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Sheets
8

Annexes

Technical terms & conditions for sanitary fixtures and fittings on sanitary premises at ŠKODA AUTO a.s.

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The latest updated version of this ITS is available on <http://cts.skoda-auto.com/>; the Company is not obliged to inform its business partners of ITS updates.

Therefore, all parties are strongly recommended to check this ITS regularly. These documents enter into force on the date of their latest update. The ITS wording relevant in terms of contracts and agreements already concluded is that in force at the time of issuing the purchase/service order concerned.

Note: In the event of any discrepancies among the Czech, English and German versions of this ITS, the Czech version shall prevail. The Czech version is available on <http://cts.skoda-auto.com/>.

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1. General

This Internal Technical Standard applies across all ŠKODA AUTO a.s. sites. The purpose of this ITS is to summarise the key requirements that arise from relevant technical standards and, primarily, unify the sanitary fixtures and fittings in use on the Company's sanitary premises.

2. Standards, regulations, guidelines

All sanitary premises shall comply with applicable occupational safety standards and guidelines and shall meet all relevant requirements for economical and environmentally friendly operation.

List of standards, guidelines and regulations applicable in CZE

ČSN 73 4108 Sanitary Premises and Changing Rooms

ČSN EN 73 5305 Office Buildings and Sites

ČSN EN 74 4505 Floors

ČSN EN 33 Toilet Bowls and Sets

ČSN EN 997 Toilet Bowls

ČSN EN 13407 Wall-Mounted Urinals

ČSN EN 14528 Bidets

ČSN 14668 Sanitary Fixtures – Sinks/Wash Basins

ČSN EN 817 Sanitary Fittings - Taps

ČSN EN 1112 Sanitary Fittings - Showers

ČSN EN 1113 Sanitary Fittings - Shower Hoses

ČSN 248 Sanitary Fittings - General Technical Requirements for Ni-Cr Electrolytic Coatings

NV No. 361/2007 Coll. that lays down occupational health terms & conditions

3. Terms and definitionsSanitary premises

Washroom – room or part of a room designed for partial or complete body washing

Shower – place designed for body washing by rinsing

Changing room – room designed for changing clothes and for temporary storage of apparel, footwear and other objects

Toilet – room intended for defecation and urination

Toilet anteroom – room that leads into a site (room) fitted with toilets and wall-mounted urinals

Personal hygiene booth – room or part of a room fitted with a toilet bowl and body-wash equipment

Fixtures

Sink/wash basin - fixture designed for upper body washing

Shower - body-wash device designed to convert a flow of water into a set of gushing water beams and water drops.

Toilet bowl - fixture designed to receive and drain solid and liquid human excrements.

Wall-mounted urinal – wall-mounted sanitary fixture designed to receive, flush and drain urine to an indoor sewer system

Bidet – sanitary fixture similar in design to a toilet that is straddled for washing the genitals and the anal area

Sanitary fittings

Mechanical (water mixing) tap – fitting designed to mix hot and cold water; using a control mechanism, the tap makes it possible for the user to set various water temperatures and flow rates

Hand shower – portable shower head connected to a sanitary fitting (tap) with a shower hose under EN 1113.

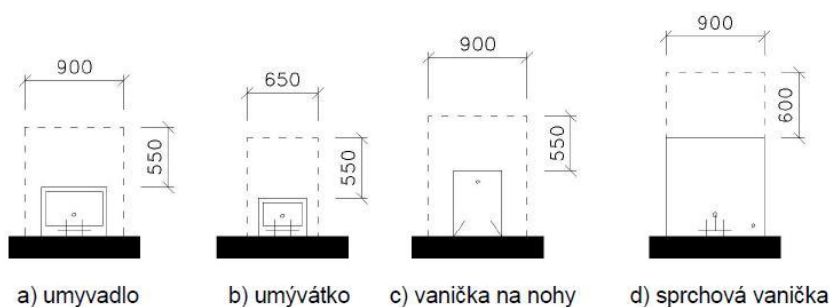
4. Sanitary premises

- 4.1. Sanitary facilities are washroom, toilet and bathroom premises equipped with sanitary fixtures and fittings such as wash basins, sinks, showers, bidet toilets, wall-mounted urinals, toilet bowls etc. used for personal-hygiene purposes while helping individuals and the whole society maintain good health.
- 4.2. The minimum clear height of sanitary premises is 2,300 mm and 2,500 mm in areas of over 30m².
- 4.3. Entrance doors to premises with multiple toilets, washrooms and changing rooms are required to feature a self-closing mechanism and be designed to prevent a direct view in the inside direction.
- 4.4. Windows in sanitary facilities are required to feature ventilation wings controllable from floor level. If the window sill is located lower than 1,800 mm above floor level, the window shall be opaque-glazed at least up to this height
- 4.5. The type and finish of floors are designed according to the purpose and character of the operation concerned. Floor surfaces shall be high-durability, dust-free and slip-free products resistant to humidity and water.
- 4.6. Any sanitary premises shall be fitted with an air supply and exhaust system. Individual fixtures/rooms can be naturally ventilated by means of windows, subject to considering the respective vapour condensation conditions (applies primarily to showers). On collective premises natural ventilation can be used for toilets, toilet anterooms and washrooms and, where applicable, some types of changing rooms. Forced ventilation is recommended for collective showers, washrooms and neighbouring changing rooms. The ventilation system shall be designed to prevent draught and the spread of contaminants to neighbouring rooms.

5. Washrooms

- 5.1. Washrooms shall be separate for men and women.
- 5.2. The size and layout of washrooms as well as the sanitary equipment configurations depend on the number of users and the scope of the intended body-washing activity. The equipment includes items for storage of soaps, toiletries, towels and linen and mirrors whose top edge is at least 1,800 mm above floor level.
- 5.3. Washrooms are equipped with showers, shower trays, and foot wash basins. They shall be accessible from the changing room and make it possible to store soaps, toiletries, towels and linen. Any washroom for employees shall be adjacent to a changing room linked with a door.
- 5.4. Each wash spot shall be equipped with a (hot and cold water-mixing) tap and an independent wastewater drain.
- 5.5. Any washroom with showers shall include a body and hair drying space whose size is at least 30% of the washroom's total area.
- 5.6. Each fixture shall come with a handling area (the minimum size of which is laid down and shall be complied with) that is not interfered by any other fixtures while also not reaching into the adjacent passageway (the minimum width of which is laid down and shall be complied with).
- 5.7. Sinks/wash basins can be fitted separately or in lines, next to each other.
- 5.8. The top-edge height of each sink shall be 800 mm - 850 mm above floor level.
- 5.9. The top-edge height of each foot wash basin shall be 300 mm - 400 mm above floor level.
- 5.10.

Minimum handling area for washroom fixtures:



Dimensions in mm

6. Changing rooms

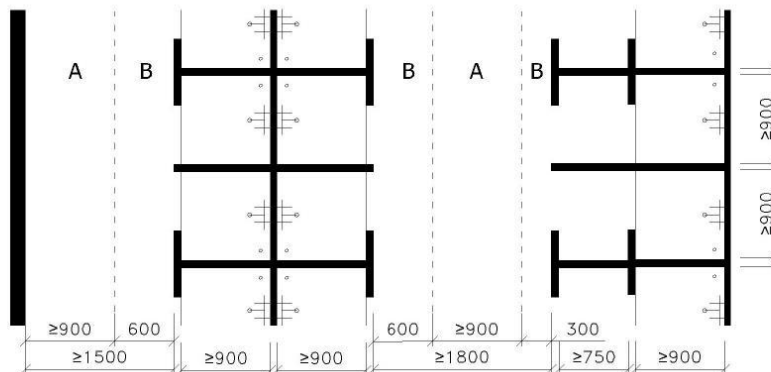
- 6.1. A changing room is an independent room that shall be set up on any site where employees are required to wear work clothes and cannot change clothes elsewhere, whether for hygienic or other reasons.
- 6.2. Changing rooms for employees shall be separate for men and women. Sites with up to 5 employees can organise use of changing rooms shared by men and women by means of two separate (gender-based) schedules.
- 6.3. Any changing room shall be situated in an easy-to-access location separate from the worksite and the washroom and shall be equipped with lockers, a bench or some other seating furniture.

7. Showers

- 7.1. The ground plan dimensions of each shower shall be 900 mm x 900 mm (shower boxes 800 mm x 800 mm and the entrance at least 600 mm wide). Each shower spot features an independent hot and cold water mixing tap. Vertical shower heads shall be located at least 2,200 mm above floor level. The equipment usually includes a soap tray located next to the water mixing tap.
- 7.2. Each shower box should have an independent drain. In exceptional cases one drain (of a sufficient capacity) can be shared by a maximum of two shower boxes.
- 7.3. Shower boxes without an anteroom are separated with partition walls. The entrance partition wall is usually fitted with towel hooks (on the outside).
- 7.4. Shower boxes with an anteroom guarantee better protection against soaking (clothes and bath towels) while providing a higher degree of clothes-changing intimacy. The minimum "depth" of the anteroom shall be 750 mm.

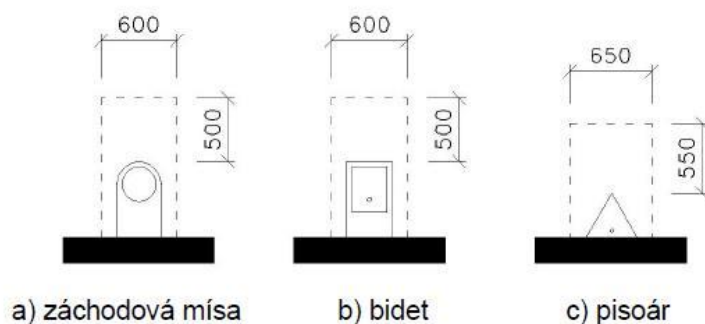


Minimum dimensions and distances of shower boxes without and with an anteroom:



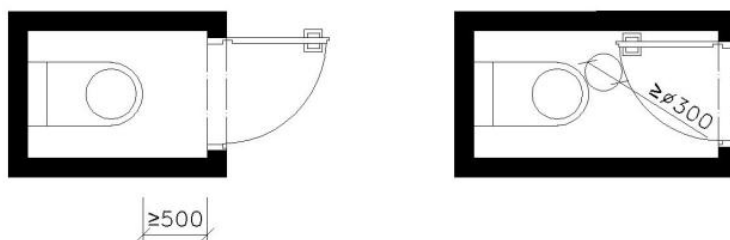
Dimensions in mm

- 7.5. Collective showers feature shower heads located in a single place, wall-mounted and grouped to form single or double lines of 3, 4 or 6 heads, and they can be either partitioned, or non-partitioned.
- 7.6. The minimum ground plan size of each shower spot in a collective shower room is 1,000 mm x 1,000 mm.
- 7.7. Depending on the layout, the recommendation for collective showers is to situate the drains (of adequate diameter) to be shared by two, three or more shower spots, the objective being to provide a sufficient water drainage capacity while effectively draining water from all shower spots. As an alternative to drains, the room can be fitted with drain channels with grates.
- 8. Toilets**
- 8.1. Toilets shall be separate for men and women. Single toilets (shared by men and women) are allowed on worksites with up to 5 employees.
- 8.2. Toilets are built on each storey with more than five full-time employees. The distance from the work station (workplace) must not exceed 120m.
- 8.3. The minimum number of toilet cubicles depends on the shift with the largest number of people:
- 1 toilet cubicle per 10 women**
 - 2 toilet cubicles per 11 - 30 women**
 - 3 toilet cubicles for 31 - 50 women**
 - 1 extra toilet cubicle per further 30 women**
 - 1 toilet cubicle per 10 men**
 - 2 toilet cubicles per 11 - 50 men**
 - 1 extra toilet cubicle per further 50 men**
- 8.4. Toilets shall be equipped with personal hygiene products - paper napkins, toilet tissue, liquid soap. The equipment at ladies' toilets shall include a litter bin with a cover.
- 8.5. Collective toilets consist of independent toilet cubicles separated with partitions. The minimum top-edge height of each partition and the door should be 1,950 mm above floor level, the bottom edge at least 150 mm above floor level.
- 8.6. Each group of toilets shall be ventilated and shall have a separately ventilated anteroom equipped with wash basins.
- 8.7. Unless otherwise required by the site administrator, the doors to toilet anterooms shall be fitted with a self-closing mechanism.
- 8.8. Toilet cubicle doors shall be lockable from inside.
- 8.9. Each fixture shall come with a handling area (the minimum size of which is laid down and shall be complied with) that is not interfered by any other fixtures while not reaching into the adjacent passageway (the minimum width of which is laid down and shall be complied with).

Minimum handling areas for fixtures:


Dimensions in mm

- 8.10. The smallest admissible dimensions for toilet cubicles depend on the intended purpose of use. The length of the cubicle is mainly determined by the size of the toilet bowl, the way the door is opened and the width of the door.
- 8.11. Toilet cubicles with out-opening doors are the preferred solution.

Smallest ground plan dimensions admissible for toilet cubicles


Dimensions in mm

- 8.12. The minimum width of each toilet cubicle is 900 mm, door width 700 mm.
- 8.13. The maximum top-edge height recommended for toilet bowls (including the seat) is 425 mm above floor level.
- 8.14. Toilet bowls and flush tanks shall feature complete flush sets (water supply/drain valve and control mechanism)

9. Personal hygiene cubicles

- 9.1. Personal hygiene cubicles are designed as independent rooms
- 9.2. Each such cubicle is fitted with a wash basin, toilet bowl, bidet toilet and hand shower, a pedal litter bin with a cover, a clothes hanger hook and, where applicable, a chair

10. Urinals

- 10.1. The number of urinals is determined by the number of toilets planned:
1 urinal per 1 toilet cubicle
- 10.2. Urinals are planned to be situated in an independent room or together with toilet cubicles. The axial distance between two urinals shall be at least 760 mm, the distance from the corner of the room at least 450 mm. Each urinal comes with a 550 mm-wide handling area.
- 10.3. The front-top-edge height of each urinal bowl is 650 mm above floor level.
- 10.4. The width of each urinal site should be at least 760 mm, and each urinal unit shall feature an independent drain.
- 10.5. Urinals shall feature a flush system - the preferred option is an automatic system that flushes each urinal independently.

11. Mechanical (water-mixing) taps

- 11.1. Mechanical (water-mixing) taps shall bear a permanent identification to legibly identify the name or brand of the manufacturer or supplier.
- 11.2. The tap control system shall feature blue colour to identify cold water and red colour to identify hot water.
- 11.3. The material of (water-mixing) taps that comes into contact with water intended for human use must not pose any health hazard.
- 11.4. The applied materials must not change the quality or organoleptic properties of drinking water.
- 11.5. Visible changes on the surfaces of chrome-plated components and Ni-Cr coats shall comply with EN 248.

12. Hand showers

- 12.1. Can be hung either on the tap (fitting) or on a wall-mounted hanger.
- 12.2. Materials that come into contact with water intended for human use must not pose a health hazard across the whole range of operating temperatures and must not in any way change its quality, look, taste and/or smell.
- 12.3. Outer chrome-plated surfaces and Ni-Cr coats shall comply with EN 248.

13. Recommendations

- 13.1. Recommended types of fixtures and fittings

Product type	ŠKODA AUTO sites
Ceramic sanitary ware	Jika Lyra plus Jika Dino Jika Mio Jika Deep Jika Pure Jika Zeta Alcaplast Ideal
Water taps	Metalia Hansgrohe Kludi
Siphons and accessories (fittings)	Slovplast Alcaplast Geberit HL Falcon Jika Schell River Silfra Sanela

Ceramic sanitary ware – toilet, washbasin, bidet, hanging toilet sets, toilet seat

Water taps – washbasin, bath, shower, sink, bidet, thermostatic, concealed + accessories (arms, cartridges, aerators, concealed bodies, spare hoses, seals, tap fasteners and kits, connecting hoses and extensions)

Siphons and accessories (fittings) – siphons and drains, toilet accessories, corner valves, drain and filler valves, float valve, flusher

- 13.2. Do not install pusher valves (concealed) and sensor taps, except for catering equipment.
- 13.3. Do not use tap aerators, as they might damage the taps.

14. Personal hygiene (white colour)

- 14.1. Paper towel dispensers
 - TORK Xpress
 - TORK Xpress Mini
 - H2 system
 - TORK Singlefold/C-fold
 - TORK Singlefold/C-fold Mini
 - H3 system
- 14.2. Paper towel roll dispensers
 - TORK Mini (with a stub-roll holder)
 - M1 (system)
 - TORK Matic
 - H1 (system)
- 14.3. Toilet tissue dispensers
 - TORK Jumbo
 - T1 (system)
 - TORK Mini Jumbo
 - T2 (system)
 - TORK Mid-size Twin
 - T6 (system)
 - TORK SmartOne
 - T8 (system)
- 14.4. Liquid/foam soap dispensers
 - TORK
 - S1 (system)
 - TORK Mini
 - S2 (system)
 - TORK (foam soap dispenser)
 - S4 (system)
- 14.5. Sanitary bag dispenser
 - TORK
 - B5 (system)
- 14.6. Paper pad dispenser
 - TORK
 - V1 (system)
- 14.7. Air freshener
 - TORK - electronic air freshener
 - A1 (system)
- 14.8. Litter bins + accessories
 - TORK
 - B1, B2, B3 (systems)