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Armitage Venesta reserves the right to alter or change specifications without notice.
Armitage Venesta has supplied IPS pre-plumbed sanitaryware units to the healthcare sector for over 45 years. As the original designer of the Integrated Plumbing System we have gained considerable industry knowledge and expertise which enables us to advise and support our customers through the specification process from minor healthcare refurbishment through to major hospital new build.

IPS Healthcare is supplied as framed duct panel units with sanitaryware factory fitted and tested before delivery, resulting in quicker and easier site installation and providing a higher quality finished product than an equivalent site assembled solution.

Specify with confidence

Government initiatives, new NHS regulations and increased public awareness of issues such as MRSA have increased the demand for fully compliant, tested and proven solutions. To enable you to specify with confidence our technical guide - IPS Healthcare has been updated to include all the recent revisions to the Health Technical Memorandum for sanitary assemblies: HTM 64 – third edition February 2006.

These include:

- Mixer taps with horizontal spouts and integral thermostatic valves
- Concealed back outlet basins for clinical areas
- The use of Rainless only WC’s

Non-compliant tap

Compliant tap

As you would expect, Armitage Venesta, together with Armitage Shanks continually develop products to meet and exceed the requirement of current NHS Estates guidelines and together are the only leading suppliers who can offer a fully integrated solution to meet the new standard. As well as HTM 64 it is important that any units supplied also comply with other relevant standards and guidance:

<table>
<thead>
<tr>
<th>HTM 64 Sanitary assemblies</th>
<th>HTM 2027 Hot and cold water supply, storage and mains services</th>
<th>HTM 68 Duct and panel assemblies</th>
<th>HFN 30 Infection control in the build environment</th>
</tr>
</thead>
</table>

IPS Healthcare identifies the most commonly specified products, for further sanitaryware options reference should be made to the ‘Blue book’ www.thebluebook.co.uk as well as www.armitage-venesta.co.uk.

To aid you in your specification writing we have used HTM 64 references throughout this document. In addition we have a team of national Specification Managers who would be happy to provide a specific specification service, please contact our Sales office on 01474 353333 to arrange an appointment.

Reference Standards

<table>
<thead>
<tr>
<th>HTM 68 Performance Specification</th>
<th>Typical Panel Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD Medium Duty</td>
<td>19mm Melamine Faced Chipboard (MFC). Edges-Square with PVC edging. Density—710kg/m³</td>
</tr>
<tr>
<td>HD Heavy Duty</td>
<td>17mm moisture resistant 68kg/m² density chipboard core, faced and backed with high pressure laminate (HPL). Edges-Choice of Post formed vertical edges or square edges lipped with PVC.</td>
</tr>
<tr>
<td>Wet Areas/Mental Health</td>
<td>13mm compact solid grade laminate. Edges-radius and black polished (no lipping is required)Density—140kg/m³</td>
</tr>
</tbody>
</table>

Hygiene & infection Control

Hygiene and infection control is obviously of paramount importance in any clinical environment and the revisions to HTM 64 have been put in place to ensure the correct sanitaryware products are used.

Anti-bacterial products have received extensive media attention however their perceived benefits have not necessarily been proven; equally there has been a suggestion that there maybe a potential risk that the bacteria could develop a resistance to such coatings. Armitage Venesta believes that the most important factors in the prevention of healthcare-associated infection are a planned cleaning regime and hand hygiene. Anti-bacterial products will not be included in our Healthcare offer until approved by the Department of Health.

To meet the stringent regulations relating to the plumbing within hospitals Armitage Venesta ensures that the following measures apply to all their pre-plumbed units:

- All products used are WRAS listed or self certified as compliant.
- TMV3 approved thermostatic mixer valves are used as an integral part of the fitting or as a separate component.
- All pre-plumbing is flushed with fresh drinking water before delivery.
- At all units are tested for leakage at approximately 2-3bar.
- Brass fittings are DZR grade.
- Flexible connection hoses are WRAS approved.
- Infection are a planned cleaning regime and hand hygiene. Anti-
- Products will not be included in our Healthcare offer until approved by the Department of Health.

Acoustic Data

IPS units have been independently tested which show that an IPS aperture unit, fitted within a standard Gyproc partition wall (70mm stud faced both sides with 2 layers of 12.5mm plasterboard) does not reduce the standard acoustic rating of 44 Rw/dB for the wall.

A copy of the full report is available on request.

A copy of the report is available on request.

In instances where higher acoustic ratings are required there are 2 options available:

1. Use of a ‘Boxed-out’ unit in front of the higher specification wall and in order to maintain its integrity.
2. Provide a suitable acoustic insulation to be fitted within the existing partition wall. Please note that this option is dependent on suitable duct depth being available.

Fire Walls

Accepted practice is not to compromise the integrity of the fire wall – as stated in HTM 68.

HTM 68 – 5.2

Wherever possible assemblies should not be installed on fire compartment walls. Where this is unavoidable, fire integrity should ideally be provided within the wall or partition itself with no reliance on the panel assembly. This is because of the difficulty of maintaining fire integrity where panels are removed for maintenance. (Refer to HTM 68)

We would therefore recommend using a Boxed-out unit in front of the fire wall in order to maintain its integrity.

Acoustic Data

IPS units have been independently tested which show that an IPS aperture unit, fitted within a standard Gyproc partition wall (70mm stud faced both sides with 2 layers of 12.5mm plasterboard) does not reduce the standard acoustic rating of 44 Rw/dB for the wall.

A copy of the full report is available on request.
Summary of Typical IPS Healthcare solutions

Each healthcare project will have its own specific sanitaryware requirements. The following technical pages provide details of some of the most commonly used/specified items. Many other sanitaryware items are available with IPS Healthcare, please refer to the Armitage Shanks/Ideal Standard Bluebook for details.

A number of typical options are shown below.

**Recessed unit**
See page 5 for more details

**Boxed-out unit**
See page 6 for more details

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**IPS Evolve - wall system**
See page 8 for more details

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**Recessed unit**

**Application**

For fitting into aperture within dry lined stud partition wall where sufficient space is available for services

**Benefits**

- Space saving - panel unit does not protrude into the room
- Avoids need for interface at floor and ceiling junctions
- Maintains up to 44RwdB sound insulation of standard partition wall
- Most cost effective solution

**Limitations**

- Not suitable for use within fire rated walls or within acoustic rated walls exceeding 44RwdB - Refer to Boxed-out unit – see page 6

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**Plan view of unit**

Opening size:
Panel width less 50mm

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**Rear view of unit**

Opening size:
Panel height less 50mm
Boxed-out unit

Application
Where insufficient duct space is available within partition wall or against external masonry wall where no duct exists
Where it is not possible to form an opening in partition wall system – e.g. Fire/Acoustic rates walls

Benefits
- Speed and ease of installation
- Compact laminate panels rebated into extruded aluminium frame to provide a flush, easy clean surface to box frame
- Pencil round on extruded corner avoids difficult detail at junction with ceiling and skirting whilst still being easy to clean
- Variable box unit depth to accommodate service requirements
- Maintains integrity of rear Fire/Acoustic walls
- Avoids the need to co-ordinate aperture sizes/positions with partitioning contractor
- 2-part delivery for ease of handling/distribution/installation – see installation sequence on page 7.

Boxed-out unit installation sequence

Step 1
Fix Box Frame to Wall

Step 2
Suspended Ceiling & Skirting
By site or others

Step 3
Insert IPS Panel Assembly

Step 4
Plumbing Connection Stage
By site or others

Step 5
Fit Top & Bottom Panels

Completed Boxed-Out Unit
IPS Evolve wall system

Application
Where duct needs to be formed to provide a complete wall system - typically used in staff and public areas

Refer to separate IPS Evolve brochure for full details

Technical specification
IPS Evolve conforms to the following specification:

Panels: All panels are designed in sections for ease of installation and to gain access for the maintenance of concealed services. Butt joints are machined square and supplied fitted with locating dowels. Manufactured from a choice of three performance boards: Melamine faced chipboard: 17mm high performance laminate 73kg/m³ grade chipboard, PEFC high performance melamine faced three performance boards: fitted with locating dowels.

Panels:
- All panels are designed in following specification: grade chipboard, PEFC approved.
- V313 moisture resistant 680kg/m³ grade chipboard. Sub-frame: Armitage Shanks S6500MY Dee stainless steel right hand slop hopper with sink and work surface. HTM 64 DU HS
- Cistern: Armitage Shanks S4385AA marks hose and tap waste pipes. Other fittings with internal overflow, S459067 6/9 litre conversion pack to suit IPS Healthcare, unless stated otherwise, all factory assembled by Armitage Venesta.
- Colours: Refer to Armitage Venesta for standard laminate colour range.
- N13 sanitary appliances/fittings
- N13/520 pre-plumbed panel lining system
- Manufacture and Reference: Armitage Venesta Washroom Systems, Charwell Court, West Malling Imperial Business Park, Gravesend, Kent, DA11 0DL. Telephone 01474 353333

‘IPS Healthcare’ high pressure laminate pre-plumbed washroom system.

Panel: 17mm V313 moisture resistant 680kg/m³ grade chipboard. Faced on both sides with high pressure laminate creating an overall panel thickness of 17mm. Panels with matching 1mm PVC lipping. Each panel section fitted to subframe with concealed ISF mild steel peg dowels, vertical panel sections panel together with locating dowels.

Subframe: Polished galvanised steel subframe with bracing board. Fitted within stud partition with nylon location brackets and metal extension brackets.

Pre-plumbing: Sanitary appliances pre-fixed and sealed to IPS Healthcare, unless stated otherwise, all factory assembled by Armitage Venesta.

Disposal unit assembly for the disposal of liquid and solid waste in connection with clinical procedures

Typical HTM 64 assembly requirements are:
1. Hospital pattern disposal unit (including cistern)
2. Hospital pattern (lever action) taps to avoid contamination (located over sink)
3. Separate manual control of hot and cold water
4. Open nozzle and flow straightener with minimal restriction
5. Connecting to concealed services

Typical room applications:
- Dirty utility/Disposal
- Typical NBS specification

N13 sanitary appliances/fittings

N13/520 pre-plumbed panel lining system

Panel system as clause 520 (minimum panel width 1600mm)

Slop Hopper: Armitage Shanks S50008Y Deep stainless steel right hand slop hopper with sink and work surface. HTM 64 DU HS

Cistern: Armitage Shanks S318287 Concealed cistern and fitting with internal overflow. S459067 6/9 litre conversion pack to suit IPS Healthcare, unless stated otherwise, all factory assembled by Armitage Venesta.

Colours: Refer to Armitage Venesta for standard laminate colour range.

N13/388 disposal unit/pre-plumbed panel
Panel system as clause 520 (minimum panel width 1800mm)

Traps:
- Hopper trap: Armitage Venesta 7360800SC, 40mm plastic re-slotted strainer waste with unslotted tail.
- 1/2" bib taps with 150mm levers, S8347AA 1/2" 100mm sealant at our factory complete with vanity units.
- Armitage Shanks S466367 plastic flushpipe. 
- Armitage Shanks S459067 6/9 litre conversion pack to suit IPS Healthcare, unless stated otherwise, all factory assembled by Armitage Venesta.

Notes on request

WCs:
- WC disposal unit/pre-plumbed panel lining system
- Fixing Brackets: Manufactured from extruded aluminium and sealed with white silicone sealant by others.
- Joint between disposal unit and panel with clear sealing
- P trap for Hopper trap: Armitage Venesta 7360800SC, 40mm plastic re-sealing bottle trap with 75mm seal.
- Hopper trap: Armitage Venesta S104981 white polypropyleneTrap for Hopper trap: Armitage Venesta 7360800SC, 40mm plastic re-sealing bottle trap with 75mm seal.
- Sealing: Joint between disposal unit and panel with seal against sealant.

Alternatives

Panels:
- 17mm V313 moisture resistant 680kg/m³ grade chipboard. Faced on both sides with high pressure laminate creating an overall panel thickness of 17mm. Panels with matching 1mm PVC lipping. Each panel section fitted to subframe with concealed ISF mild steel peg dowels, vertical panel sections panel together with locating dowels.

Armitage Venesta S927267 - stainless steel legs to floor.

• 13mm o/a thickness Solid Grade Laminate for wet and heavy use.

• Armitage Venesta S466367 plastic flushpipe.

• Armitage Venesta S459067 6/9 litre conversion pack to suit IPS Healthcare, unless stated otherwise, all factory assembled by Armitage Venesta.

• Armitage Shanks S8347AA 1/2" 100mm sealant at our factory complete with vanity units.

• Armitage Shanks S4385AA marks hose and tap waste pipes. Other fittings with internal overflow, S459067 6/9 litre conversion pack to suit IPS Healthcare, unless stated otherwise, all factory assembled by Armitage Venesta.

Colours: Refer to Armitage Venesta for standard laminate colour range.

Notes on request
Disposal unit assembly for the disposal of liquid and solid waste in connection with clinical procedures

Typical HTM 64 assembly requirements are:
1. Hospital pattern disposal unit (including cistern)
2. Hospital pattern (lever action) taps to avoid contamination
3. Separate manual control of hot and cold water
4. Open nozzle and flow straightener with minimal restriction
5. Connecting to concealed services

Typical HTM 64 room applications:
- Dirty utility/Disposal

Typical NBS specification
N13 sanitary appliances/fittings
To be read with Preliminaries / General conditions

N13/280 pre-plumbed panel lining system
Manufacture and Reference: Armitage Venesta Washroom Systems, Chartwell Court, West Ml, Imperial Business Park, Gravesend, Kent, DA11 0DL.
Telephone: 01474 353333

‘IPS Healthcare’ high pressure laminate pre-plumbed washroom system.
IPS Evolve boxed-out unit for Hospitals’ compact laminate pre-plumbed washroom system.
Panel: 17mm thick V213 moisture resistant 88kg/m2 grade chipboard, faced on both sides with high pressure laminate creating an overall panel thickness of 18mm. Panels have post formed vertical edges with matching 1mm PVC piping to horizontal edges. Each panel section fitted to subframe with concealed BZW mild steel joggle clips, panel sections panel together with locating dowels.
Subframe: Each panel section fitted to rigid galvanised steel subframe with concealed BZW mild steel joggle clips, panel sections panel together with locating dowels.
Box lining: Front, sides, skirting & head panels 13mm compact laminate. Restroom subframe flush fitted into SSA aluminium frame to create rigid box unit. Box panel colour to be Smoke from Armitage Venesta standard colour range.
Pre-plumbing: Sanitary appliances pre-fixed and sealed to IPS Evolve unit, unless stated otherwise, all factory assembled.

N13/388 disposal unit/pre-plumbed panel
Panel System as clause 520 (minimum panel width 2000mm)
Stop Hopper: Armitage Shanks S550580 Stainless steel right hand slop hopper with work surface. HTM 64 DU H
Cistern: Armitage Shanks S350287 Conceala cistern and fittings with internal overflow, S459067 6/9 litre conversion pack for high level cistern.
Flushpipe: Armitage Shanks S435637 plastic flushpipe.
Taps: Armitage Shanks S8270AA, Markwik chrome plated 1/2" bib taps with 150mm levers, S8247AA 1/2" 100mm extensions and S8336AA, 1/2" panel mounts for concealed supply. HTM 64 TB H1
Trap: Armitage Venesta 018408 white polypropylene P trap for Hopper. Supplied loose for fixing on site.
Sealing: Joint between disposal unit and panel with clear silicone sealant by others.

Note: The Stop Hopper Assembly is supplied separate to the back panel.

Alternatives
Panel: 13mm o/a thickness Solid Grade Laminate for wet and heavy use.
- Armitage Venesta 018408M stainless steel (min. panel width 2000mm)
- Armitage Shanks S552707 stainless steel legs to floor 2 required.

Typical HTM 64 assembly requirements are:
1. Hospital pattern disposal unit (including cistern)
2. Hospital pattern (lever action) taps to avoid contamination
3. Separate manual control of hot and cold water
4. Open nozzle and flow straightener with minimal restriction
5. Connecting to concealed services

Typical HTM 64 room applications:
- Dirty utility/Disposal

Typical NBS specification
N13 sanitary appliances/fittings
To be read with Preliminaries / General conditions

N13/520 pre-plumbed panel lining system
Manufacture and Reference: Armitage Venesta Washroom Systems, Chartwell Court, West Ml, Imperial Business Park, Gravesend, Kent, DA11 0DL.
Telephone: 01474 353333

‘IPS Healthcare’ high pressure laminate pre-plumbed washroom system.
Panel: 17mm thick V213 moisture resistant 88kg/m2 grade chipboard, faced on both sides with high pressure laminate creating an overall panel thickness of 18mm. Panels have post formed vertical edges with matching 1mm PVC piping to horizontal edges. Each panel section fitted to subframe with concealed BZW mild steel joggle clips, panel sections panel together with locating dowels.
Subframe: Each panel section fitted to rigid galvanised steel subframe with concealed BZW mild steel joggle clips, panel sections panel together with locating dowels.
Box lining: Front, sides, skirting & head panels 13mm compact laminate. Restroom subframe flush fitted into SSA aluminium frame to create rigid box unit. Box panel colour to be Smoke from Armitage Venesta standard colour range.
Pre-plumbing: Sanitary appliances pre-fixed and sealed to IPS Evolve unit, unless stated otherwise, all factory assembled.

N13/388 disposal unit/pre-plumbed panel
Panel system as clause 520 (minimum panel width 5000mm)
Stop Hopper: Armitage Shanks S551325MY - Lavan stainless steel slop hopper HTM 64 DU
Cistern: Armitage Shanks S550287 Conceala cistern and fittings with internal overflow, S459067 6/9 litre conversion pack for high level cistern.
Flushpipe: Armitage Shanks S435637 plastic flushpipe.
Taps: Armitage Shanks S8270AA, Markwik chrome plated 1/2" bib taps with 150mm levers, S8247AA 1/2" 100mm extensions and S8336AA, 1/2" panel mounts for concealed supply. HTM 64 TB H1
Trap: Armitage Venesta 018408 white polypropylene P trap for Hopper. Supplied loose for fixing on site.
Sealing: Joint between disposal unit and panel with clear silicone sealant by others.

Note: The Stop Hopper Assembly is supplied separate to the back panel.

Alternatives
Panel: 13mm o/a thickness Solid Grade Laminate for wet and heavy use.
- Armitage Venesta 018408M stainless steel (min. panel width 2000mm)
- Armitage Shanks S552707 stainless steel legs to floor 2 required.

Product information – Tel: 01474 353333 Fax: 01474 533558 email: tech@armitage-venesta.co.uk
**Plaster sink assembly for use in connection with plaster preparation**

**Typical HTM 64 assembly requirements are:**
1. Hospital pattern plaster sink
2. Hospital pattern (lever action) tap to avoid contamination
3. Separate manual control of hot and cold water
4. Open nozzle and flow straightener with minimal restriction
5. Connecting to concealed services

**Variable to suit**

**Separate manual control of hot and cold water**

**Hospital pattern (lever action) tap to avoid contamination**

**Typical NBS specification**

**N13/520 pre-plumbed panel lining system**

Manufacturer and Reference: Armitage Venesta Washroom Systems, Chartwell Court, West Mill, Imperial Business Park, Gravesend, Kent. DA11 6DL

Telephone: 01474 353333

‘IPS Healthcare’ high pressure laminate pre-plumbed washroom system

Panel: 17mm thick V313 moisture resistant 680kg/m² grade chipboard, faced on both sides with high pressure laminate creating an overall panel thickness of 19mm. Each panel section fitted to subframe with concealed BZP mild steel Joggle clips, panel sections joined together with locating dowels. Subframe: Rolled galvanised steel section subframe with bearing board, fitted within stud partition with nylon location brackets and metal extension brackets.

Pre-plumbing: Sanitary appliances pre-fixed and sealed to IPS Healthcare unit, unless stated otherwise, all factory assembled by Armitage Venesta.

Colours: Refer to Armitage Venesta for standard laminate colour range.

**N13/331 plaster sink unit/pre-plumbed panel**

Panel System as clause 520: (minimum panel width 1200mm)


Janitorial Unit

**Typical NBS Specification**

**N13/320 pre-plumbed panel lining system**

Manufacturer and Reference: Armitage Venesta Washroom Systems, Chartwell Court, West Mill, Imperial Business Park, Gravesend, Kent. DA11 6DL

Telephone: 01474 353333

‘IPS Healthcare’ high pressure laminate washroom system

Panel: 17mm thick V313 moisture resistant 680kg/m² grade chipboard, faced on both sides with high pressure laminate creating an overall panel thickness of 19mm. Panels have post formed vertical edges with matching 1mm PVC piping to horizontal edges. Each panel section fitted to subframe with concealed BZP mild steel Joggle clips, panel sections joined together with locating dowels. Subframe: Rolled galvanised steel section subframe with bearing board, fitted within stud partition with nylon location brackets and metal extension brackets.

Pre-plumbing: Sanitary appliances pre-fixed and sealed to IPS Healthcare unit, unless stated otherwise, all factory assembled by Armitage Venesta.

Colours: Refer to Armitage Venesta for standard laminate colour range.

**N31/331 janitorial unit panel lining system:**

Panel System as clause 520: Minimum panel width 700mm

Sink Unit: Armitage Shanks S6509MY Janitorial unit. Stainless steel 570mm x 570mm, 880mm high complete with tamper proof concealing panel for basin trap, hinged bucket grating to sink, stainless steel legs with adjustable feet & earthing tag. Supplied loose for fixing to IPS unit on site.

Taps: Armitage Shanks B2809AA MonoBloc mixer with swivel nozzle and lever handles.

Basin Trap: Armitage Shanks S8734AA Chrome-plated 32mm waste with swivel plug.

Sink Waste: 38mm Unslotted strainer waste. Armitage Shanks S8760AA.

Base Trap: Self colour 32mm plastic re-sealing bottle trap with 75mm seal. Armitage Venesta 7360100SC.

Sink Trap: Self colour 32mm plastics re-sealing bottle trap with 75mm seal. Armitage Venesta 7360100SC.

**Typical room applications:**

• Cleaners rooms

**Alternatives**

Panels

- 13mm u/l thickness Solid Grade Laminate for wet and heavy use.
- Armitage Shanks S507367 stainless steel legs to floor: 2 required.
- Plaster sink. Armitage Shanks S507367 Clyde left hand stainless steel plaster sink with work surface.
- No tapholes with strainer basket, lid and 38mm waste.
**Scrub-up trough assembly for use in connection with surgical washing of forearms and hands**

**Typical HTM 64 assembly requirements are:**
1. Hospital pattern scrub-up trough
2. Washing under running water (therefore no plug)
3. Hospital pattern (lever-action) tap(s) or automatically by sensor to avoid contamination
4. Open nozzle and flow straightener with minimal restriction
5. Water temperature should be controlled via integral thermostat
6. Connecting to concealed services

**Typical room applications:**
- **Shower cubicle**
- **wash-up areas**

**Typical NBS specification**
**R13 sanitary appliances/ fittings**

N13/520 pre-plumbed panel lining system

Manufacturer and Reference: Armitage Venesta Washroom Systems, Charwell Court, West Mill, Imperial Business Park, Gravesend, Kent, DA11 0DL

Telephone 01474 353333

IPS Healthcare's high pressure laminate pre-plumbed washroom system.

Panel: 17mm thick V2/3 moisture resistant 880g/m² grade chipboard, faced on both sides with high pressure laminate creating an overall panel thickness of 19mm. Panels have matching 1mm PVC edging to edges. Each panel section fitted to subframe with concealed B2P mild steel joggle clips, vertical panel sections panelled together with blinded dowels.

Subframe: Rolled galvanised steel subframe with bracing board, fitted within sub-panel with nylon location brackets and metal expansion brackets.

Pre-plumbing: Sanitary appliances pre-fixed and sealed to IPS Healthcare unit, unless stated otherwise, all factory assembled by Armitage Venesta.

**Colours:** Refer to Armitage Venesta for standard laminate colour range.

N13/346 scrub-up trough pre-plumbed panel

Panel system as clause 520 (minimum panel width 2600mm)

- **Trough:** Armitage Shanks S28654X Fri2 4000mm stainless steel surgeon scrub-up trough with right-hand outlet, angle brackets, 40mm strainer waste and trap cover HTM 64 TB H4.
- **Taps:** Armitage Shanks S8252AA Markwik chrome plated sequential electronic mixer with proximity sensor, horizontal outlet. HTM 64 LB H2.
- **Trap:** Armitage Venesta 2960655G, 40mm plastic re-sealing bottle trap with 75mm seal.
- **Sealing:** Joint between scrub-up trough and panel sealed with clear silicone sealant by others.

**Note:** The Scrub-up Assembly is supplied separate to the back panel.

**Alternatives**

- **Panels:**
  - 13mm o/a thickness Solid Grade Laminate for wet and heavy use.
  - Trough: Armitage Shanks S2852AA Markwik chrome plated sequential electronic mixer with proximity sensor, horizontal outlet.
  - Armitage Shanks S8252AA Markwik chrome plated sequential electronic mixer with proximity sensor, horizontal outlet.
  - Armitage Shanks S2852AA Markwik chrome plated sequential electronic mixer with proximity sensor, horizontal outlet.
  - Armitage Shanks S8252AA Markwik chrome plated sequential electronic mixer with proximity sensor, horizontal outlet.

**Basin assembly for use in connection with clinical procedures**

**Typical HTM 64 assembly requirements are:**
1. Hospital pattern basin, integral back outlet
2. Washing under running water (therefore no plug)
3. Hospital pattern (lever-action) tap(s) or automatically by sensor to avoid contamination
4. Single horizontal spout open nozzle and flow straightener
5. Thermostatic mixer in hot supply (TM3 DOH 8 - approved)
6. Connecting to concealed services

**Typical room applications:**
- **4/4 bed wards**
- **Single bed wards**
- **Dirty utility**
- **Clean utility**
- **Treatment rooms**
- **Consulting rooms**

**Typical NBS specification**
**R13 sanitary appliances/ fittings**

N13/520 pre-plumbed panel lining system

Manufacturer and Reference: Armitage Venesta Washroom Systems, Charwell Court, West Mill, Imperial Business Park, Gravesend, Kent, DA11 0DL

Telephone 01474 353333

IPS Healthcare's high pressure laminate pre-plumbed washroom system.

IPS Evolve boxed-out unit for Hospitals.

Panel: 17mm thick V2/3 moisture resistant 880g/m² grade chipboard, faced on both sides with high pressure laminate creating an overall panel thickness of 19mm. Panels have past formed vertical edges with matching 1mm PVC edging to horizontal edges. Each panel section fitted to subframe with concealed B2P mild steel joggle clips, vertical panel sections panelled together with blinded dowels.

Subframe: Each panel section fitted to rolled galvanised steel subframe with concealed B2P mild steel joggle clips, panel sections joined together with blinded dowels.

**Boxing:** Front, sides, skirting & head panels 13mm compact laminate recessed flush fitting into 50mm aluminium frame to create rigid box unit. Box panel colour to be specified from Armitage Venesta standard colour range.

Pre-plumbing: Sanitary appliances pre-fixed and sealed to IPS Evolve unit, unless stated otherwise, all factory assembled.

**Colours:** Refer to Armitage Venesta for standard laminate colour range.

N13/335 wash basin pre-plumbed panel

Panel system as clause 520 (minimum panel width 600mm)

- **Wash basin:** Armitage Shanks S235401 Contour 21 500mm vitreous china panel mounted basin with no tap holes, no overflow, no chain hole, concealed outlet, HTM 64 LB H2.
- **Taps:** Armitage Shanks S9161 concealed hangers, toggle bolts and clips.
- **Sealing:** Joint between basin and panel sealed with white silicone sealant by Armitage Venesta.

**Alternatives**

- **Panels:**
  - 13mm o/a thickness Melamine Faced Chipboard (MFC) for dry and light use.
  - 13mm o/a thickness Solid Grade Laminate for wet and heavy use.
  - Taps: Armitage Shanks S9161 concealed hangers, toggle bolts and clips.

**Note:** Minimum dual panel size shown are to suit IPS Healthcare. However plumbing/hygiene flow requirements space above to suit wash basin system unit.
Basin assembly for use in connection with personal washing

Typical HTM 64 assembly requirements are:
1. General basin (medium & large)
2. Washing in reservoir of water (therefore a basin with plug and chain with screw stays)
3. Combined or separate nozzle with flow straightener
4. Lever action taps

Typical NBS specification
N13 sanitary appliances/fittings

N13/320 pre-plumbed panel lining system
Manufacture and Reference: Armitage Venesta Washroom Systems, Chertsey Court, West Mill, Imperial Business Park, Gresware, Kent, DA11 0DL
Telephone: 01444 353333

Typical room applications:
• En-suites
• Bathrooms

N13/335 wash basin pre-plumbed panel
Panel system as clause 520 (minimum panel width 550mm)
Wash basin: Armitage Shanks S22544T Portman 21 500mm reedine china panel mounted basin with 1 right hand tap hole, no overflow, no chain hole. HTM 64 L8 B M.
Taps: Armitage Shanks S7434AA Nuastyle single lever action thermostatic mixer tap with copper tails. HTM 64 TP6.
Waste: Armitage Shanks S8720AA 32mm chrome plated round bottle trap with 80mm unslotted tail, screw stay. HTM 64 WT6.
Joint between basin and panel sealed with white silicone sealant by Armitage Venesta.

Alternatives
Panels
• 13mm o/a thickness Solid Grade Laminate for wet and heavy use.
• Available with Sensor flow control system

Taps
• Armitage Shanks S4448AA Nuastyle single lever action thermostatic mixer tap. HTM 64 TP6 with flexi tails.
• Armitage Shanks S7186AA Allevia 1/2" chrome plated quarter turn pillar taps. HTM 64 TP6
• Armitage Shanks S7186AA, Avon chrome plated 1/2" non-concussive self closing pillar taps with anti-splash outlet. HTM 64 TP6

Other accessories: Armitage Shanks S115AA Nuastyle Thermostatic mixing valve 1/2" basin thermostatic valve with anti-tamper shield.

Basin assembly for hand-rinsing only

Typical HTM 64 assembly requirements are:
1. General basin – small
2. Washing under running water (therefore no plug)
3. Hand-rinsing only, therefore small basin
4. Combined manual control of flow and temperature of water or automatic control of thermostatically mixed water. Single flow spout
5. Lever action tap or press tap
6. Thermostatic mixer on hot supply (TMV3 DOH-8 approved)

Typical NBS specification
N13/320 pre-plumbed panel lining system
Manufacture and Reference: Armitage Venesta Washroom Systems, Chertsey Court, West Mill, Imperial Business Park, Gresware, Kent, DA11 0DL
Telephone: 01444 353333

Typical room applications:
• Patients wc’s
• Staff wc’s

N13/335 pre-plumbed washroom system
IPS
Evolve boxed-out unit for Hospitals
Panel system as clause 520 (minimum panel width 450mm)
Wash basin: Armitage Shanks S22344H Portman 21 450mm reedine china panel mounted basin with 1 right hand tap hole, no overflow, no chain hole. HTM 64 L8 B S.
Taps: Armitage Shanks S7434AA Nuastyle single lever action thermostatic mixer tap with copper tails. HTM 64 TP6.
Waste: Armitage Shanks S8720AA 32mm chrome plated round bottle trap with 80mm unslotted tail, screw stay. HTM 64 WT6.
Joint between basin and panel sealed with white silicone sealant by Armitage Venesta.

Alternatives
Panels
• 13mm o/a thickness Melamine Faced Chipboard (MFC) for wet and heavy use.

Taps
• Armitage Shanks S4448AA, Nuastyle single lever action thermostatic mixer tap. HTM 64 TP6 with flexi tails.
• Armitage Shanks S7186AA, Avon chrome plated 1/2" non-concussive self closing thermostatic mixer with anti-splash outlet. HTM TP6P
Bidet assembly for use in connection with clinical procedures

Typical HTM 64 assembly requirements are:

1. Hospital pattern bidet with flush-grated waste (therefore no plug)
2. Sensor-operated over-rim supply
3. Water temperature thermostatically controlled [TMV approved]
4. Connecting to concealed services

Typical NBS specification
N13 sanitary appliances/fittings
N13/315 urinal/pre-plumbed panel

Panel System as clause 520: Sanitary appliances pre-fixed and sealed to IPS Evolve unit by Armitage Venesta unless stated elsewhere.

Urinal: Armitage Shanks S611001 Contour vitreous china urinal bowl HTM 64 UR H.
Waste/cistern: Armitage Shanks SK9701 40mm plastic domed waste, S9701 40mm plastic Prap with 75mm seal and multi-fit outlet.
Cistern/flush pipe(s) (complete with automatic syphon, lid and support fittings): Armitage Venesta AGS1600-4.5 litres auto cistern, pre-plumbed copper flush pipe.
Other accessories: Armitage Shanks S4232 anti-back siphon, S4235 moisture resistant 680kg/m³ grade chipboard.

Panel: 17mm thick V313 moisture resistant 680kg/m³ grade chipboard, faced on both sides with high pressure laminate creating an overall panel thickness of 19mm. Each panel section fitted to subframe with concealed BZP mild steel joggle clips, panel sections joined together with locating dowels.

Subframe: Rolled galvanised steel section subframe with bracing board, fitted within stud partition with nylon location brackets and metal extension brackets.

Pre-plumbing: Sanitary appliances pre-fixed and sealed to IPS Evolve unit, unless stated otherwise, all factory assembled by Armitage Venesta.

Colours: Refer to Armitage Venesta for standard laminate colour range.

N13/325 bidet /pre-plumbed panel
Panel system as clause 520 (panel width 700mm)
Bidet: Armitage Shanks Sn921 Tiffany bidet with over rim supply. Single central tap hole, no overflow.

Taps: Armitage Shanks S7013/A Sensorflow solo high rise bidet mounted spout with integral sensor servicing valve and filter.

Valve: Armitage Shanks S7015/A adjustable TMV 1/2" thermostatic mixer valve with anti-limescale filter.

Waste: Armitage Shanks S6303/AA 32mm plastic strainer waste, HTM 64 WTI.

Trap: Armitage Shanks S66567 32mm plastic P Trap with 75mm seal.

Other Accessories: Armitage Venesta AGS1602 laminate faced spacer box colour matched to IPS back panel. 100mm projection.

Sealing: Joint between bidet, spacer box and back panel by others.

Alternatives:
- 18mm o/a thickness Melamine Faced Chipboard (MFC) for dry and light use.
- 19mm o/a thickness Solid Grade Laminate for wet and heavy use.

En-suites
Bathrooms

Hospital pattern urinal assembly

Typical HTM 64 assembly requirements are:

1. Concealed trap

Typical NBS specification
N13 sanitary appliances/fittings
N13/320 pre-plumbed panel lining system

Panel System as clause 520: Sanitary appliances pre-fixed and sealed to IPS Evolve unit by Armitage Venesta unless stated elsewhere.

Urinal: Armitage Shanks S611001 Contour vitreous china urinal bowl HTM 64 UR H.
Waste/cistern: Armitage Shanks SK9701 40mm plastic domed waste, S9701 40mm plastic Prap with 75mm seal and multi-fit outlet.
Cistern/flush pipe(s) (complete with automatic syphon, lid and support fittings): Armitage Venesta AGS1600-4.5 litres auto cistern, pre-plumbed copper flush pipe.
Other accessories: Armitage Shanks S4232 anti-back siphon, S4235 moisture resistant 680kg/m³ grade chipboard.

Panel: 17mm thick V313 moisture resistant 680kg/m³ grade chipboard, faced on both sides with high pressure laminate creating an overall panel thickness of 19mm. Panels postformed vertical edges with matching 1mm PVC lipping to horizontal edges. Each panel section fitted to subframe with concealed BZP mild steel joggle clips, panel sections joined together with locating dowels.

Subframe: Rolled galvanised steel section subframe with bracing board, fitted to site frame with nylon click-fix location brackets.

Site Framing: Extruded aluminium base, headrail sections, rolled metal wall channels.
Flashings: 18mm thick melamine faced chipboard.

Pre-plumbing: Sanitary appliances pre-fixed and sealed to IPS Evolve unit, unless stated otherwise, all factory assembled by Armitage Venesta.

Colours: Refer to Armitage Venesta for standard laminate colour range.

N13/315 urinal/pre-plumbed panel
Panel System as clause 520: Sanitary appliances pre-fixed and sealed to IPS Evolve unit by Armitage Venesta unless stated elsewhere.

Urinal: Armitage Shanks S611001 Contour vitreous china urinal bowl HTM 64 UR H.
Waste/cistern: Armitage Shanks SK9701 40mm plastic domed waste, S9701 40mm plastic Prap with 75mm seal and multi-fit outlet.
Cistern/flush pipe(s) (complete with automatic syphon, lid and support fittings): Armitage Venesta AGS1600-4.5 litres auto cistern, pre-plumbed copper flush pipe.
Other accessories: Armitage Shanks S4232 anti-back siphon, S4235 moisture resistant 680kg/m³ grade chipboard.

Sealing: Joint between urinal bowl and panel sealed with white acrylic sealant by Armitage Venesta.

Alternative panels:
- 18mm o/a thickness Melamine Faced Chipboard (MFC) for dry and light use.
- 19mm o/a thickness Solid Grade Laminate for wet and heavy use.
WC for fully ambulant and ambulant disabled users

**Typical HTM 64 assembly requirements are:**
1. Rimless pan for all back-to-wall hospital pattern pans
2. Fully enclosed seat holes
3. Seat only (no cover)
4. WC Suite to fully comply with the WC Suite performance specification of waterSupply (waterfittings) Regulations 1999
5. Custom to include flushing arrangement (siphon) adjusted to deliver no more than 6l full flush and dual flush, smaller not to exceed two-thirds of full flush volume

**Typical room requirements:**
- Staff area
- Public area

**Typical NBS specification**

**N13 sanitary appliances/fittings**

**N13/520 pre-plumbed panel lining system**

Manufacture and Reference: Armitage Venesta Washroom Systems, Charterfield Court, West Malling Industrial Park, Gravesend, Kent, DA1 1DL

Telephone: 01474 353333

**IPS Healthcare/ high pressure laminate pre-plumbed washroom system.**

IPS Evolve boxed-out unit for Hospitals.

Pan: 480mm thick V13 moisture resistant 640g/m² grade chipboard, faced on both sides with high pressure laminate creating an overall panel thickness of 18mm. Panels have post formed vertical edges with matching from PVC lip to horizontal edges. Each panel section fitted to subframe with concealed BZP mild steel joggle clips, vertical panel sections joined together with locating dowels.

Subframes: Each panel section fitted to roll galvanised steel subframe with concealed BZP mild steel joggle clips, panel sections joined together with locating dowels.

Box framing: Front, sides, skirting & head panels 17mm compact laminate received flush fitting into 5A aluminium frame to create rigid box unit. Box panel colour to be Stone from Armitage/ Venesta standard colour range.

Pre-plumbing: Sanitary appliances pre-fixed and sealed to IPS Evolve unit, unless stated otherwise, all factory assembled.

Colours: Refer to Armitage Venesta for standard laminate colour range.

**N13/300 wc pre-plumbed panel**

Panel system as clause 520: (minimum panel width 540mm)

WC arrangement: Back-to-wall wc with concealed cistern.

Pan: Armitage Shanks S305101 Contour 21 rimless vitreous china back-to-wall floor mounted wc (supplied as a loose item) 50mm high projection)

Seat: Armitage Shanks S450567 Simpla inlet connector.

Pan connector: Armitage Shanks S405 (converts to P trap).

Cistern/flush pipe: Armitage Venesta EEM 13506176 Concealed plastic concealed cistern with internal overflow Flushpipe EEM 13546176.

Flush volume: 6 litres

Valve/flush/operating mechanism: 1/2" Micro-valve HPL/P bataville, Chrome plated lever. C031661CP.

Other accessories: Armitage Shanks S4505 Simple inlet connector.

Sealing: Joint between wc and panel by others.

**Alternatives**

Panels:
- 18mm x thickness Melanie Faced Chipboard (MFC) for dry and light use.
- 18mm x thickness Solid Grade Laminate for wet and heavy use.
- Pneumatic Flush.
- Sensorflush flushing system.

Pan Armitage Shanks S505010 Contour 21 panel mounted rimless vitreous china WC (supplied loose).

Brackets to suit wall mounted pan.

- 4.5 litre delay fill tank.

**WC for assisted ambulant disabled/wheelchair users**

**Typical HTM 64 assembly requirements are:**
1. Rimless pan for all back-to-wall hospital pattern pans
2. Fully enclosed seat holes
3. Custom to include flushing arrangement (siphon) adjusted to deliver no more than 6l full flush and dual flush, smaller not to exceed two-thirds of full flush volume

**Typical room requirements:**
- En-suite
- Patient wc's
- Assisted wc's

**Typical NBS specification**

**N13 sanitary appliances/fittings**

**N13/520 pre-plumbed panel lining system**

Manufacture and Reference: Armitage Venesta Washroom Systems, Charterfield Court, West Malling Industrial Park, Gravesend, Kent, DA1 1DL

Telephone: 01474 353333

**IPS Healthcare/ high pressure laminate pre-plumbed washroom system.**

Pan: 480mm thick V13 moisture resistant 640g/m² grade chipboard, faced on both sides with high pressure laminate creating an overall panel thickness of 18mm. Panels have post formed vertical edges with matching from PVC lip to horizontal edges. Each panel section fitted to subframe with concealed BZP mild steel joggle clips, panel sections joined together with locating dowels.

Subframes: Roll galvanised steel subframe with bracing, fitted within sub panel with nylon location brackets and metal extension brackets.

Pre-plumbing: Sanitary appliances pre-fixed and sealed to IPS Healthcare unit, unless stated otherwise, all factory assembled by Armitage Venesta.

Colours: Refer to Armitage Venesta for standard laminate colour range.

**N13/300 wc pre-plumbed panel**

Panel system as clause 520:

WC arrangement: Back-to-wall pan with spacer box and concealed cistern.

Pan: Armitage Shanks S305011 Contour 21 rimless (70mm projection) vitreous china back to wall floor mounted wc (supplied as a loose item) HTM 64 WC HD


Cistern/flush pipe: Armitage Venesta EEM 13506176 Concealed plastic concealed cistern with internal overflow. Flushpipe EEM 13546176.

Flush volume: 6 litres

Valve/flush/operating mechanism: 1/2" Micro-valve HPL/P bataville, Chrome plated lever. C031661CP.

Other accessories: Armitage Shanks S45057 Simple inlet connector.

Sealing: Joint between wc and panel by others.

**Alternatives**

Panels:
- 18mm x thickness Melanie Faced Chipboard (MFC) for dry and light use.
- 18mm x thickness Solid Grade Laminate for wet and heavy use.
- Pneumatic Flush.
- Sensorflush flushing system.

Pan Armitage Shanks S505010 Contour 21 panel mounted rimless vitreous china WC (supplied loose).

Brackets to suit wall mounted pan.

- 18mm x thickness Solid Grade Laminate for wet and heavy use.
- Pneumatic Flush.
- Sensorflow control system.
- 4.5 litre delay fill tank.
Bath assembly for use in connection with personal bathing

Typical HTM 64 assembly requirements are:

1. General bath, not for use in clinical areas
2. Open nozzle and flow straightener with minimal restriction
3. Thermostatic mixer on hot supply or integral thermostat (TMV3 Approved)

Typical room applications:

- Bathrooms

N13/520 pre-plumbed panel lining system:
Manufacturers and reference: Armitage Venesta Washroom Systems, Chartwell Court, West Mill, Imperial Business Park, Gravesend, Kent, DA1 1DL.
Telephone: 01474 353333

‘IPS Healthcare’ compact laminate pre-plumbed washroom system:
Panel: 13mm thick compact laminate. Panels have radiused and polished edges. Each panel section fitted to subframe with concealed BZP mild steel joggle clips, panel sections joined together with locating dowels.
Subframe: Rolled galvanised steel section with bracing board, fitted within stud partition with nylon location brackets and metal extension brackets.
Pre-plumbing: Sanitary appliances pre-fixed and sealed to IPS Healthcare unit, unless stated otherwise, all factory assembled.
Colours: Refer to Armitage Venesta for standard laminate colour range.

N13/355 general bath unit / pre-plumbed Panel:
Panel system as clause 520. Sanitary appliances pre-fixed and sealed to IPS Healthcare unit by Armitage Venesta unless stated elsewhere.
Bath: Armitage Shanks S169901 Nisa lowline heavy duty steel bath with slip resistant base, no tapholes, no handgrips. HTM 64 BA G M Supplied loose.
Taps: Armitage Shanks Contour 21 wall mounted thermostatic bath filler (55).
Waste: Armitage Shanks S8780AA 1 1⁄2" chain waste with overflow stopper.
Trap: Armitage Shanks S8970 38mm plastics re-sealing bottle trap with 75mm seal. HTM 64 TR R2/P.
Accessories:
- Armitage Shanks S091501 Nisu front panel.
- Armitage Shanks S091601 Nisu end panel.
- Armitage Shanks S936501 Edge strip.

Summary of Healthcare taps and mixers

Markwik thermostatic sequential mixer
- Single lever operation with large easy to use lever
- 200mm tap centres
- Easy access for maintenance - no need to remove panels
- Horizontal Spout
- Cleaning feature
- Safe surface temperature
PRODUCT CODE S9247AA HTM 64 TB H2

Markwik electronic thermostatic mixer with proximity sensor
- Sensor operated means no hand touch
- Water saving potential
- 200mm tap centres
- Easy access for maintenance - no need to remove panels
- Horizontal Spout
- Cleaning feature
- Safe surface temperature
PRODUCT CODE S9248AA HTM 64 TB H8

Markwik electronic thermostatic mixer with time flow sensor
- Sensor operated means no hand touch
- 200mm tap centres
- Easy access for maintenance - no need to remove panels
- Horizontal Spout
- Cleaning feature
- Safe surface temperature
PRODUCT CODE S9249AA HTM 64 TB H6

Nuastyle thermostatic basin mixer
- Satisfies part M of Building regulations
- Single easy use lever
- Suitable for high and low pressure systems
- Serviceable from outside panel
- Fits into standard pillar tap hole (28 - 35mm)
- TMV3 Approved
PRODUCT CODE S7449AA HTM 64 TP6 Flexi tails
S7443AA HTM 64 TP6 Copper tails

Nuastyle pillar taps
- Deck mounted chrome plated brass taps with anti vandal indices. Particularly suitable for contract use
- Suitable for close fist operation
PRODUCT CODE S7106AA HTM 64 TP5

Avon Monoblock
- Push operated
- Self closing
- Single control
PRODUCT CODE S7516AA HTM 64 TP PI

Markwik wall mounted bib taps
- Wall mounted chrome plated taps with 15cm levers
- Suitable for close flat operation
PRODUCT CODE S9270AA HTM 64 TB H1

Thermostatic shower with mounting box
- Lever operated thermostatic valve
- Supplied pre-plumbed in stainless steel box with cover plate
- Comes complete with isolating valves, non return valves and filters
- Suitable for ‘Test for’ before walls are finished
- Operates on very high differential inlet pressures (5:1)
- TMV3 Approved
PRODUCT CODE S8933AA CHROME
PRODUCT CODE S8933AC WHITE HTM 64 TM1