive of installation and VAT. Valid as of: 2016 price list

\*A+ is possible in conjunction with alternative control unit/sensor technology. For more information, visit [international.zehnder-systems.com](http://international.zehnder-systems.com)

## Clever modernisation of an existing apartment



1

Air output for every niche

**Zehnder ComfoAir 180 comfort ventilation unit:** powerful and compact. Fits into standard kitchen cupboards and wall niches. Extremely convenient to install with variable connections and a compact ventilation system that is optimised for installation.



2

Incredibly compact transportation  
of outdoor air and exhaust air

**Zehnder ComfoPipe Plus twin duct:** DIN-compliant rectangular duct. Outdoor air and exhaust air in a single element. Connection boxes, diffuser boxes, length compensation and attenuators complete the system.



3

The tube that flattens itself

**Zehnder ComfoTube flat 51 flat tube:** for shallow suspended ceilings and/or low floor structures. Flexible installation, including inside existing installation space. Many moulded parts for all installation situations. Clinside inner skin and SKZ certification for maximum hygiene.



4

Crossing ducts for minimum  
ceiling suspension

**Flat 51 cross-piece:** crossing of pipes without height offset. Ceiling suspension can be reduced by up to 50% for suspension dimensions of just 70 mm.



5

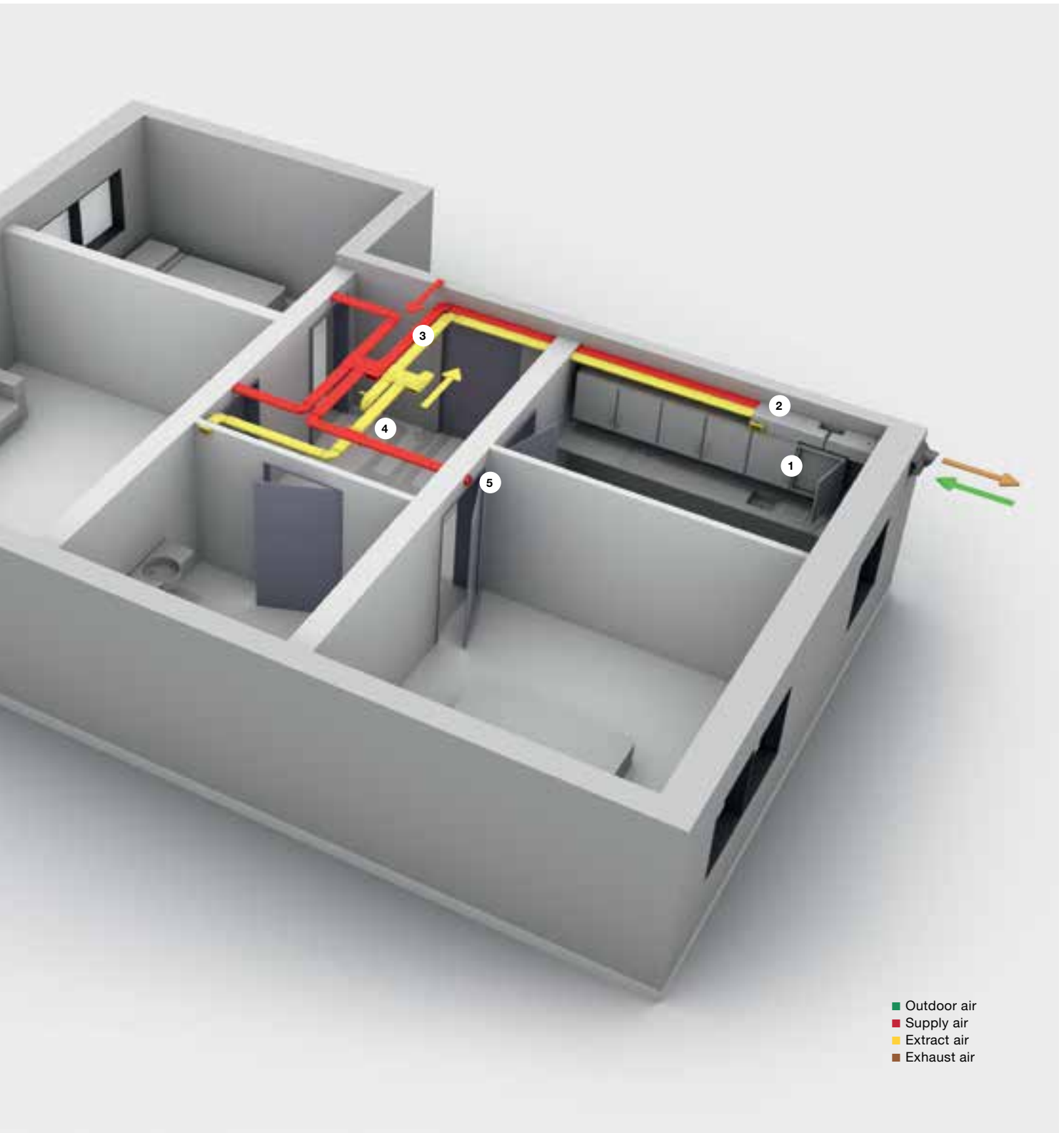
Installation directly underneath  
the ceiling

**Renovation valve:** wide spread without draughts. Installation almost flush with the ceiling means that no additional chiselling or scabbling work is required, whilst the suspension of the ceiling is kept to a minimum. No contamination around the valve.

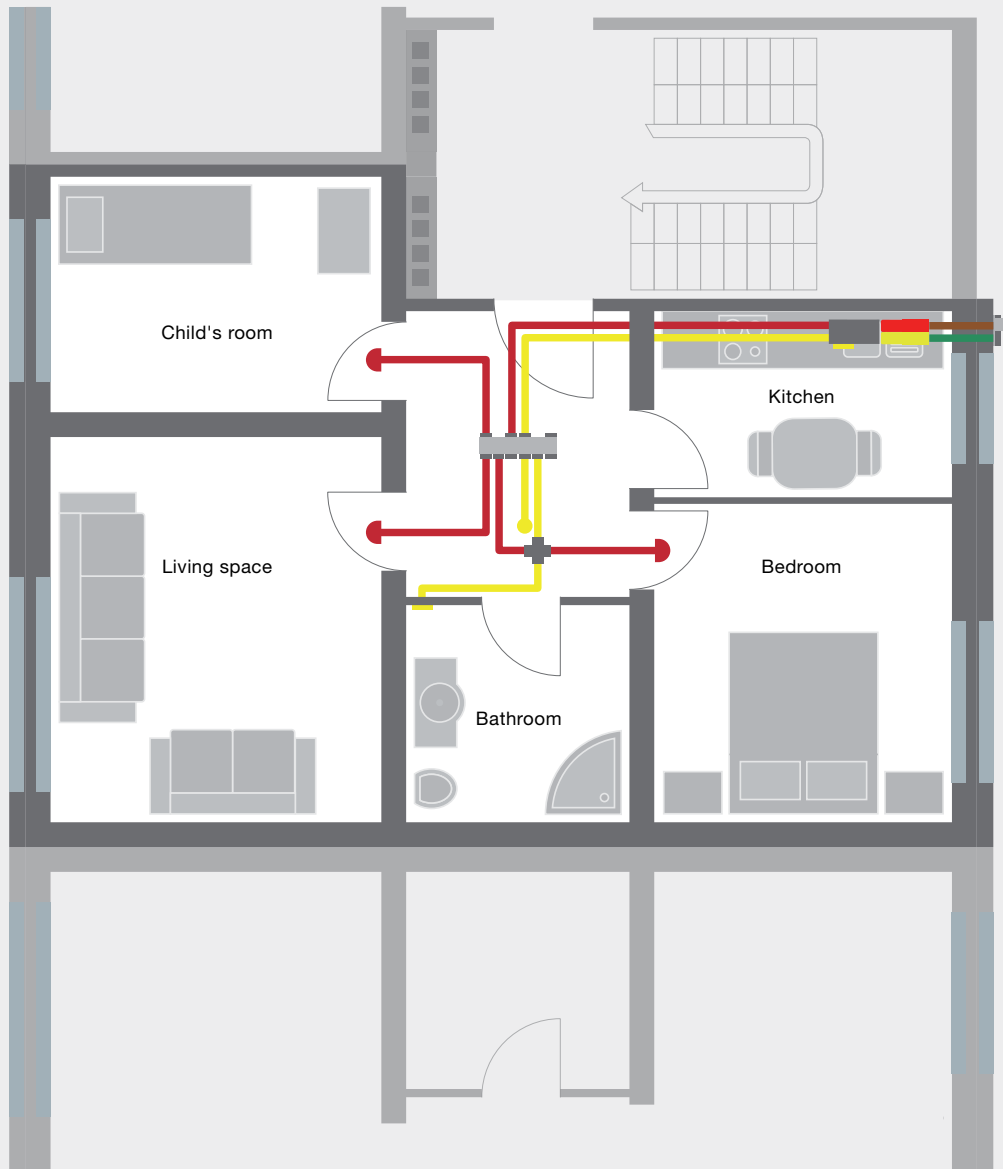


**Apartment, 80 m<sup>2</sup>, renovation.** This compact Zehnder ventilation system is the perfect fit for any standard fitted kitchen and small wall niches. To avoid taking up space unnecessarily, existing surfaces are used for installation: the ducts are simply routed into the room from above the kitchen cabinet and the air

distribution radiates out from under the floor. Only the ceiling has to be suspended, providing a clever means of accommodating downlights and hiding power cables. Zehnder renovation vales can be positioned easily above doors, avoiding the need for long pipe routes into the individual rooms.



Example system 4 – Plan




Note: Plans shown are not to scale

## Example system 4 – List of materials


Item	Article no.	Description	Quantity	Unit price in €	Total in €
<b>Ventilation unit with accessories</b>					
1	471 212 210	ComfoAir 180 comfort ventilation unit, energy efficiency class A	1	1,729.00	1,729.00
2	655 010 200	ComfoSense 55 control panel	1	214.00	214.00
<b>Air distribution</b>					
<b>Tubes for outdoor air and exhaust air</b>					
3	990 328 800	ComfoPipe Plus twin duct, L = 400 mm	1	28.50	28.50
4	990 328 801	ComfoPipe Plus horizontal connection box, for connection on the right	1	54.00	54.00
5	990 328 807	ComfoPipe Plus twin duct joining set	1	61.10	61.10
6	990 328 671	ComfoPipe tube, DN 125, L = 500 mm, D = 155/125	2	25.70	51.40
7	990 328 814	Clamp, wide	3	8.20	24.60
<b>Tubes for supply air and extract air</b>					
8	990 328 802	ComfoPipe Plus horizontal connection box, for connection on the left	1	54.00	54.00
9	990 322 020	CK 300 twin duct, length = 150 cm	4	41.00	164.00
10	990 322 023	CK 300 twin duct nipple	4	12.90	51.60
11	990 322 021	CK 300 H twin duct elbow, 90 degrees, horizontal	1	20.20	20.20
<b>Attenuators/Distribution manifolds</b>					
12	990 328 819	Long attenuator, left-hand version	1	254.00	254.00
13	990 328 823	flat 51 4-way distribution manifold with single connection	2	113.00	226.00
<b>Pipes/Moulded parts</b>					
14	990 328 063 X	ComfoTube flat 51 flat tube, 1 m	8	12.94	103.52
15	990 328 252 X	flat 51 end cap, 1 cap	5	4.86	24.30
16	990 322 015	ComfoSet flat 51 air flow regulator	3	17.20	51.60
17	990 322 012	flat 51 H elbow, 90 degrees, horizontal	5	18.70	93.50
18	990 322 154	flat 51 cross-piece	1	42.10	42.10
19	990 322 016 X	flat 51 adjustable wall bracket, 1 bracket	10	3.28	32.80
<b>Vents/Designer grilles/Valves</b>					
20	990 322 062	flat 51 grille housing renovation valve	4	27.30	109.20
21	990 322 060	CLRF grille housing, DN 125, flat 51 side	1	39.00	39.00
22	990 326 254	Round supply air renovation valve, DN 90, D = 105 mm	3	14.30	42.90
23	990 326 253	Angular extract air renovation valve, DN 90, 180 x 112 mm	2	27.30	54.60
24	990 320 780	Venezia designer grille, CLRF/TVA, stainless steel, D = 160 mm	1	35.50	35.50
<b>Outdoor air connection</b>					
25	990 430 592	Combined external wall grille left, DN 125, up to 200 m <sup>3</sup> /h	1	132.00	132.00
<b>Optional/Alternative</b>					
26	471 212 215	ComfoAir 180 V comfort ventilation unit, energy efficiency class A	1	2,034.00	alternative
<b>Total</b>					<b>3,693.42</b>

**Note:** All article numbers marked "X" correspond to the estimated requirements for this property. When ordering, please note the corresponding delivery sizes / packaging units. All articles are exclusive of installation and VAT. Valid as of: 2016 price list


## Simple system for a standard apartment

- 


**Hygienic and discreet outdoor air and exhaust air**

**External wall grille:** with a generous cross section for maximum air volume. The fin setting provides protection against driving rain, preventing water from accumulating in the tubes. Fits discreetly into façade appearance.
- 


**Ideal underneath the ceiling**

**Climos 200 comfort ventilation unit for suspended ceilings:** due to the absence of condensate, the unit is particularly suitable for installation in suspended ceilings. Compact dimensions. Equipped with an enthalpy exchanger as standard.
- 

**Compact and adaptable**

**Zehnder ComfoWell system:** combines attenuators and distribution manifolds in a space-saving component. Modular system enabling performance to be enhanced. Direct connection and combination of all components in a single width. Can be installed in a duct or directly on the ventilation unit.
- 

**For neat installation in concrete**

**ComfoTube 75 round tube:** flexible and easy installation in concrete floor without colliding with other services. Compact diameter enables fire safety requirements to be met. Installation can be carried out during the course of standard construction work (no special arrangements need to be made).
- 

**For maximum hygiene**

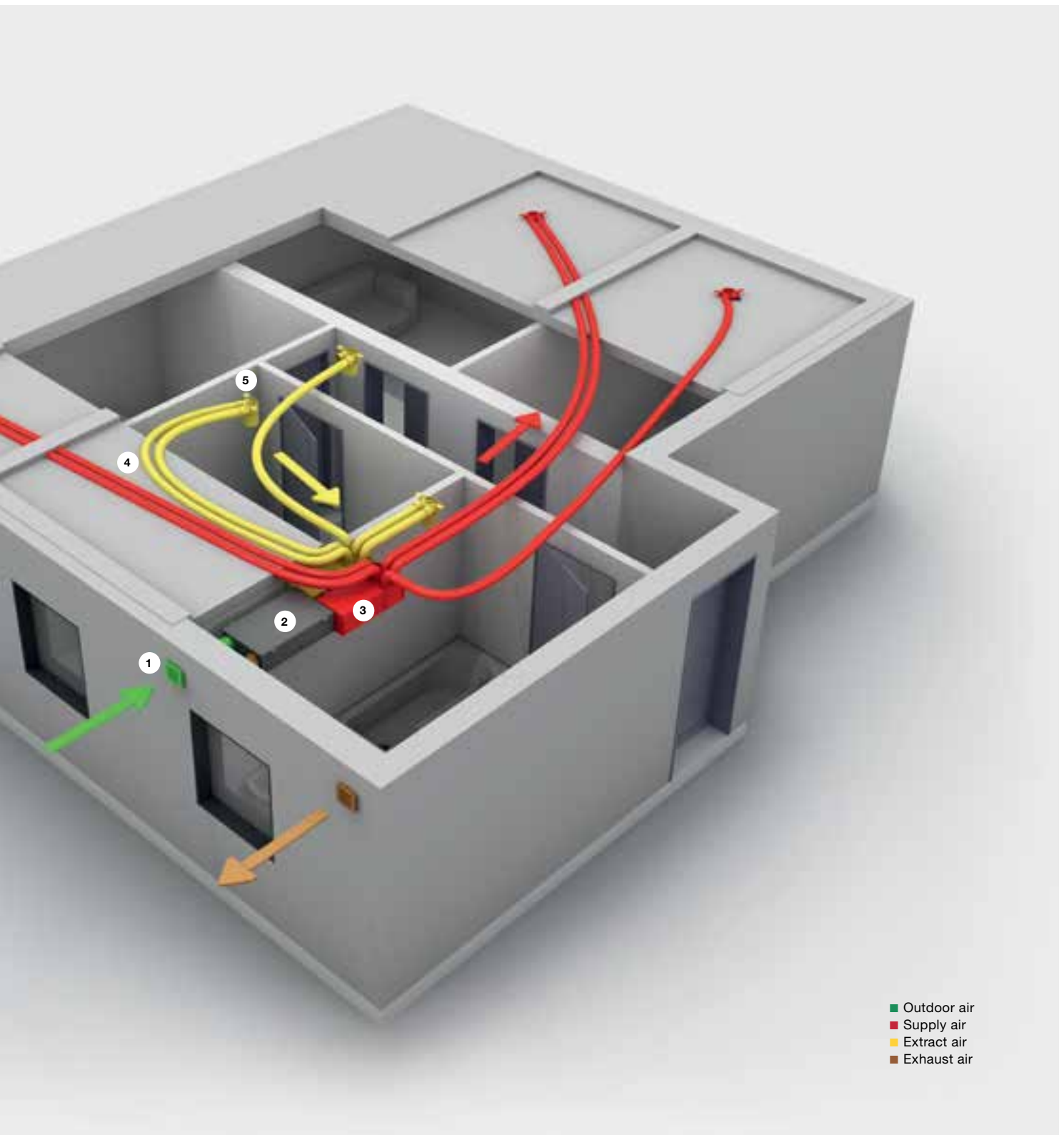
**Unique Zehnder filter for maximum hygiene.** Easily inserted into extract air outlets. No contamination of the tube system.



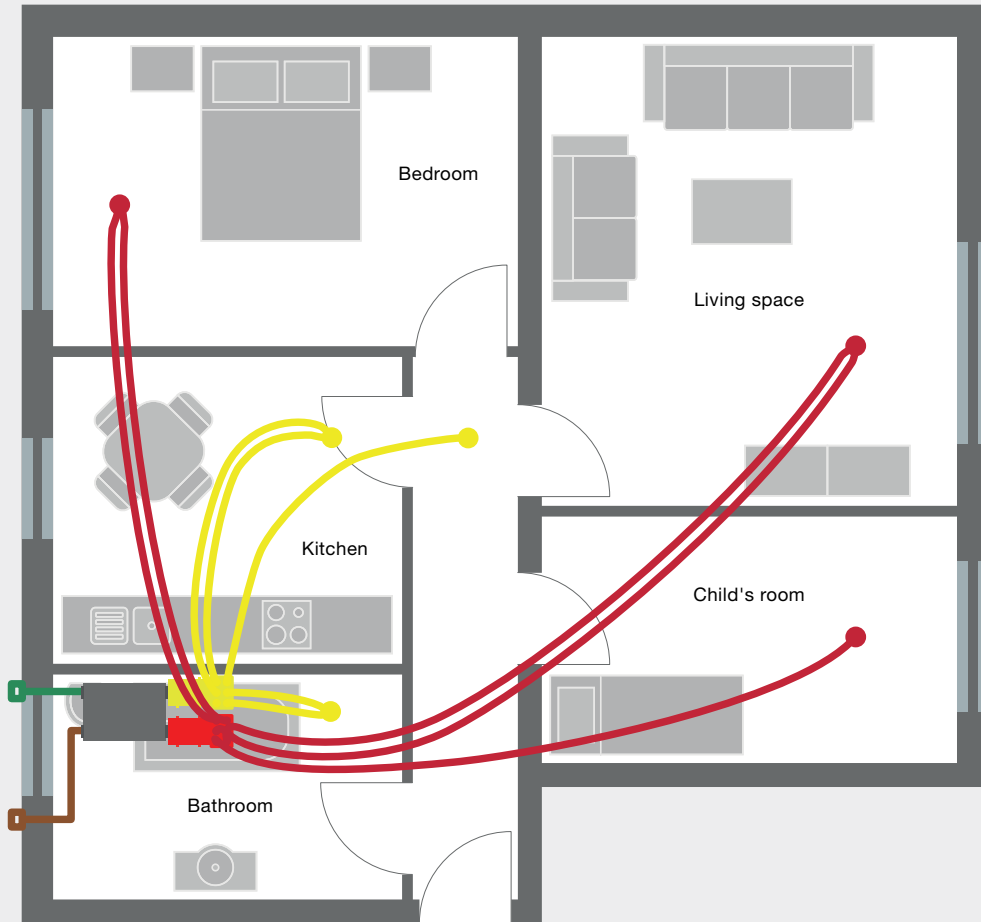


**Apartment, 70 m<sup>2</sup>, new build.** Small number of components, short pipe routes: here the ventilation system is reduced to a minimum but energy efficiency is maximised. Installation in the concrete ceiling gives the apartment its own fire compartment; due to the absence of risers from one floor to the next, there is

no need for fire dampers. It is only in the bathroom that the ceiling must be suspended slightly; this can accommodate design features such as downlights. As the enthalpy exchanger excludes the possibility of condensate forming, a condensate drain is not required.



Example system 5 – Plan



Note: Plans shown are not to scale

## Example system 5 – List of materials

Item	Article no.	Description	Quantity	Unit price in €	Total in €
<b>Ventilation unit with accessories</b>					
1	527 003 240	Climos 200 R enthalpy comfort ventilation unit, energy efficiency class A*	1	2,378.00	2,378.00
2	521 014 140	TFT RD control panel	1	359.00	359.00
<b>Air distribution</b>					
<b>Tubes for outdoor air and exhaust air</b>					
3	990 328 672	ComfoPipe tube, DN 125, L = 1000 mm, D = 155/125	4	35.70	142.80
4	990 328 673	ComfoPipe elbow, DN 125, 90 degrees, D = 155/125	2	30.90	61.80
<b>Attenuators/Distribution manifolds</b>					
5	990 323 517	ComfoWell fixing kit CW-K 320	1	112.00	112.00
6	990 323 501	ComfoWell attenuator CW-S 320	2	144.00	288.00
7	990 323 531	ComfoWell manifold box CW-D 320	2	120.00	240.00
8	990 323 612	ComfoWell mounting plate CW-M 320, 6 x 75/P	2	61.40	122.80
<b>Pipes/Moulded parts</b>					
9	990 328 007 X	ComfoTube 75 round tube, 1 m	55	4.20	231.00
10	990 328 362 X	O-ring seal, DN 75, 1 seal	24	2.24	53.76
11	990 320 026	ComfoSet 75 air flow regulator	2	10.20	20.40
<b>Vents/Designer grilles/Valves</b>					
12	990 326 121	TVA-P 75 grille housing, DN 125, 2 x 75, H 150	6	44.40	266.40
13	990 326 127	TVA-P fixing kit, DN 125, for mounting in concrete	6	10.30	61.80
14	990 320 780	Venezia designer grille, CLRF/TVA, stainless steel, D = 160 mm	3	35.50	106.50
15	705 512 592	STH 1-125 supply air valve, DN 125, 156 mm	3	27.30	81.90
<b>Outdoor air connection</b>					
16	990 430 250	External wall grille, DN 125, up to 200 m <sup>3</sup> /h	2	72.30	144.60
<b>Optional/Alternative</b>					
17	527 003 260	Climos 200 VR enthalpy comfort ventilation unit, energy efficiency class A*	1	2,737.00	alternative
				<b>Total</b>	<b>4,670.76</b>

**Note:** All article numbers marked "X" correspond to the estimated requirements for this property. When ordering, please note the corresponding delivery sizes / packaging units. All articles are exclusive of installation and VAT. Valid as of: 2016 price list

\*Depending on the control unit/sensor technology chosen. For detailed information, visit [international.zehnder-systems.com](http://international.zehnder-systems.com)

# Ideal conditions for maximum hygiene

Zehnder systems for comfortable indoor ventilation offer a high level of hygiene. The particularly hygienic properties of Clinside are certified: the smooth inner skin of the ventilation tubes reduces the build-up of dust and makes cleaning easier. As well as the products themselves, professional planning, correct installation and regular inspections and maintenance are essential for maximum hygiene.



## Prerequisites for perfect hygiene

Easy to look after and clean: Zehnder systems for comfortable indoor ventilation are ideal for hygiene. In spite of this, the following points must also be considered.

- **Professional planning:** direct routes, provision for access to carry out inspections
- **Professional installation:** no contamination during construction
- **Regular maintenance:** consistent adherence to service intervals

## Cleanliness thanks to Clinside

Clinside smooth inner skin prevents the build-up of dust. Cleaning is easy.



## For certified cleanliness

The acknowledged Hygiene Institute for the Ruhrgebiet certifies the low dust build-up and good dust removal provided by Clinside, the smooth inner skin for Zehnder ventilation tubes.

Zehnder ventilation tubes are certified by the SKZ. This requires tests to be carried out from raw material to finished product and assures the highest standards of quality for the air distribution system.



# Perfect air distribution really can look this good

Whether with flat oval tubes, round tubes or mixed installation, Zehnder air distribution not only works perfectly – it looks great too. Designer grilles are available for all products. They can be supplied in stainless steel or white, round or angular, for installation in ceilings, walls and floors. Integrating harmoniously into any environment, some of Zehnder's designer grilles have even been recognised by the iF Product Design Award.



## Zehnder designer grilles for round tubes



Zehnder Luzern



Zehnder Engelberg



Zehnder Roma



Zehnder Venezia



Zehnder Pisa



Zehnder Torino

## Zehnder designer grilles for flat tubes



Zehnder Abacus



Zehnder Torino



Zehnder Pisa



Zehnder Roma

## Zehnder designer grilles for round tubes and flat tubes



Zehnder Torino



Zehnder Venezia



## You can thus offer your customers a reliable system with many advantages

- **A clean bill of health as a result of tested systems:** fresh air promotes well-being, healthy sleep, concentration and productivity. Zehnder uses only food-grade materials. The high quality is verified by the SKZ seal of approval and the Hygiene Institute for the Ruhrgebiet.
- **Significant energy saving due to heat recovery:** more than 70% of the energy requirement in homes is accounted for by heating. Residential ventilation replaces window ventilation, thus avoiding the loss of expensive heat into the atmosphere. As a result, an energy saving of up to 50% can be made and heat recovery rates of up to 95% from the extract air can be achieved.
- **Better living comfort as a result of well thought out components:** Zehnder systems can be relied upon for quiet, draught-free operation. Noise and sound transmission are avoided through the use of highly efficient attenuators. Components for optimum flow reduce the noise emitted by the ventilation system to an absolute minimum.
- **Retention of value in the long term as a result of wise investment:** your clients want to invest in sustainable technologies. Zehnder systems for comfortable indoor ventilation can be relied upon for permanent air exchange. This prevents the formation of mildew, which can damage the fabric of a building, and ensures that the property retains its value.

