

FACT BOOK ON CHILD-FRIENDLY BATHROOMS

PLANNING AND EDUCATIONAL ASPECTS

BATHROOMS FOR GROWING AND LEARNING

SAFETY AND CREATIVITY

Buildings and their positive influence on children

The best way for pre-school children to develop and learn is in a safe and secure environment. Architecture, style and design play an essential role in this regard, arousing children's playful curiosity and giving them a sense of orientation. It was on this basis that Villeroy & Boch developed its O.novo Kids collection for, and with, children. This collection was created in close collaboration with educators, architects and designers, offering a wide variety of options to encourage children to learn intuitively.

LEGAL INFORMATION

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ORIENTATION AND SPACE

Why children prefer a clear architectural style, and what levels of flexibility and openness spaces should offer...

Today, nursery school education means much more than simply looking after children and keeping them busy. It is part of the education system. This also has an impact on the architecture. Children should enjoy taking part in activities, creating and trying things out so that they can use their imagination and develop their personality. It is therefore important for architects to create inspiring learning environments which help children to become familiar with day-to-day tasks – such as using a door handle or turning on a bathroom tap. This requires a change in perspective.



INDEPENDENT LEARNING

Children love trying out new things. This is what helps them develop a sense of balance and stability within their environment.



LEARNING TOGETHER

O.novo Kids offers more than good ceramics and matching ergonomics. The experts from Villeroy & Boch took children's perspectives into account during intensive workshops with the young users.



With children for children

A high-quality bathroom collection for children that combines fun with functionality. That was the brief that the product developers at Villeroy & Boch were given. In consultation with all parties, a collection was to be created, the intuitive and child-friendly design of which would encourage children's natural development. Naturally, the highest hygiene standards for safe use were also set.

Ideas need to be tried out

For Villeroy & Boch, good design and top quality were not enough to launch the collection. First, extensive tests needed to be carried out to check that the ceramics and accessories could be used safely. During intensive workshops, children and educators then checked out the everyday suitability of the collection. Extensive tests proved that, without receiving any instructions, the children intuitively chose the appropriate height on the three-tier washbasin when washing their hands. An encouraging confirmation that children can experience a real sense of achievement when interacting independently with O.novo Kids.

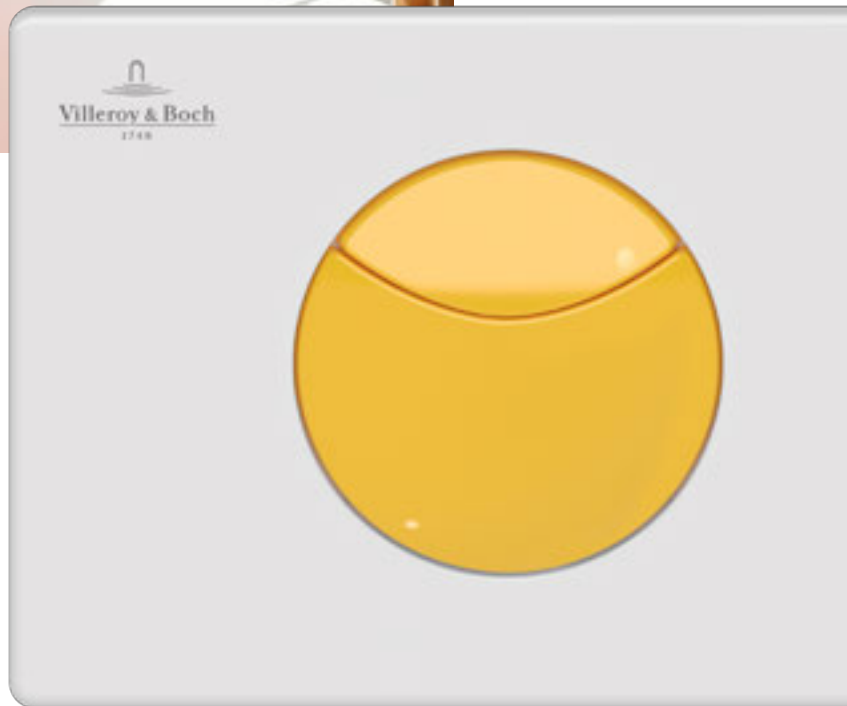
Crowdstorming for kids

In addition to the ergonomic and educational aspects, this project also focuses, above all, on creating a fun environment, and therefore on encouraging acceptance by the children. To ensure this, Villeroy & Boch used a crowdstorming activity to activate the creative community. Out of 51 drafts, three designs provided the basis for the new children's bathroom collection. Based on intense discussions with educators, designers and, above all, with children themselves, Villeroy & Boch developed the O.novo Kids collection and introduced it to the market.



COLOURS AND FUNCTION

Can architecture be too colourful?

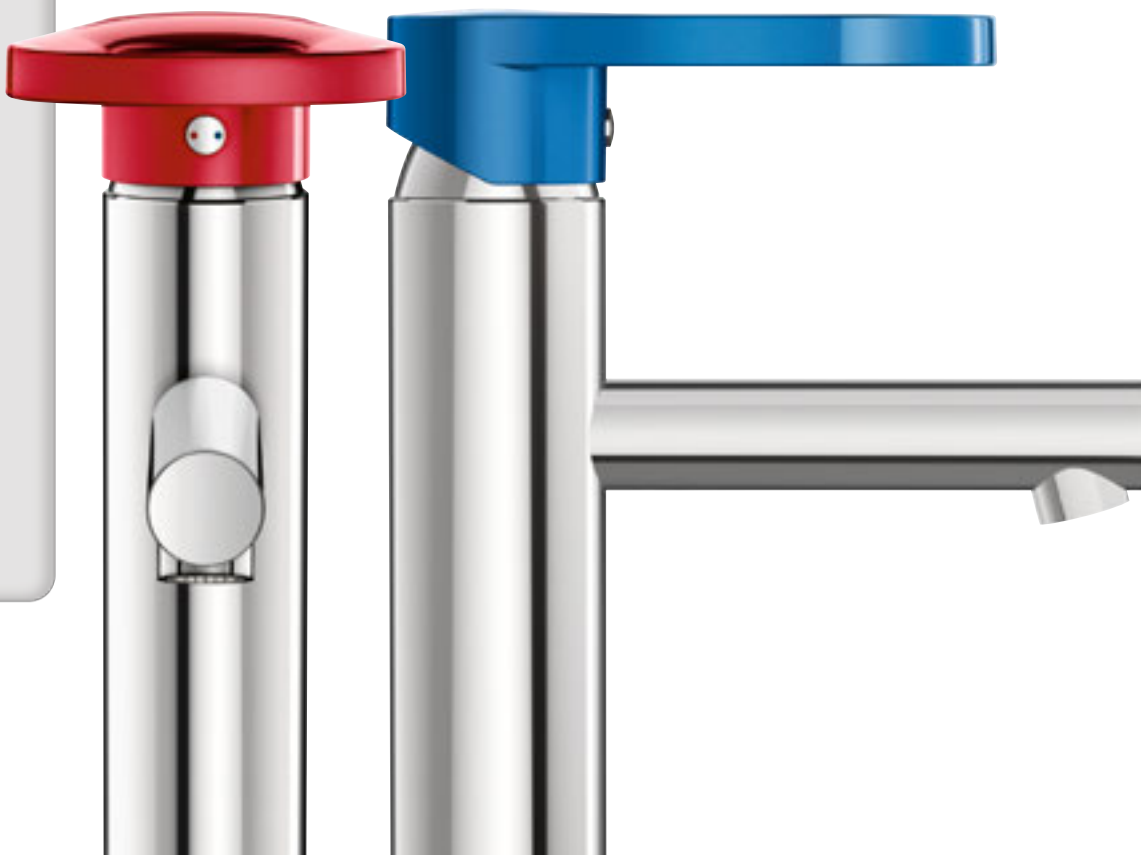


The “colourfulness” of children

When choosing colours for a nursery school, most educators recommend a concrete allocation of colours, such as the use of subdued colours in recreational areas. In this way, colours are not overloaded and the children’s own “colourfulness” is encouraged to develop freely. However, entrance areas and halls are allowed to be more striking and to feature a high-contrast design. Conversely, in areas designed for relaxation and sleeping, strong contrasts would contradict their function. Primary colours aid orientation. The O.novo Kids children’s range applies this approach, using the colours red, yellow and blue.

Intuitive orientation

In education, colours are a recognised tool for promoting learning achievements through intuitive guidance. For example, this mechanism is used on coloured control elements to indicate their operation. Just as with flush plates on toilets or different coloured toilet seats, they intuitively draw children’s attention to the fact that something needs to be activated. A child-friendly lever on taps also facilitates operation, and an integrated scald protection feature gives them a sense of safety. Blue, red and yellow single-lever mixer taps can be colourfully combined, encouraging children to wash their hands on their own. Successfully addressing the “challenge” helps to improve the child’s self-confidence and increases the educational value.



CHILD-FRIENDLY ERGONOMICS

Designs for children can do more...



THE RIGHT HEIGHT AND DEPTH

Children learn quickly and intuitively choose the right object to use in the bathroom. The projecting washbasin is adapted to the arm lengths of children in different age groups.



ACHIEVABLE WITH SIGNAL EFFECTS

Flushing the toilet is twice as easy for kids. Even on its own, the bright colour indicates that "something is going on here". At the same time, the flush plates are easily accessible. A special ViConnect element guarantees safe mounting at the right height.



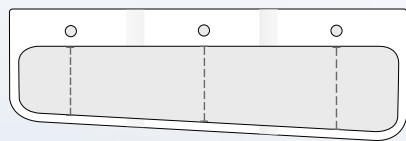
THE "RIGHT" TOILET SEAT RING

In a fun way, children learn which of the two toilet seats is the right one for them. Colourfulness aids orientation. Handles and child-friendly ergonomics promote safe use and give children a great feeling of mastering the toilet, encouraging independent use.



CERAMICS FOR CHILDREN

O.novo Kids' ergonomic design meets children's requirements in terms of size and shape. The items are easily accessible, with a height of 35 cm for wall-mounted toilets and 26 cm for floor-standing toilets.



220mm 245mm 275mm



550mm 600mm 650mm



HYGIENE MUST BE LEARNED

Children learn about hygiene through imitation and trying things out

Children develop a sense for personal hygiene both under adult guidance and by chatting to other children in the group. It's important that the equipment and design in wet areas enable and promote learning through play by giving children a sense of mastery. Of course, not everything goes right first time. That's why the shape and surface of bathroom ceramics play a crucial role in improving hygiene.



BACTERIA STAND NO CHANCE

Tests have shown that through their antibacterial action, the silver ions in the glazing inhibit bacterial growth by more than 99.9%. As a result, the use of chemical cleaning agents can be reduced.



SHAPES FOR GREATER CLEANLINESS

Rimless toilets enable particularly thorough and fast cleaning, assisted by the flushing of the entire inner bowl. The children's wall-mounted toilet is equipped with the hygienic DirectFlush technology.



IT'S ALL ABOUT THE SURFACE FINISH

The specially refined surface is particularly scratch-proof and durable. The materials used are of a very high standard and the surface is especially hygienic and clean.





NATURAL BUILDING MATERIALS FOR CREATIVE DEVELOPMENT

“Real opportunities for growth” in a feel-good atmosphere. Materio and RSArchitekten win the competition for three different nursery schools thanks to an unusual project approach based on a bright idea!





Designing floor plans

Timber frame construction offers maximum freedom when it comes to designing floor plans. This was one of the many reasons for RSA and Materio's close cooperation. In the course of an investor competition for three nursery schools organised in the Ruhr region of Germany by the Ennepetal local authorities, Materio came out on top with its design for a functional and ecological building, and was awarded the contract to build all three nursery schools based at different sites.

Forward-looking construction method

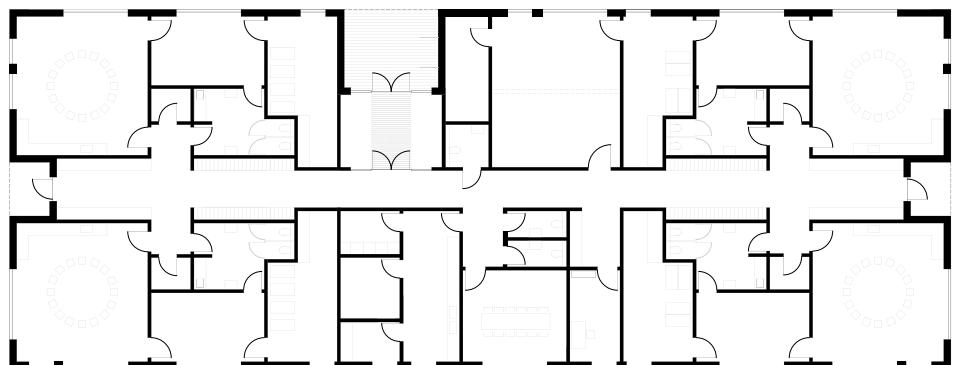
The timber frame construction method fits exceptionally well into the environment of the attractive residential area. When no longer required as a day nursery, the building can also be converted into 4-6 attractive residential units, at little expense. This future-oriented space concept was agreed individually with the sponsor so that it would comply not only with construction requirements but also with Waldorf Nursery School's educational concept. At the same time, it also safeguards planning security in the long-term, thanks to its flexibility.



Front view



Front view



Floor plan

NEW CONSTRUCTION: WALDORF NURSERY SCHOOL, ENNEPETAL-VOERDE (GERMANY)

Direct access to the garden

The nursery school offers space for 4 groups, each with direct access to the outdoor area. Large windows with very low sills give the children an unhindered view of the enclosed, open area outside.



Friendly and functional

The Waldorf Nursery School building is functional, and thus fulfils the sponsor's educational requirements. This was discussed and arranged during several workshops and planning meetings with everyone involved. The natural building materials used and the energy concept comply with the challenging expectations of the local authority and the building's sponsor.



Independent use

Following the guiding principle of this approach, even the furnishings in the wet areas are designed with children in mind, encouraging independent use and taking their level of development into account. For example, the washbasin with three different heights and depths allows children to decide for themselves where to wash their hands. This approach is confirmed in practice as each child intuitively uses the washbasin most suited to his or her needs. Through its shape, the washbasin encourages independent use and can help give children a sense of affirmation as they make their own decisions.





Orientation and function

The main part of the building is south-facing while the bathroom and toilet areas are north-facing. In line with the philosophy behind Waldorf education, facilities encouraging learning through play can be found throughout the entire establishment. Of course, this also includes the four wet rooms allocated to the group areas. With signal colours, the taps, fittings and toilet flush plates draw attention to their function. In the colours red, blue and yellow, even the toilet seats indicate the different possible uses for the children.



CONSTRUCTION INFORMATION

PROJECT:	sustainable new construction Waldorf Nursery School Ennepetal-Voerde, Vilvoorder Straße
SPONSOR:	Waldorf Nursery School, Ennepetal-Voerde
WEBSITE:	www.waldorfkindergarten-hagen.de/ kindergaerten
PRIME CONTRACTOR:	Materio Holzbau GmbH www.materio.de
PLANNER:	RSA – Rinsdorf Ströcker Architekten GmbH www.rsarchitekten.de
AWARD PROCEDURE:	competition organised by Ennepetal local authorities
START OF CONSTRUCTION:	June 2017
CONSTRUCTION PERIOD (BUILDING SHELL):	2 weeks after completing the foundations
BUILDING SHELL:	timber frame design
INAUGURATION:	January 2018 after completion of foundations
USABLE SPACE:	approx. 700 sqm. (75 children in 4 groups)
INVESTMENT VOLUME:	approx. 2 million euros
VILLEROY & BOCH PRODUCTS:	O.novo Kids bathroom range

“CONSISTENT PROJECT APPROACH”

Good architecture and efficiency are what win competitions.



Carsten Rinsdorf
Architect
RSArchitekten,
Lippstadt



Johannes Berger
Managing Director
Materio group
Soest

New paths

V&B: Is it normal that as a developer in the public sector you construct, rent out and operate a building? How does that work with the three nursery schools that you are building?

J. Berger: The Ennepetal local authorities organised an investor competition for three nursery schools. We purchased all three plots of land and had the nurseries built. After completion, we will rent out the nurseries to the respective sponsors for a period of 20 years. If the sponsors drop out, it's up to the local authorities to find a new sponsor.

First prize

V&B: The speed and sustainability with which the building was constructed was a determining argument for winning the competition. Why were you better than others in this respect? What was the decisive factor for your design?

C. Rinsdorf: We put that down to the advantages of building with wood, which makes it possible for us to streamline the design and implementation phase. Of course, we also save time through the high degree of prefabrication and in the implementation itself, for example by reducing the drying times as a whole.

Sustainable architecture?

V&B: How important is “nursery school architecture” when you think about future volumes of orders for local authorities? From your point of view, is it worth specialising in timber frame designs?

J. Berger: Absolutely! Timber engineering projects represent our core competence. In the case of public authorities, we have noticed an increasing openness to timber engineering and the related advantages. Finally, the notion of “healthy interior spaces” also plays a prominent role with nursery schools.



Source: Materio

Architecture is dialogue

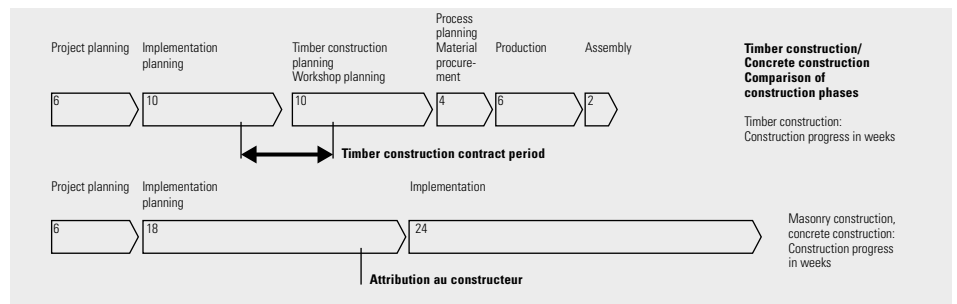
V&B: During the planning phase, the different requirements of the operator and architect had to be aligned with those of the investor and operator. What was the key to success here?

C. Rinsdorf: Through long-term cooperation with our partners, for instance with the company Materio, we were able to commit to accepting short construction times. Our working relationship is founded on careful preliminary planning which brings all interests to the table, including those of later users. This literally pays off, at the latest, during operation of the completed property.

“Educational” architecture?

V&B: What were the reasons behind the decision to install the O.novo Kids range by Villeroy & Boch?

C. Rinsdorf: In addition to its high-quality ceramics, this bathroom collection consistently meets both the ergonomic and educational requirements demanded by child-friendly design. Washbasins with different heights and signal colours drawing attention to their function are implemented here, for example, and encourage children to learn for themselves.



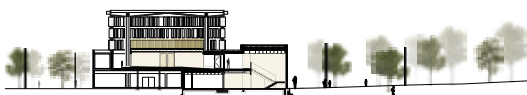
Comparison of timber engineering and solid construction completion times

OPPOSITES ATTRACT

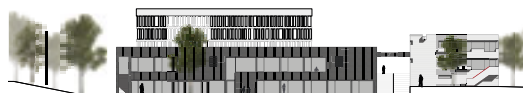
Sign of the times



The new annex with its solid wood construction, with a view of the group areas



Side view



Front view

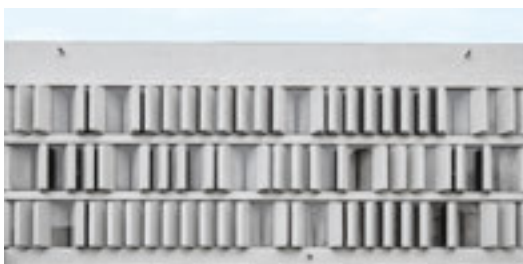
“Christkönigkirche”, or Christ the King Catholic Church, in Saarlouis is exemplary in many respects. To start with, it was built at the end of the 1960s to provide enough space to accommodate a growing Catholic community in the district of Roden. It was designed by architect Günter Kleinjohann in the “New Brutalism” style, whereby “brutal” is not used here with the English meaning, but rather in reference to “béton brut” – i.e. “exposed concrete” in French. Nowadays, for most of the year, the place of worship serves as a play area for a nursery school.



Floor plan

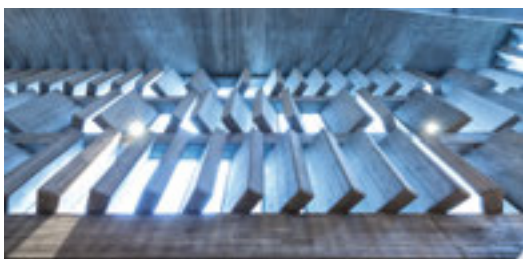


Staircase to the open space on the roof of the cubic element which houses the nursery school's functional spaces



New application

In 2008, due to its dilapidated roof, Saarlouis banished the church from service. The FLOSUNDK architects wanted to make sure that the unusual space would not be left unused. The architect's office won the competition with its design for the new Christ the King Nursery School. The new construction is made up of a two-storey rectangle at the back of the church and a space within a space inside the church. Both components were built using a post and beam construction method. The inserted cubic element was made with a post and beam construction method while the external new building was constructed using a solid wood method.



Proportions

The new building follows the lines and proportions of the monument. The autonomy of the new sections can be recognised by the surface finish. Through the use of dark glazed, fresh-sawn wood for the façade, FLOSUNDK adopted the texture of the existing exposed concrete walls.

NURSERY SCHOOL ANNEXED IN AND ONTO A LISTED CHURCH BUILDING IN SAARLOUIS (GERMANY)



Large open space on the "roof" of the inserted cubic element. Plenty of space for running around and for holding events

Open play area

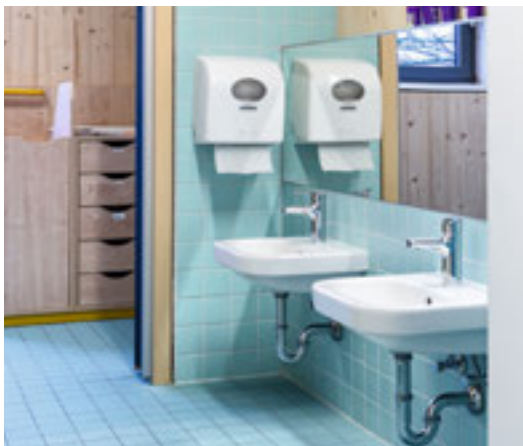
The original church area is the nursery school's most important space. FLOSUNDK installed a wooden box inside the church to accommodate the kitchen and adjacent room. At the same time, the church building functions as a roofed outdoor space. The walls, ceilings and floors of the "wooden building" are thermally insulated like exterior components. Stairs lead up to the roof of the inserted section which can be used as a play area and for holding church services. Children enjoy this area with its diffused light, offering them plenty of space to run around and play.



The group areas bathed in daylight



Architectura's surfaces are particularly hygienic thanks to the use of AntiBac



The washbasins have been installed at the right height for the children to use

Playful approach

Pre-school children discover their own bodies and learn about personal hygiene through imaginative play. At the same time, they gradually learn how to master the challenges of using the bathroom and toilet. Villeroy & Boch has developed a special feature to aid them in this respect. In addition to child-friendly ergonomics, the ceramics also have a rimless design which facilitates cleaning and therefore substantially improves hygiene. With its antibacterial effect, the AntiBac surface ensures greater cleanliness when using the ceramics.

CONSTRUCTION INFORMATION

PROJECT:	Christ the King Nursery School, Saarlouis new construction / existing building
BUILDING PROJECT:	nursery school annexed in and onto a listed church building
PROPERTY DEVELOPER:	Saarlouis parish community on the right bank of the river Saar Priest: Hans-Kurt Trapp
OPERATOR:	Katholische KiTa gGmbH Saarland, Supervisor: Simone Speicher
PLANNER / CONSTRUCTION MANAGEMENT:	FLOSUNDK ARCHITEKTUR + URBANISTIK GMBH am Mügelsberg 4, 66111 Saarbrücken
START OF CONSTRUCTION:	end of 2015
CONSTRUCTION:	post and beam construction, solid wood construction
OPENING:	August 2017
USABLE SPACE:	approx. 1,300 sqm (approx. 100 nursery and 33 crèche places)
INVESTMENT VOLUME:	approx. 3.5 million euros
VILLEROY & BOCH PRODUCTS:	Architectura bathroom collection

SUCCESSFUL SYNTHESIS

Nursery school in the listed concrete church



Mario Krämer
Architect
FLOSUNDK, Saarbrücken



Simone Speicher
Nursery School Supervisor,
Katholische KiTa gGmbH,
Saarland



Stefan Driesch
Site Manager
Christ the King Nursery
School, Saarlouis

V&B question: The brief for the listed church specified a “striking architectural style”, to put it mildly. How do you perceive the contrast between the exposed concrete material – also known as “New Brutalism” – and the feeling of security that a nursery school should convey?

Mr Krämer: For us, the question was how should we deal with this concrete monument? In the original building, exposed concrete was used right down to the tiniest detail. Even the church's candle holders are made with it. To answer this question, we used spruce to contrast with the rough concrete. It's worth noting that spruce was also used as the formwork for pouring the concrete. In this design, the material, wood, also stands for “friendly naturalness”.

Mrs Speicher: I share Mr Krämer's view and prefer to focus on the diversity of the materials rather than on a contrast. The “wooden box” inside the exposed concrete area creates a really warm and cosy atmosphere. The architects used colour sparingly, leaving it up to the children to add their own colourfulness to the space and the projection surface.





V&B question: The success of a project increasingly depends on finding the right balance between requirements which can sometimes be contradictory. How were you able to balance and take account of the different interests of architecture and education?

Mr Driesch: We had countless meetings, during which every little detail was settled. We chose every single colour and tile together, collaborating very closely. What matters for the children and for me as Supervisor of Christ the King Nursery School is that the building is close to nature and feels warm and cosy. Warm wooden shades and white predominate, creating a pleasant sense of space for everyone.

Mr Krämer: It was also important to retain the building's sacred character. That's why we inserted the new construction like a piece of furniture.

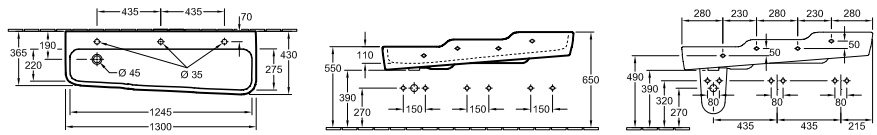
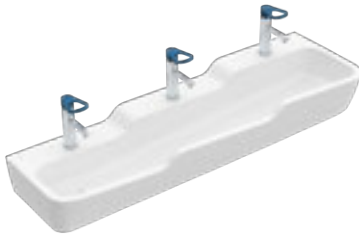
V&B question: Modern education includes training children in all areas. How has this exerted an influence on the new nursery school building?

Mr Krämer: Mrs Speicher, the supervisor of 8 nursery schools in Saarland, surprised us here when she came up with an astonishing idea. She wanted all the washbasins to have different tap fittings. It was only in the course of discussions that we discovered that by handling different types of tap fittings the children learn how to master them. It may look strange but it is very educational.

Mrs Speicher: ...wet rooms should also offer children a place where they can try things out and engage their curiosity. After all, this is where they develop their own relationship to personal hygiene. So, it's good to know that the shape of the toilets makes them particularly easy to clean and that, thanks to their special surface, bacteria don't stand a chance.

Ceramic

O.NOVO KIDS MULTIPLE WASHBASIN



Modell number

4A08 13 1300 x 430 mm

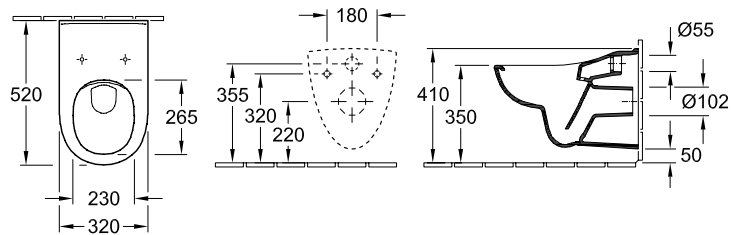
suitable for 3-hole mixer, 3 precut tap holes, without overflow

Accessories

Trap cover (article no. 721800), tap fittings



WASHDOWN TOILET, RIMLESS FOR CHILDREN, O.NOVO KIDS



Modell number

4690 R0 320 x 520 mm, EN 997

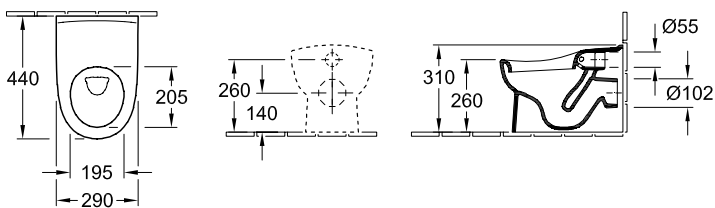
wall-mounted, horizontal outlet

Accessories

Children's toilet seat



WASHDOWN TOILET FOR SMALL CHILDREN, O.NOVO KIDS



Modell number

4691 10 290 x 440 mm, EN 997

floor-standing, horizontal outlet,
with AQUAREDUCT® water-saving system: flush volume 3/4.5 litres

Accessories

Foam seat ring for small children



Colours

CERAMIC COLOURS



01
White Alpin

R1
White Alpin
CeramicPlus

T1
White Alpin
AntiBac

T2
White Alpin
AntiBac
CeramicPlus

BICOLOUR CERAMIC COLOURS



BC9A
Ocean Blue

BCP5
Sunshine Yellow

ACCESSORY COLOURS



9A
Ocean Blue

P5
Sunshine Yellow

P4
Cherry Red

CERAMIC COLOURS

01	White Alpin
R1	White Alpin CeramicPlus
T1	White Alpin AntiBac
T2	White Alpin AntiBac CeramicPlus

BICOLOUR CERAMIC COLOURS

BC9A	Ocean Blue
BCP5	Sunshine Yellow

ACCESSORY COLOURS

9A	Ocean Blue
P5	Sunshine Yellow
P4	Cherry Red

Accessories

SEATS



Modell number

8M1261	Children's toilet seat consisting of: 1 large seat ring, 1 small seat ring, 1 cover Stainless-steel hinges
8M1161	Children's toilet seat consisting of: 1 large seat ring, 1 small seat ring, without cover Stainless-steel hinges
8M1361	Children's toilet seat consisting of: 1 large seat ring, stainless steel hinges

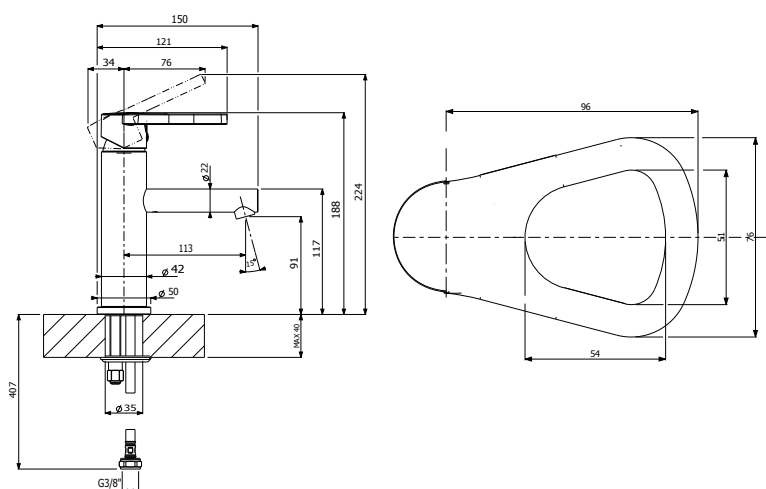
also available in White Alpin

Modell number

8M1461	Foam seat ring for small children
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also available in Ocean Blue

TAP FITTINGS



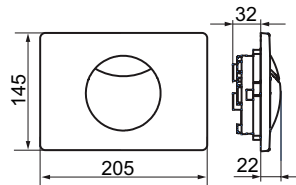
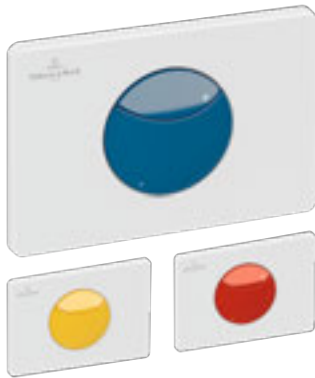
Modell number

GB45216251	Single-lever washbasin mixer (Gustavsberg)
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also available with sensor operation

Installation systems

CHILDREN'S FLUSH PLATE E100

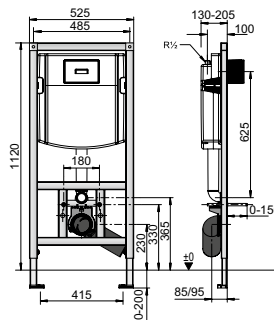


Modell number

9223 74	205 x 145 x 22 mm
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made of high-quality plastic, also available in White

VICONNECT TOILET ELEMENT FOR CHILDREN'S WALL-MOUNTED TOILET FOR DRY-WALL INSTALLATION, STANDARD HEIGHT

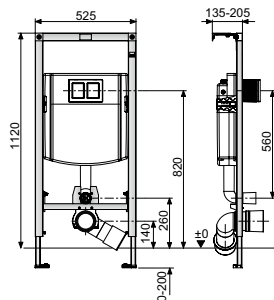


Modell number

9224 61 00	525 x 1120 x 135 mm
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self-supporting, powder-coated steel frame construction, fully pre-mounted, EN 14055

VICONNECT TOILET ELEMENT FOR SMALL CHILDREN'S FLOOR-STANDING TOILET FOR DRY-WALL INSTALLATION, FLUSH PLATE SET AT LOW HEIGHT



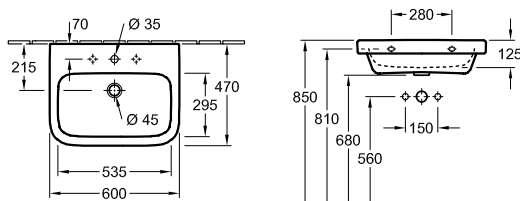
Modell number

9221 54 00	525 x 1120 x 135 mm
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self-supporting, powder-coated steel frame construction, fully pre-mounted, EN 14055

Matches the collection

COMBI CLASS ARCHITECTURA WASHBASIN WITH VANITY UNIT



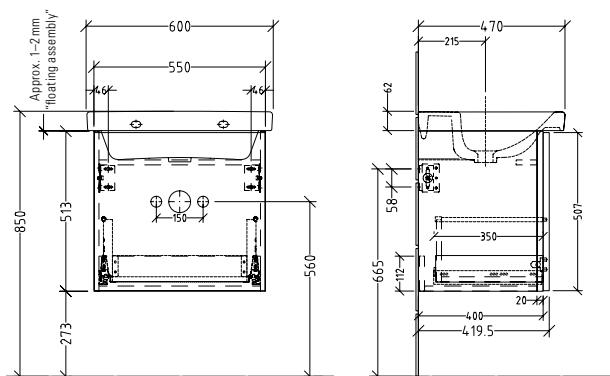
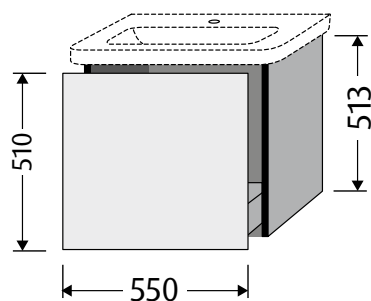
Architectura washbasin

4188 65	650 x 470 mm (with overflow)
4188 66	650 x 470 mm (without overflow)
4188 60	600 x 470 mm (with overflow)
4188 61	600 x 470 mm (without overflow)
4188 55	550 x 470 mm (with overflow)
4188 56	550 x 470 mm (without overflow)

suitable for 3-hole mixer, precut centre tap hole

Accessories

Pedestal, trap cover



Vanity unit (Sanipa)

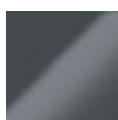
BS 998	650 x 513 x 420 mm
BS 999	600 x 513 x 420 mm
BS 997	550 x 513 x 420 mm

1 drawer, left and right accented edge in chrome

FRONT AND CARCASS COLOURS

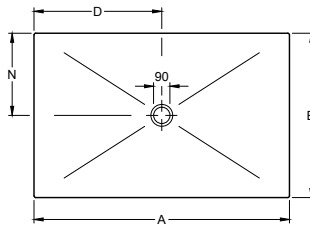
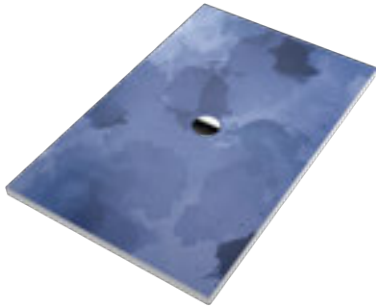


78
White
High-gloss

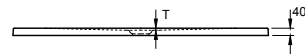


79
Anthracite
High-gloss

**SUBWAY INFINITY SHOWER TRAY
WITH BLUE LAGOON VIPRINT DÉCOR**



	A	B	D	N	T
6232 45	1600	1000	800	500	12
6231 S4	1400	900	700	450	12
6230 N4	1200	900	600	450	12
6229 J3	1000	800	500	400	12
6228 J5	1000	1000	500	500	12



Modell number

6232 45	1600 x 1000 x 40 mm
6231 S4	1400 x 900 x 40 mm
6230 N4	1200 x 900 x 40 mm
6229 J3	1000 x 800 x 40 mm
6228 J5	1000 x 1000 x 40 mm

Standard model for all installation types, on request can be cut to many other sizes (recommended: Mepa installation system, article no. 9223 76 00), in addition to the standard colours White Alpin, Taupe and Ardoise and the Blue Lagoon ViPrint décor, Subway Infinity shower trays are also available in 19 additional stylish ViPrint décors.



PROJECTS

The complete concept

Villeroy & Boch works with architects, planners and interior designs before, during and after the project – from the first draft to the final version. The modular PROJECTS system from Villeroy&Boch offers collections and products for individual project requirements with clear segmentation in terms of pricing and subject matter.

The system offers:

- A variety of products to suit every project requirement
- A wide range of services
- Modern tools for efficient project design
- Newly defined standards for quality, design and innovation
- Rapid and simple orientation through different price and project segments

PRICE SEGMENTS:



Premium & Luxury

Collections for the most discerning requirements.



Design & Lifestyle

Design variety for every project.



System & Function

The modular concept for different projects.



Entry level & broad product range

The attractive entry-level price segment for every project requirement.

PROJECT SEGMENTS:



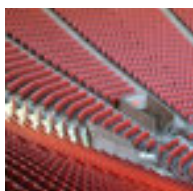
HOTEL & RESTAURANT



HOUSING



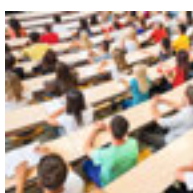
OFFICE & COMMERCE



SPORT & CULTURE



HEALTH & HEALTHCARE



PUBLIC SECTOR & EDUCATION

