

Technical Unit for a Sanitary Fixture

The invention relates to a technical unit for a sanitary fixture according to the preamble of Claim 1 and to a sanitary fixture with a technical unit according to the invention according to the preamble of Claim 31.

From the document EP-A 2 067 901, a device is known with a vertical installation front wall which reaches the floor, and which, as a static element, transfers the forces from the WC ceramics (wall-mounted) to the floor; behind said front wall both the WC rinsing device and the plumbing of the sanitary apparatuses with water and waste water as well as the under-shower for the body can be accommodated, and a ceramics bowl can be attached to said front wall. Relative to the installation front wall, the entire technical arrangement is arranged under plaster, which entails the disadvantage that all the elements that are part of the technical unit are difficult to access, which also results in poor serviceability. An additional disadvantage is the design, because an opening or door is required to provide access to the technical unit. This device has only one interface, namely between the closet body and the installation front wall. There is no interface with the wall itself at all. Finally, an additional important disadvantage is that the decision in favor of such a shower WC with the technical arrangement integrated in the installation front wall has to be made already during the building shell phase. A belated desire for a shower WC can thus not be satisfied. During the mounting of the fixture, an installation wall is first attached to the building floor and to the building wall, and then the mounting frame is covered with a cover. After completing this installation wall, the shower unit, the actuation plate for the water closet, and a plate are mounted; said plate can be removed again later, so that the shower unit and any other function elements are accessible for a revision. The installation wall is thus not an autonomous modular technical unit which can be delivered in a completely premounted state, so that the water closet can be attached to a wall in two mounting steps. For such a mounting in only two mounting steps, no rear interface is provided on which all the connections for the water closet are arranged freely accessible, and there is no front

interface to which the closet body can be attached subsequently in such a manner as to be freely accessible from the front side.

Additional disadvantages of this known device are the following:

- cleaning under the technical unit or installation wall is not possible;
- the installation front wall is a static element and has to be secured to the rear on the fixed wall for statics related reasons and supported on the floor; and
- once the respective installation front wall element has been installed, conventional WC ceramics can no longer be mounted.

The aim of the invention here is to provide a remedy. The invention is based on the problem of producing a combination of a shower WC technical arrangement and WC ceramics, but with two separate elements (a technical unit and WC ceramics).

The invention solves the indicated problem with a technical unit that has the characteristics according to Claim 1 and with a sanitary fixture that has the characteristics according to Claim 31.

The advantages achieved by the invention can be characterized as follows:

- the decision in favor of such a shower WC needs to be made only after the building shell phase (a decision made shortly before the completion of the mounting of the shower WC is sufficient);
- optimal accessibility and thus serviceability; and
- it requires no static element on the floor for the shower WC itself. The clearance from the floor thus allows cleaning under the WC and under the technical unit;
- because the rinsing technical arrangement is already premounted in the wall or on the building side, the technical unit according to the invention is independent thereof;
- as a result of the design of the technical unit with a housing that encloses the rear and the front interfaces, a mounting of the entire shower WC in two mounting steps is possible, i.e., the technical unit is first attached as an autonomous and completely premounted unit to the building wall, and subsequently the closet body is attached to the front interface; and
- the technical unit is produced as an autonomous module, which can be transported and delivered as a completely premounted unit.

In a special embodiment, the housing is designed as a tank, preferably with a cuboid shape.

In a further embodiment, the cuboid tank has six walls, two of said walls representing the two interfaces.

In an additional embodiment, the technical unit comprises a supporting frame with the load-bearing elements for the closet body, wherein the supporting frame is connected in a rigid manner to the tank. This makes it possible to achieve the advantage that, for the attachment of the closet body, the supporting frame can be attached directly, for example, to the rear wall of the tank, and it can be passed through to the front wall, so that the entire technical unit can be attached with the rear side of the supporting frame to the building wall, and the closet body can be attached at the front interface directly to the supporting frame. Furthermore, as a result of this design, the tank can be produced using a simple construction, because the large forces generated by the supporting of the closet body are absorbed by the supporting frame.

In an additional embodiment, the rear interface comprises a rear mounting plate and the front interface comprises a front mounting plate, wherein the rear mounting place is preferably connected in a rigid manner to the supporting frame. This allows the advantage that the entire technical unit can be attached via the supporting frame to the building wall, wherein the supporting frame at the rear interface can have the same attachment elements as a conventional closet body, thus also allowing the subsequent incorporation of the technical unit, without large expense, on the attachment elements that are already attached to the building wall.

In yet another embodiment, the rear mounting plate in the interior of the cuboid tank comprises attachment elements for attaching a WC under-shower device, a pipe system for the flow of the rinsing water, a hot water heater, a blow-drying device, and a control unit. The under-shower device, the pipe system, the hot water heater, the blow-drying device, and the control unit can thus be mounted in the factory on the rear mounting plate, and the remaining walls of the tank can be attached after finishing the technical unit in the factory. In this manner, a compact arrangement and attachment of the WC under-shower device, of the pipe system, and, for example, of a hot water heater and a blow-drying device in the technical unit is made possible. At the construction site, only a single compact tank then needs to be attached to the building wall.

In a further embodiment, at least one of the six walls, preferably a side wall, can be opened in a manner such that it can be closed again. In this manner, the technical unit can be designed in a manner that is particularly maintenance friendly.

In an additional embodiment, the WC under-shower device is designed so it can be moved and it comprises a retractable and extendable arm.

In a further embodiment, the technical unit has a pipe system for the flow of the rinsing water from a rinsing tank located outside of the technical unit to the closet body.

In an additional embodiment, the technical unit has no rinsing tank. This saves space and simplifies the mounting.

In an additional embodiment, the technical unit can be delivered or mounted as a combination with a rinsing tank which is arranged outside of the technical unit, horizontally and with vertical offset with respect to said technical unit, and under plaster.

In yet another embodiment, the technical unit can be delivered or mounted as a combination with a rinsing tank which is arranged outside of the technical unit, vertically with respect to said technical unit, and over plaster.

In a further embodiment, the technical unit in addition has a hot water heater. The advantage here is that the shower water can be preheated to a temperature that is pleasant for the body.

In an additional embodiment, the technical unit has, in addition, a blow-drying device. The advantage is that several functions can be carried out using only one device. After cleaning the anal and/or vaginal area with the shower water, these areas can be dried using the blow-drying device. For individuals with disabilities, this function facilitates the tedious cleaning of these areas as well as the drying thereof.

In a further embodiment, the blow-drier device is integrated in the WC under-shower device, preferably in the form of a single movable arm. The advantage is that no second arm is required for this function.

In an additional embodiment, the technical unit comprises, in addition, an odor extraction device. The advantage is that unpleasant odors can be extracted directly.

In a further embodiment, the WC under-shower device comprises a water pump.

The technical unit can also comprise a pipe system for the rinsing water, which can be coupled to a connection piece for the rinsing device, which passes through the building-side installation surface.

In a further embodiment, the technical unit comprises an electrical connection that passes through the installation surface.

In an additional embodiment, said technical unit comprises a closet body which is attached at its interface by means of the load-bearing elements to the front interface of the technical unit.

In a further embodiment, it is mounted over plaster on a building-side installation surface.

In an additional embodiment, said technical unit comprises a rinsing tank arranged behind the building-side installation surface under plaster. A rinsing device usually comprises a rinsing tank with a fill valve, rinsing fittings as well as a rinsing pipe which is attached to the rinsing tank and which can be connected through the building-side installation surface and the rear interface of the technical unit via the rinsing pipe connection to the pipe system of the technical unit.

In a further embodiment, the closet body, the technical unit, and the rinsing tank are arranged horizontally.

In an additional embodiment, the technical unit has a separation $A > 0$ from the building floor, where A is preferably at least 20 mm.

In a further embodiment, the closet body comprises at least two guide elements protruding over its interface, for coupling to the technical unit.

In an additional embodiment, the closet body comprises at least two anchoring elements protruding over its interface, for the attachment to the technical unit.

In a further embodiment, the WC under-shower device comprises a shower function and a blow-drying function, wherein the shower function and the blow-drying function are implemented in an arm which can be retracted and extended by a control unit, and which, on the one hand, contains at least one water feed line to at least one shower opening, and, on the other hand, at least one air feed line to at least one blow-drying opening in an inner pipe, wherein a closure is provided on the inner pipe, which is arranged, in the position for the operation of the at least one shower opening with water, above the at least one blow-drying opening, and the closure, in the position for the operation of the at least one blow-drying opening with air, is removed from the at least one blow-drying opening.

In a further embodiment, the closure is arranged, in the position for the operation of the at least one blow-drying opening with air, above the at least one shower opening.

In a further embodiment, the closure is configured as an outer pipe which surrounds the inner pipe, and which is arranged so that it can be moved with respect to the inner pipe.

In yet another embodiment, the outer pipe has an opening, wherein, in two relative positions of the outer pipe with respect to the inner pipe, the blow-drying opening or the shower opening can be exposed alternatingly.

In an additional embodiment, the outer pipe can be moved by a control unit between two positions, wherein one position corresponds to a retracted position.

In an additional embodiment, the inner pipe can be moved into three different positions by a control unit.

In yet another embodiment, the two positions of the outer pipe correspond to two positions of the inner pipe, and the inner pipe can be moved further with respect to the extracted position of the outer pipe into the third position.

In an additional embodiment, the arm can be positioned individually with respect to the user.

In yet another embodiment, the water feed line in the area of the shower opening and the air feed in the area of the blow-drying opening extends substantially parallel to each other.

The technical unit is preferably configured as a transportable module.

In an additional embodiment, the technical unit comprises a shower water feed line for the WC under-shower device.

In a particular embodiment, the sanitary fixture can be mounted over plaster onto a building-side installation surface. The sanitary fixture preferably comprises a rinsing tank arranged behind the building-side installation surface under plaster, wherein the closet body and the technical unit can be arranged horizontally, and the rinsing tank can be arranged with horizontal and vertical offset.

In a further embodiment of the sanitary fixture, the technical unit has a separation $A > 0$ from the building floor, where A is preferably at least 20 mm.

In an additional embodiment of the sanitary fixture, the closet body has at least two guide elements for coupling to the technical unit, which protrude over the interface of said closet body. The closet body preferably has at least two anchoring elements protruding over its interface, for the attachment to the technical unit.

The invention and variants of the invention are described in further detail below in reference to partially diagrammatic representations of several embodiment examples.

Figure 1 shows a perspective view of an embodiment of the technical unit including a closet body for a sanitary fixture;

Figure 2 shows a perspective view of the closet body 4 corresponding to the embodiment of the technical unit for a sanitary fixture according to the invention, which is represented in Figure 1;

Figure 3 shows a perspective view of the embodiment of the technical unit for a sanitary fixture according to the invention, which is represented in Figure 1;

Figure 4 shows a perspective view of the embodiment of the technical unit for a sanitary fixture according to the invention, which is represented in Figure 1;

Figure 5a shows a perspective view of the embodiment of the technical unit for a sanitary fixture according to the invention with an under-shower device, which is represented in Figure 1;

Figure 5b shows a detail view of the front portion of the under-shower device of Figure 5a;

Figure 6 shows a perspective view of the closet body 4, which is mounted on the load-bearing elements, of the embodiment of the technical unit for a sanitary fixture according to the invention, which is represented in Figure 1;

Figure 7 shows an exploded view of the load-bearing elements and of the closet body of the embodiment of the technical unit for a sanitary fixture according to the invention, which is represented in Figure 1;

Figure 8 shows a perspective view of the embodiment of the technical unit for a sanitary fixture according to the invention, which is represented in Figure 1, wherein one side wall is open, and as a result the access to the hot water heater can be seen;

Figure 9 shows a perspective view of the building-side installation surface;

Figure 10 shows a front view of the interface in the direction of the installation wall of the technical unit;

Figure 11 shows a perspective view of the interface in the direction of the closet body of the technical unit;

Figure 12 shows a perspective view of a further embodiment of the technical unit according to the invention with closed side wall;

Figure 13 shows a perspective view of the embodiment of the technical unit according to the invention, which is represented in Figure 12, with open side wall;

Figure 14 shows a view from the rear onto the embodiment of the technical unit according to the invention, which is represented in Figure 12;

Figure 15 shows a perspective view of the load-bearing elements and of the closet body of the embodiment of the technical unit according to the invention, which is represented in Figure 12;

Figure 16 shows a perspective view of the rear mounting plate with the function elements of the embodiment of the technical unit according to the invention, which is represented in Figure 12;

Figure 17 shows a diagrammatic view of a combined shower/blow-drying arm of a shower WC, in the case of the use as a shower arm, in a cross section in the longitudinal direction, in the case of a further embodiment of the technical unit according to the invention;

Figure 18 shows a diagrammatic representation of the combined shower/blow-drying arm from Figure 17 in the case of the use as a drying arm, in a cross section in the longitudinal direction;

Figure 19 shows a diagrammatic representation of a combined shower/blow-drying arm of a shower WC in the case of the use as a shower arm, in a cross section in the longitudinal direction of yet another embodiment of the technical unit according to the invention; and

Figure 20 shows a diagrammatic representation of the shower/blow-drying arm of Figure 19, in the case of the use as a drying arm, in a cross section in the longitudinal direction.

The embodiment of the technical unit 1 for a sanitary fixture, which is represented in Figure 1, comprises a technical unit 1 which is mounted with its rear interface 3 onto a building-side installation surface 2. Moreover, it comprises a closet body 4 which is connected to the front interface 5 of the technical unit 1. The rinsing tank is arranged here in a manner so it cannot be seen behind the installation surface 2 under plaster.

The embodiment of the technical unit 1 for sanitary fixtures represented in Figure 2 shows the closet body 4 including an interface 8 which can be mounted onto the front interface 5 of the technical unit 1. At the interface 8, the anchoring elements 10 which

are required for attaching the closet body 4 to the technical unit 1 as well as the guide elements 9 which are used for coupling to the technical unit 1 are arranged.

The embodiment of the technical unit 1 for sanitary fixtures represented in Figure 3 shows the technical unit 1, which is mounted by means of the rear interface 3 onto the building-side installation surface 2 as well as the front interface 5 which is required for mounting the closet body 4 onto its interface 8.

The embodiment of the technical unit 1 for sanitary fixtures represented in Figure 4 shows the load-bearing elements 6 on the technical unit 1, which are required for mounting the closet body 4, so that the guide elements 9 and the anchoring elements 10 of the closet body 4 can be attached to the technical unit 1.

The embodiment of the technical unit 1 for sanitary fixtures represented in Figure 5a shows a perspective view of the closet body 4, in which the preferably movable WC under-shower device 7 can be seen. In Figure 5b, the front attachment 22 of the under-shower device 7 is represented in detail, with the blow-drying openings 21 and the two (anal and vaginal) shower devices 29.

The embodiment of the technical unit 1 for sanitary fixtures, which is partially represented in Figure 6, shows primarily the static attachment elements of the mounted technical unit 1, the closet body 4, the rear interface 3, and the anchoring elements 10 and the rinsing pipe connection 24. The closet body 4 is attached to the load-bearing element 6 of the technical unit 1.

The embodiment of the technical unit 1 for sanitary fixtures represented in Figure 7 shows the closet body 4, the anchoring elements 10, the guide elements 9, the connection for odor extraction 13, the pipe system 14 for the rinsing water distribution, and the rear interface 3 of the technical unit 1.

The embodiment of the technical unit 1 for sanitary fixtures represented in Figure 8 shows the hot water heater 15 which is integrated in the technical unit 1 and which can be flipped out of the latter.

Figure 9 shows the building-side installation surface 2 to which the rear interface 3 of the technical unit 1 is connected by means of the anchoring element 19. Behind the building-side installation surface 2, the rinsing tank 23 is located. Moreover, Figure 9 shows the electrical connection 16 and the water supply 17, the connection piece 18 as a connection between the rinsing tank 23 and the pipe system 14 for rinsing, as well as the outlet 20 for soiled water.

Figure 10 shows the interface 3 of the technical unit 1, which is connected to the building-side installation wall 2 [according to Figure 1 and Figure 9]. Moreover, a conduit opening 27 for the electrical connection 16 [according to Figure 9] on the building-side installation wall 2 [according to Figure 9], the discharge water pipe 25, and the water feed pipe 26 are shown.

Figure 11 shows the interface 5 of the technical unit 1, which is connected to the interface 8 of the closet body 4 [according to Figure 2]. Moreover, the load-bearing elements 6 are shown, which receive the anchoring elements 10 of the closet body 4 [according to Figure 2], the discharge water pipe 25, the WC under-shower device 7, the dual water feed 12, the duct for domestic hot water tank overflow 11, and the duct for odor extraction 28.

In Figures 12-16, an embodiment of the technical unit 1 is represented, which comprises a housing enclosing the rear and the front interfaces 3, 5. This housing is configured substantially as a cuboid tank 30 with six walls. The technical unit 1 furthermore comprises the WC under-shower device 7, which comprises a retractable and extendable arm 37 arranged at the front interface (Figure 13). The advantage is that the arm 37 of the WC under-shower device 37 can be retracted when not in use into the closet body 4. A further advantage is the fine adjustment that is possible as a result.

Furthermore, the technical unit 1 comprises a supporting frame 34 with the load-bearing element 6 for the closet body 4, supporting frame which is connected in a rigid manner to the tank 30. The rear interface 3 comprises a rear mounting plate 32 which forms a wall of the cuboid tank 30, while the front interface 5 comprises a front mounting plate 33 which forms a further wall of the cuboid tank 30. The rear mounting plate 32 is provided in the interior of the cuboid tank 30 with the attachment elements (not shown) for the attachment of the WC under-shower device 7, of the pipe system 14 for the flow of the rinsing water, of the hot water heater 15, of the blow-drying device, and of the control unit. The technical unit 1 comprises, in addition, a shower water feed line 35 (Figure 16) for the WC under-shower device 7, which can be connected to the water feed 17 (Figure 9).

Furthermore, the rear mounting plate 32 is connected in a rigid manner to the supporting frame 34, so that the entire technical unit can be attached by the single step of attaching the supporting frame 34 to a building wall on the building. At the time of the

mounting of the technical unit 1 onto the building wall, the technical unit 1 can be shifted, without opening one of the walls of the tank 30, over the anchoring elements 19 that are fastened in the building wall (Figure 9), and attached by means of a pipe wrench which can be passed from the front, i.e., from the front mounting plate 33, through the tank 30 to the rear mounting plate 32, by means of the securing elements 36 to the anchoring elements 19. Since, on the one hand, the technical unit 1 is attached by the single step of attaching the supporting frame 34 by means of the securing elements 36 to the building wall, and, on the other hand, the WC under-shower device 7, the pipe system 14 for the flow of the rinsing water, the hot water heater 15, the blow-drying device, and the control unit are attached only to the rear mounting plate 32, the technical unit 1 can be designed as a compact construction (Figure 16).

The supporting frame 34 comprises two load-bearing elements 6 designed as rails, which are configured to allow the reception by shifting of the guide elements 9 attached to the closet body 4. The mounting of the closet body 4 on the technical unit 1 previously attached to the building wall can therefore occur by simply inserting the guide elements 9 into the load-bearing elements 6 configured as rails, so that the weight of the closet body 4 is absorbed by the supporting frame 34, as soon as the guide elements 9 are inserted into the rails. The attachment of the closet body 4 to the technical unit 1 is carried out subsequently by screwing the anchoring elements 10 attached to the closet body 4 to the load-bearing elements 6 of the technical unit 1, without having to use any force to lift the closet body 1.

As represented in Figure 13, a side wall 31 of the tank 30 can be opened in a manner such that it can be closed again.

Figures 17 and 18 show diagrammatically a front portion of a WC under-shower device 7, which comprises a combined shower arm and a blow-drying arm. The combined shower and blow-drying arm are configured in an arm 37 which can be retracted and extended by a control unit of the shower WC. The control unit can be the control unit of a shower WC which is embodied by a microprocessor. The arm 37 comprises a water feed line 38, and an air feed line 39 in the form of passages and ducts, which is separate from the water feed line 38, in an inner pipe 40 of the arm 37. The water feed line 38 is connected to a container (not shown) in which the water can be warmed or heated. The water feed line 38 can be supplied with the water from the container via a pump (not shown).

The water feed line 38 enters into a shower opening 41 for the shower function from the inner pipe 40, wherein the shower opening 41 can comprise a shower nozzle. The air feed line 39 exits in a blow-drying opening 21, which can be provided with a blow-drying nozzle, from the inner pipe 40. The air feed line 39 can be supplied or fed with preferably warm pressurized air from an air compressor (not shown).

The inner pipe 40 is surrounded by a closure which, in the position for the operation of the shower opening 41 with water, is arranged above the blow-drying opening 21 (see Figure 17), and which, in the position for the operation of the blow-drying opening 21 with air, is removed from the blow-drying opening 21 (see Figure 18).

In the embodiment shown in Figures 17 and 18, the closure is designed as an outer pipe 43 surrounding the inner pipe 40, the inner diameter of said outer pipe being adapted to the outer diameter of the inner pipe 40, in order to achieve accuracy of fit. The outer pipe 43 can be coated on the inner surface with an elastic material, in order to allow an accurately fitting sliding of the inner pipe 40 on the outer pipe 43, and to seal the inner pipe 40 with the outer pipe 43 that encloses it with respect to the outside.

The outer pipe 43 or the closure can be moved between two positions by the control unit, wherein one position corresponds to a retracted position. The combined shower/blow-drying arm is then retracted in the ceramics of the shower WC. In the other position of the outer pipe 43, the combined shower/blow-drying arm can be used. In the other position, it is extended into the ceramics, and thus exposed in the WC bowl of the shower WC.

The inner pipe 40 can be moved by the control unit into three different positions. On the one hand the, retracted position, in which the combined shower/blow-drying arm is embedded in the ceramics. On the other hand, into two additional positions corresponding to the shower operation and the blow-drying operation. Figure 17 shows one of the two last positions in which the shower opening 41 is exposed. The relative position of the inner pipe 40 and of the outer pipe 43 is maintained with respect to the retracted position. The inner pipe 40 and the outer pipe 43 are extended into the WC bowl. The control unit supplies the water feed line 38 with water in the position shown in Figure 17, in order to carry out or make possible the shower function. Instead of the two or three positions, it is also possible to provide several positions adapted individually to the user.

In comparison to Figure 17, in Figure 18 the inner pipe 40 is further extended relative to the outer pipe 43, in order to carry out or make possible the blow-drying operation. In the position shown in Figure 18, the control unit supplies the air feed line 39 with warm pressurized air and it blocks the water supply for the water feed line 38.

In the state where the arm 37 is extended into the ceramics, the blow-drying opening 21 is closed, which prevents the entry of water and dirt into the blow-drying opening 21 during pre-rinsing and post-rinsing. The inner pipe 40 and the outer pipe 43 are in the mutual relative position shown in Figure 17. For the shower function, the inner pipe 40 and the outer pipe 43 are extended jointly, without changing the relative mutual position.

Figures 19 and 20 show a further embodiment, in which identical reference numerals denote identical elements to those of the embodiment shown in Figures 17 and 18. Furthermore, the closure of the embodiment shown in Figures 19 and 20 is designed such that it is arranged, in the position for the operation of the shower with water, above the blow-drying opening 21, in order to ensure that, during the performance of the shower function, no water reaches the blow-drying opening 21 from the shower opening 41.

The outer pipe 43 has an opening 44 which, in the two relative positions of the outer pipe 43 with respect to the inner pipe 40 shown in Figures 19 and 20, alternately exposes the blow-drying opening 21 or the shower opening 41.

Figure 19 shows the relative position of the outer pipe 43 with respect to the inner pipe 40, in which the shower opening 41 is exposed. The control unit can supply the water feed line 38 with water in the position shown in Figure 19, in order to carry out or make possible the shower function of the combined shower/blow-drying arm.

In comparison to Figure 19, in Figure 20 the inner pipe 40 with the blow-drying opening 21 is extended further relative to the outer pipe 43, in order to carry out the blow-drying operation or to expose the blow-drying opening 21. In the position shown in Figure 20, the control unit can supply the air feed line 39 with preferably warm pressurized air, and block the water supply for the water feed line 38.

In the state of retraction into the ceramics of the embodiment of the arm 37, which is shown in Figures 19 and 20, the blow-drying opening 21 is closed, which prevents the entry of water into the blow-drying opening 21. The inner pipe 40 and the outer pipe 43 are in the mutual relative position shown in Figure 19. For the shower

function, the inner pipe 40 and the outer pipe 43 are extended jointly, without changing the relative mutual position.

As described above, the present invention allows a better arrangement of an arm for a shower WC with a shower function and a blow-drying function, because two arms are not used, of which at least one has to be arranged off-center. With one arm, a central arrangement of the shower arm and also of the drying arm is possible. The direction of the air jet is optimal, because it can extend similarly to the direction of the water jet. In addition, the expenses for mounting and/or maintenance as well as for sealing are reduced, because only one opening in the ceramics needs to be provided; the same drive unit as well as the same control unit can be used.

Although the above-described different embodiments of the present invention are provided, they must be understood to include the possibility of using different features either alone or also in any desired combination.

Therefore, the invention is not limited to the above-described, particularly preferred embodiments.

Claims

1. Technical unit (1) for a WC,

characterized in that

a) the technical unit (1) comprises a rear interface (3) suitable for mounting said technical unit onto a building-side installation surface (2), and a front interface (5) suitable for mounting a closet body (4) of a sanitary fixture;

b) the technical unit (1) comprises one or more load-bearing elements (6), which allow the mounting of a closet body (4) onto the technical unit (1);

c) the technical unit comprises a WC under-shower device (7), and

d) the technical unit (1) comprises a housing which encompasses the two interfaces (3, 5).

2. Technical unit (1) according to Claim 1, characterized in that the housing is designed as a tank (30), preferably with a cuboid shape.

3. Technical unit (1) according to Claim 2, characterized in that the cuboid tank (30) has six walls, two of said walls representing the two interfaces (3, 5).

4. Technical unit (1) according to Claim 2 or 3, characterized in that the technical unit (1) comprises a supporting frame (34) with the load-bearing elements (6) for the closet body (4), wherein the supporting frame (34) is connected in a rigid manner to the tank (30).

5. Technical unit (1) according to one of Claims 1-4, characterized in that the rear interface (3) comprises a rear mounting plate (32), and the front interface (5) comprises a front mounting place (33), and preferably the rear mounting plate (32) is connected in a rigid manner to the supporting frame (34).

6. Technical unit (1) according to Claim 5, characterized in that the rear mounting plate (32) comprises, in the interior of the cuboid tank (30), attachment elements for the attachment of a WC under-shower device (7), of a pipe system (14) for the flow of the rinsing water, of a hot water heater (15), of a blow-drying device, and of a control unit.

7. Technical unit (1) according to one of Claims 3-6, characterized in that at least one of the six walls, preferably a side wall (31), can be opened in a manner such that it can be closed again.

8. Technical unit (1) according to one of Claims 1-7, characterized in that the WC under-shower device (7) is designed so that it is movable, and it comprises a retractable and extendable arm (37).

9. Technical unit (1) according to one of Claims 1-8, characterized in that the technical unit (1) contains a pipe system (14) for the flow of the rinsing water from a rinsing tank (23) located outside of the technical unit (1) to the closet body (4).

10. Technical unit (1) according to Claims 1-9, characterized in that it does not contain a rinsing tank (23).

11. Combination of a technical unit (1) according to one of Claims 1-10 with a rinsing tank (23) which is arranged outside of the technical unit (1) with horizontal and vertical offset with respect to said technical unit, and under plaster.

12. Combination of a technical unit (1) according to one of Claims 1-10, with a rinsing tank (23) arranged outside of the technical unit (1) vertically with respect to said technical unit, and over plaster.

13. Technical unit (1) according to one of Claims 1-12, characterized in that it contains, in addition, a hot water heater (15).

14. Technical unit (1) according to one of Claims 1-13, characterized in that it contains, in addition, a blow-drying device.

15. Technical unit (1) according to one of Claims 1-14, characterized in that the drying device is integrated in the WC under-shower device (7), preferably in the form of a single, movable arm.

16. Technical unit (1) according to one of Claims 1-15, characterized in that it contains, in addition, a device for odor extraction (13).

17. Technical unit (1) according to one of Claims 1-16, characterized in that the under-shower device (7) comprises a water pump.

18. Technical unit (1) according to one of Claims 1-17, characterized in that it comprises a pipe system (14) for the rinsing water, which can be coupled to a connection piece (18) for the rinsing device, which passes through the building-side installation surface (2).

19. Technical unit (1) according to one of Claims 1-18, characterized in that it comprises an electrical connection (16) passing through the installation surface (2).

20. Technical unit (1) according to one of Claims 1-19, characterized in that the WC under-shower device (7) has a shower function and a blow-drying function, wherein the shower function and the blow-drying function are implemented in an arm (37) which can be retracted and extended by a control unit, and which contains, on the one hand, at least one water feed line (38) to at least one shower opening (41), and, on the other

hand, at least one air feed line (39) to at least one blow-drying opening (21) in an inner pipe (40), wherein a closure is provided on the inner pipe (40), which, in the position for the operation of the at least one shower opening (41) with water, is arranged above the at least one blow drying-opening (21), and the closure, in the position for the operation of the at least one blow-drying opening (21) with air, is removed from the at least one blow-drying opening (21).

21. Technical unit (1) according to Claim 20, characterized in that the closure, in the position for the operation of the at least one blow-drying opening (21) with air, is arranged above the at least one shower opening (41).

22. Technical unit (1) according to Claim 20 or 21, characterized in that the closure is designed as an outer pipe (43) which encloses the inner pipe (40), and which is arranged so it can be shifted relative to the inner pipe (40).

23. Technical unit (1) according to one of Claims 20-22, characterized in that the outer pipe (43) comprises an opening (44), wherein, in two relative positions of the outer pipe (43) with respect to the inner pipe (40), alternately the blow-drying opening (21) or the shower opening (41) can be exposed.

24. Technical unit (1) according to Claim 22 or 23, characterized in that the outer pipe (43) can be moved between two positions by a control unit, wherein one position corresponds to a retracted position.

25. Technical unit (1) according to one of Claims 20-24, characterized in that the inner pipe (40) can be moved by a control unit into three different positions.

26. Technical unit (1) according to Claim 24 and 25, characterized in that the two positions of the outer pipe (43) correspond to two positions of the inner pipe (40), and the inner pipe (40) can be moved further into the third position with respect to the extended position of the outer pipe.

27. Technical unit (1) according to one of Claims 20-22, characterized in that the arm (1) can be positioned individually with respect to the user.

28. Technical unit (1) according to one of Claims 1-27, characterized in that the water feed line (38) in the area of the shower opening (41) and the air feed line (39) in the area of the blow-drying opening (21) extend substantially parallel to each other.

29. Technical unit (1) according to one of Claims 1-28, characterized in that it is designed as a transportable module.

30. Technical unit (1) according to one of Claims 1-29, characterized in that it comprises a shower water feed line (35) for the WC under-shower device (7).

31. Sanitary fixture with a technical unit (1) according to one of Claims 1-30, characterized in that it comprises a closet body (4) which can be attached at its interface (8) by means of the load-bearing elements (6) to the front interface (5) of the technical unit (1).

32. Sanitary fixture according to Claim 31, characterized in that it can be mounted over plaster onto a building-side installation surface (2).

33. Sanitary fixture according to Claim 31 or 32, characterized in that it comprises a rinsing tank (23) arranged behind the building-side installation surface (2) under plaster.

34. Sanitary fixture according to Claim 33, characterized in that the closet body (4) and the technical unit (1) are arranged horizontally, and the rinsing tank (23) is arranged horizontally and with vertical offset with respect to said technical unit.

35. Sanitary fixture according to one of Claims 31-34, characterized in that the technical unit (1) is at a separation $A > 0$ from the building floor, where A is preferably at least 20 mm.

36. Sanitary fixture according to one of Claims 31-35, characterized in that the closet body (4) comprises two guide elements (9) for coupling to the technical unit (1), guide elements which protrude over the interface (8) of said closet body.

37. Sanitary fixture according to one of Claims 31-36, characterized in that the closet body (4) comprises at least two anchoring elements (10) for the attachment to the technical unit (1), anchoring elements which protrude over the interface (8) of said closet body.