

# NATSOL METAL BUILDING ERECTION FOR FULL ACCESS TOILET

## What you need: -

1. **Components [& tools] supplied by NATSOL:**
  - a. building sections; 4 walls and roof
  - b. cover flashings for corners and roof edges
  - c. gutter, downpipe kit & gully
  - d. pack of screws, bolts, nuts and washers of various sorts in pedestal box
  - e. universal 10mm drill bit
  - f. 3 m length of grey 160mm diameter pipe
  - g. directional cowl
  - h. vent pipe flashing collar
  - i. SIKAFlex – supplied with vault
2. **Tools & equipment required:**
  - a. **safety clothing**
  - b. tape
  - c. ladder
  - d. cordless drill or generator, trip and corded drill
  - e. socket drives for cordless or socket set and/or spanners
  - f. small assortment of ZP woodscrews for pipe fixings etc
  - g. mastic gun
3. **Personnel & skills required:**
  - a. 4 people for erection of frames, then 2
  - b. measuring & drilling
  - c. lifting and positioning
  - d. fitting bolts and cladding screws
  - e. mastic vent pipe

## Method – see accompanying drawings and/or photos: -

**NB. Use appropriate safety clothing for all stages, particularly gloves and boots. Before you start to erect the building make sure that all apertures in the floor have hatches or safety boards fitted. Do not erect under windy conditions. Keep bystanders clear by roping off site. If using corded power tools use correct voltages [and/or protective trips] for site work.**

1. Do **NOT** cut up or destroy the timber packing system for the building. This will usually go back with the carrier, or it may be collected later. You have probably paid a deposit on it.
2. Remove all the **lower** internal lining boards from the building walls. They are held in place with screws along the bottom edge and will slip out of the upper channel when these screws are removed. Make sure you know which board came from which wall section.
3. Remove temporary blocks screwed to the underside of the sole but avoid damage to cladding edge.
4. Mark on a line with a pencil 50mm in from the vault edges to help you align the soles of the building.
5. Stand rear wall section in place centrally L to R and line up the inner edge of the sole with the pencil line. Support this wall section with props or otherwise hold securely.
6. Stand a side wall section in place. Use the connecting bolts to join rear and side walls together. Line the wall up with the line as above. Repeat with other side wall.
7. Check all three walls are on the lines. The gap left at the front between the metal frames of the side walls [into which the front wall will be fitted later] should be about **1765mm**.  
**Measure this low down!**
8. Fix down the rear and side walls by drilling through the metal brackets, timber soles and GRC as shown using a cordless drill and universal 10mm bit supplied. Angle the drill slightly so that the holes do not emerge too close to the vault wall below. DO **NOT** USE A HAMMER SETTING. Steady side walls whilst drilling the holes. If conditions are windy use props to hold the side walls securely in this position whilst drilling.

9. Fit 100mm bolts with washers from beneath with washers and nuts on top and tighten.



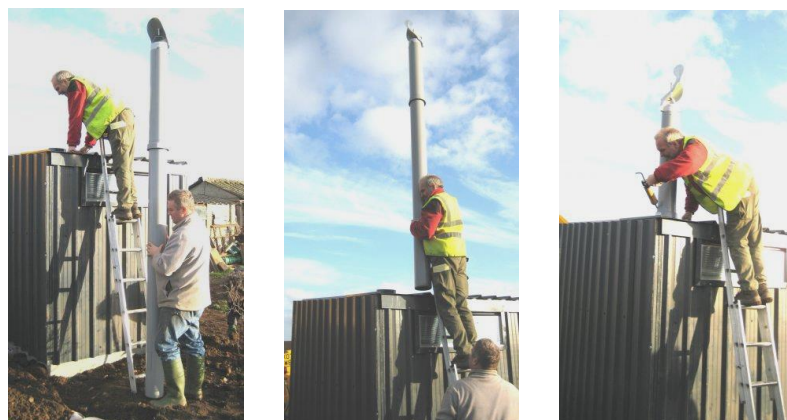
NB. Our buildings now have a skylight rather than a window. Internal linings may be dark grey recycled plastic EkoPly or OSB as shown

10. Slide the side wall linings into position and screw the bottom edge to the sole.
11. If you have an EkoPly lined building use the black screws in pack BM4 and fit two screws into each side wall where the timber stud is behind. The screw positions should have been marked with felt tip. Don't use an impact driver and don't drive them in too far.
12. Fit the rear wall lining by sliding the top up into the metal channel and screwing the bottom to the sole.
13. **Fit the front wall** and connect to side walls using bolts. Fix the two floor bolts for the front wall as above.
14. **Now fit the roof.** Slide it up from the back with 2 people inside and 2 outside. Find a way of holding it down whilst fixing - **a roof blowing off is very dangerous!** Use 4 of the self-

- tapping cladding screws supplied with the building and insert these through the 4 side support brackets up into the roof member using a cordless drill and socket drive. The brackets should have a 6mm clearance hole for the tek screw. Check with a 6mm bit first.
15. **Fit corner flashings.** Obviously the longer ones are for the front. They wrap around a ridge in the cladding on the side wall. Hold them against the corner making them level with the corrugated at the bottom. Now drive the self-tapping cladding screws through them into ridges on the side wall and into the steel frame of the building on front and rear walls. **Do not overtighten!** For neatness use the same heights for the screws on each face and each corner.
  16. **Side roof flashings.** It should be sufficient to fix these into the walls alone and to use a line of mastic between the top edge and the roof. Align them with the rear edge of the roof.
  17. **Front roof flashing.** Fit this using 4 tek screws along the top and 4 on the front.
  18. **Fit gutter and downpipe.** Work out which side it's best to have the downpipe and fit the galvanised brackets for this as shown below. Then fit the gutter using self-tapping screws. Decide where the water is going – see the **Full Access Site Layout, Excavations and Soakaways** section. This depends on site conditions. We supply a rainwater gully but you may need additional pipe. Eventually you could also install a rain butt and diverter if we agreed to supply this.



19. **The vent pipe.** Slide the plastic storm collar on to the pipe and position approx 800mm down from the top end.
20. Assemble and attach directional cowl to the top end of the pipe with self-tappers. Ensure there are no obstructions such as branches so the cowl can rotate freely at all times.
21. Insert pipe down through hole in roof. **Use a properly supported ladder, sufficient personnel and do not attempt under windy conditions.**



22. Locate bottom end of pipe in floor socket.
23. Slide storm collar down over roof collar. **Seal top edge to vent pipe with SIKA.**
24. Seal pipe into floor socket with SIKA. You won't get around the back of the pipe but it almost certainly doesn't matter.
25. **NB. If the outside of the building appears to have tiny rust spots these will be small particles of metal from manufacture which have stuck to the surface and gone rusty. No damage will have occurred and they should just wipe off.**



**INTERNAL FITTINGS** See internal layout drawing.  
**NB. Some pictures may illustrate the inside of timber buildings.**

**What you need: -**

- 1. Components [& tools] supplied by NATSOL:**
  - a. stainless steel toilet pedestal and short urine plate
  - b. toilet seat
  - c. 2 hand disinfectant dispensers and 4 gel packs
  - d. grab rail kit in white or dark blue
  - e. 2 toilet roll holders
  - f. splashback for urinal is you have OSB timber linings
  - g. ceramic urinal, trap, mounting brackets and pre-assembled pipework – all stored inside the soak box.
  - h. 40mm solvent weld pipe [**long piece over spade handle**],
  - i. soak bin containing some wood shavings
  - j. coat hook
  - k. various screws
  - l. floor wax
  - m. metal rake
  - n. emptying spade – the owner can store this somewhere else.
- 2. Tools & materials required:**
  - a. saw for pipe cutting,
  - b. cordless drill & bits
  - c. flat bit screwdriver
  - d. **PAINT FOR INTERIOR – OPTIONAL, ONLY IF YOU HAVE OSB LININGS**
- 3. Personnel & skills required:**
  - a. 1 person is sufficient, 2 is handy

**Method – see accompanying drawings and/or photos: -**

1. NB. If you have OSB linings you may wish to paint the cubicle. We normally supply white grab rails. These should not be set on a white background. If you decide to paint we suggest fitting the grab rails and other fittings to the marked positions and then removing them again. The screw holes will make it clear where to refit them after painting.
2. If you have OSB linings then fit splashback for urinal in far RH corner of cubicle. Use self-tappers through perimeter holes. It should go right into the corner. Fit brackets to predrilled holes in centre and hang urinal as shown. Fit waste and threaded adaptor below. It is preassembled.
3. Connect up pipe work ensuring suitable fall on pipe, clip to wall. The pipe through the floor should be pushed into the hole up to the felt tip line. More than this and it may block the urine pipe.





Metal building interior

4. Fit the grab rails in the positions shown on the walls, use the **Grab Rail Layout Drawing** at the end of this section. One grab rail is for the back of the door and will need to be fitted using the self-tappers provided. One goes to the left of the urinal.



Grab rail on door



Urinal grab rail in metal buildings

5. The wall mounted “soak” box is best fitted before fitting the pedestal. Fix the mounting brackets to the wall in both pedestal positions. The screw positions should be marked. If you can’t see them then the top of the box should be 1100mm off the floor and you should leave a 25mm gap between the side of the box and the circular fixing plates of the rear vertical grab rails. Hang the box behind whichever pedestal position you intend to use first. If you don’t want it to be easily removed put in a screw through the central hole in the back of the box.
6. Position the pedestal in the rear hatch which had the timber safety board. The front of the pedestal should be inserted first so that the urine plate extends under the floor and reaches to the gutter. Use pack B4 to fix down the back of the pedestal. The small washer goes beneath the large SS one. Fit the short urine plate inside the front of the pedestal on the hooks below the front edge of the top of the pedestal.
7. Fit toilet seat **following instructions on the label on its packaging.**
8. Fit the dispensers which open by pushing up recessed button underneath at rear.
9. Fit toilet roll holders, one each side, in position accessible from pedestal.
10. Fit coat hook on back of door or opposite urinal.
11. If not done earlier empty one bale of wood-shavings into the vault to be used first.



12.

Use pedestal fix down (B4) at rear.

Use floor wax as supplied.

13. Place the rake in the active vault so that handle is accessible from the emptying hatch in front of the pedestal – it stays in there until vault changeover and is then moved to the new active vault. The spade should be stored by the owners.
14. We supply floor wax as part of the kit. Application is best left for a few days so that the floor can be thoroughly cleaned and allowed to dry.

**FINISHING OFF OUTSIDE - We don't supply anything for this and it will depend very much on the site. See Ramped Access – next page.**

1. A **ramp** or **slope** and **landing area** should be constructed to comply with building regs. Maximum gradient for a **ramp** of 2m length is 1 in 12; width 1200mm. A **slope** of maximum gradient 1:21 is preferred for wheelchair access. The level **landing area** in front of the door should be approx. 2200mm deep to provide 1200mm clear when the door is open. Make sure the landing area is slightly below the floor level so that rain doesn't run inside. The **maximum permissible step** here is 15mm. **We strongly advise you to contact a COUNCIL ACCESS OFFICER or private sector ACCESS CONSULTANT when designing your approach to the toilet.** Please see the **Ramped Access** document following this section.
2. We strongly advise you to fit a post preventing the door from opening further than 90 degrees. Our doors will be fitted with restrainers but these could be damaged in high winds. The post should not obstruct disabled access.
3. We recommend fitting a **rain butt** to make use of rainwater and to reduce the amount of water going to the rain soakaway. The soakaway is necessary because the butt will undoubtedly overflow in winter. Rainwater is fine for floor cleaning, urinal rinsing etc.



**T 01686 412653**

# Ramped access

## EXTRACTS FROM PART M OF THE BUILDING REGULATIONS

### SECTION M1/M2

#### ACCESS TO BUILDINGS OTHER THAN DWELLINGS

##### Design considerations

**1.19** If site constraints necessitate an approach of 1:20 or steeper, an approach incorporating ramped access should be provided. Ramps are beneficial for wheelchair users and people pushing prams, pushchairs and bicycles.

**1.20** Gradients should be as shallow as practical, as steep gradients create difficulties for some wheelchair users who lack the strength to propel themselves up a slope or having difficulty in slowing down or stopping when descending.

##### Limits for ramp gradients:

Going of a flight	Maximum gradient	Maximum rise
10m	1:20	500mm
5m	1:15	333mm
2m	1:12	166mm

Note:- For goings between 2 and 10m it is acceptable to interpolate between the maximum gradients.

##### Provisions

**1.26** A ramped access will satisfy Requirement M1 or M2 if:

- c. no flight has a going greater than 10m, or a rise of more than 500mm;
- e. it has a surface width between walls, upstands or kerbs of at least 1.5m;
- h. there is a landing at the foot and head of the ramp at least 1.2m long and clear of any door swings and other obstructions;
- k. all landings are level, subject to a maximum gradient of 1:60 along their length and a maximum cross fall gradient of 1:40;
- m. there is a kerb on the open side of any ramp or landing at least 100mm high, which contrasts visually with the ramp or landing in addition to any guarding required under Part K.

##### Note from NatSol:

You should view the full regulations which can be downloaded online.

Highlighted sections above relate to those requirements which, in our experience, are often neglected in the installation of toilets on remote sites.

**We stress that the inclusion of the above extracts is merely a way to assist you but that we do not accept any liability for the work you do in providing access into a toilet we provide and that if in doubt you should consult with the local Building Control Officer or an Access Consultant.**