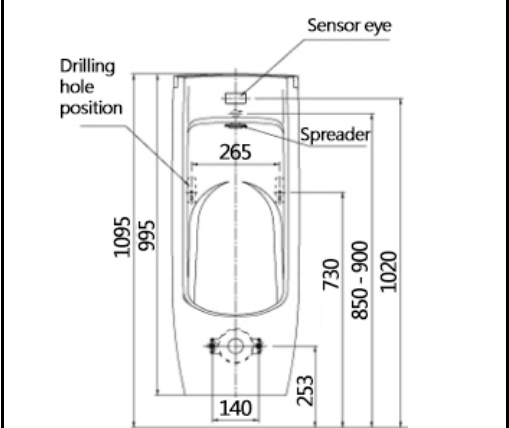
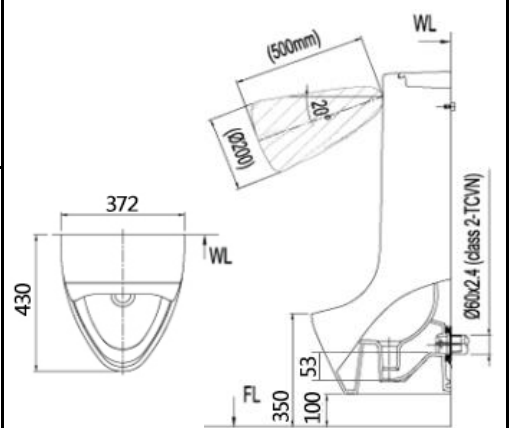




PROJECT		REF		REV	ITEM CODE	
LOCATION		DATE			PAGE	

## SANITARY WARE SPECIFICATION SHEET

Item Descriptions	Inax (Japan) Vitreous china wall hung integrated sensor urinal <b>with full plastic pipeline</b> for sea water; <b>Aqua Ceramic</b> against stains and build-up of bacteria; <b>bulit-in 1/2" washable inlet plastic wired filter</b> and 1/2" plastic angle valve; WSD approved "EMCA" sensor flush valve ref: EM9200.059+58.8637.1 ; 6V DC supply ; 53mm water seal complied with BD CAP.123 clause 24 ; tested on BS 5520:1977, BS 3402:1969, BS EN 13407:2015, HTM 64:2006, BS 3402 & BS EN 274-1:2002 ; test report J27789A & J27789B, J27789C & J27789D ; flush volume <b>1.2 litres/cycle</b> in WELS <b>Grade 1</b> ; Registration No. IU 19-0028
Dimensions	L420 x W372 x H995 mm
Model	ASU-500VS
Finish	Vitreous China
Brand	Inax (Japan)
Country of Origin	Vietnam
Source	Acme Sanitary Ware Co. Ltd Mr. Eric Wong/ Mr. Don Yuen
Contact Tel/Fax	(852) 2388-7171 / (852) 2710-8012
E-mail	acme@acmesanitary.com.hk
Website	www.acmesanitary.com.hk



### Specification

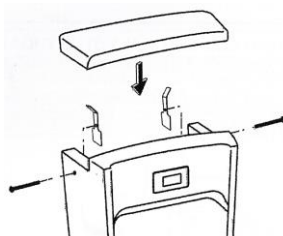
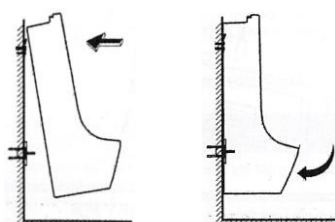
**Product:** Elementary wall for the men's room

**Characteristic product:**

- Primary coronary RIM format exhaust cleaning
- Automatic drain valve profile
- Induction Range 700-900 mm
- 0.070.1 Mpa: Pressure recommended use
- 0.10.75 Mpa: Adjust the valve block towards paste

**Water pressure:**

- If the water pressure is lower than the minimum pressure, flow not strong enough to discharge water wash comfortable cottage.
- If the water pressure exceeds the maximum pressure that can cause damage.



\* All information of the above is for the reference only. No prior notice is made if any changes.



PROJECT		REF		REV	ITEM CODE	
LOCATION		DATE			PAGE	

**SANITARY WARE SPECIFICATION SHEET**

**AQUA CERAMIC 100 Years of Clean**



AQUACERAMIC – prevent scratch marks, marks from waste, water scale stains and the build-up of bacteria.

**ANTI-STAIN TECHNOLOGY**

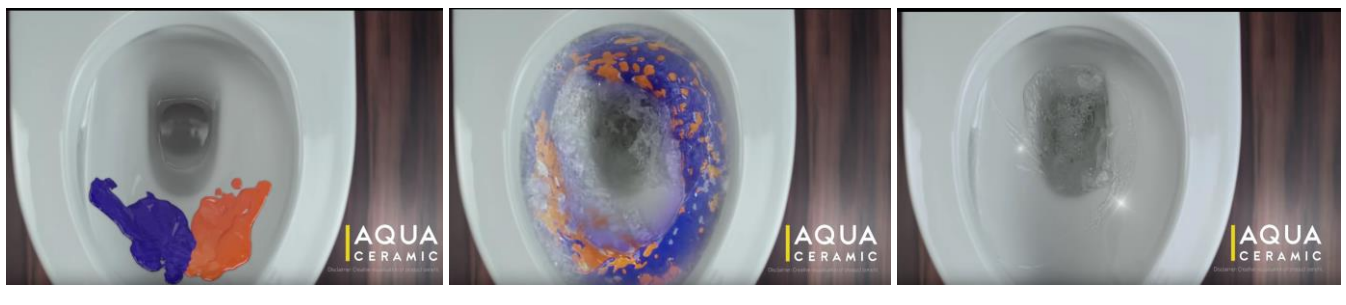
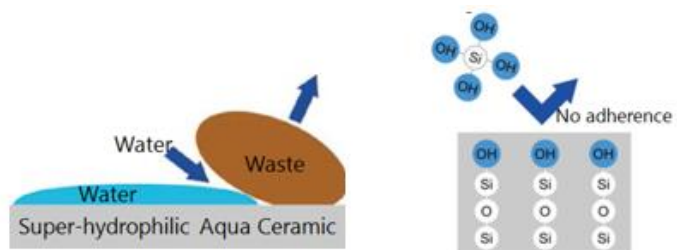
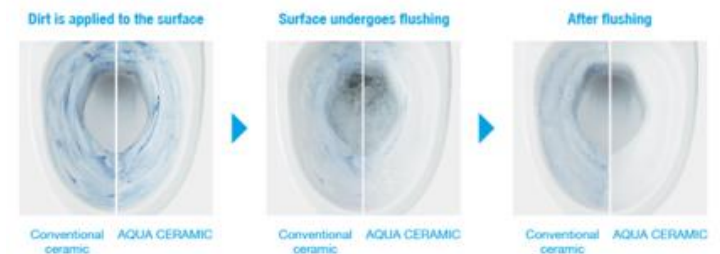
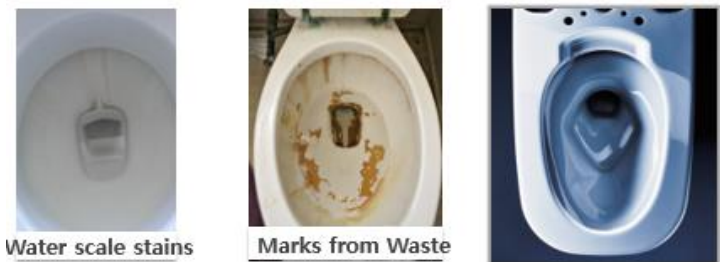


**Less Dirt Stains. Less Water Stains.**

This award-winning super-hydrophilic technology prevents dirt and dark ring stains from sticking to ceramic surfaces. In fact, dirt glides off the surface effortlessly as Aqua Ceramic enables water to penetrate between the contaminants and the toilet surface, effectively lifting off that waste with every flush.

AQUA CERAMIC is the first material in the world that is able to address the four main issues that affect the cleanliness of toilets: scuffing and scratching, marks from waste, stains caused by prolonged exposure to hard water, and the build-up of bacteria.

The technology incorporates super-hydrophilic performance in the surface of the ceramic, which permits the rinse water to permeate beneath any waste that may have become attached to the ceramic. And as the stain relinquishes its hold, the water simply lifts it and flushes it away.



Note: **LIXIL**

\* All information of the above is for the reference only. No prior notice is made if any changes.

註冊號碼 (Registration No.): 1U 19-0028



自願參與用水效益標籤計劃 - 小便器用具  
Voluntary Water Efficiency Labelling Scheme - Urinal Equipment



茲證明  
This is to certify that  
Acme Sanitary Ware Co., Ltd

將下列小便器用具在本計劃內註冊：  
has registered the following urinal equipment under this scheme :

牌 子 / Brand	:	EMCA
型 號 / Model	:	EM9200.059+58.8637.1
種 類 / Category	:	1
原產地 / Country or Region Origin	:	China

在用水效益標籤上展示的標誌 <i>Symbolic Presentation on the Water Efficiency Label</i>	:		滴水點 <i>Water droplet(s)</i>
用水效益級別 <i>Water Efficiency Grade</i>	:	1	
沖水量 <i>Water Flush Volume</i>	:	1.2	公升/循環 <i>litres/cycle</i>

簽發日期：  
Date of Issue: 12 April 2019

水務署  
Water Supplies Department



水務署署長(張業駒代行)  
for Director of Water Supplies

上述小便器用具具有智能功能，並且能達至額外節省用水。  
The above urinal equipment is operated with a smart demand operation to achieve additional water saving.





水務署  
Water Supplies Department

總部 Headquarters  
香港灣仔告士打道七號入境事務大樓 48 樓  
Immigration Tower, 7 Gloucester Road, Wan Chai, Hong Kong



本署  
Our  
來函檔  
Your ref. : 3321/2021 T/J(1004/2021)

電話  
Tel. :  
傳真  
Fax. : 2824 0578

30 August 2021

Acme Sanitary Ware Co Ltd  
1/F Acme Building,  
22-28 Nanking Street,  
Kowloon, Hong Kong

(Attn.: Mr Perry CHOW)

Dear Sir,

**Approval of "EMCA" Sensor Flush Valve  
(General Acceptance No. C20210992F)**

Your letter ref. L032/2021 dated 22 June 2021 refers.

Having considered the test report ref. J26549 issued on 18 June 2021 by Nutek Systems (HK) Limited, this Authority accepts that the fitting described below complies with, and its use when correctly installed does not contravene, the Waterworks Ordinance and Regulations.

**Name of Manufacturer:** Jiangmen LIXIL AS Sanitary Fitting Manufacturing Co Ltd

**Country of Origin:** the Mainland of China

**Brand:** EMCA

**Details of Fitting:** 1/2" Sensor flush valve for urinal

**Model:** EM9200.059

**Body Markings:** rpe

**Expiry Date:** 30 May 2026



**Proviso:** As the fitting has not been tested for use in contact with water intended for human consumption, the fitting can only be used in flushing water plumbing system.

This Authority hereby permits the use of the above fitting in flushing water plumbing systems subject to full adherence to Waterworks installation requirements. In particular, you are required to draw your customers' attention to the following requirement-

"Installation of filter before flushing valve is required. Without the filter, the flushing valve is liable to leak. The installed filter need frequent inspection and cleaning to maintain flushing supply. Normally only public toilets with good management system for maintenance would be considered."

"A stop cock or gate valve must be installed at the upstream of the fitting for manual isolation of water supply."

"The design flushing volume of the flushing valve should be compatible with the toilet bowl to ensure that effective clearance can be achieved by a single flush of water."

"Flushing valve should be used within the range of working pressures specified by the manufacturer." AND

"Installation of electronic opening and closing sanitary tapware should also comply with the requirements of Electrical & Mechanical Services Department."

A condition of this acceptance is that the fitting to be installed shall be replicas of the sample as certified by the testing agent mentioned above and without modifications. This acceptance may be withdrawn at any time if the standard of the fitting installed fails to meet that of the approved sample or if the fitting is found to be unsuitable for use in flushing water plumbing systems.

For the use of the fitting in any project, the General Acceptance Number of this letter must be quoted as a means of identification of acceptance of the fitting by this Authority.

Should you have any enquiries, please contact our Engineer Mr. Terry KUNG at tel. no. 3583 4086.

Yours faithfully,



(Roger WONG)  
for Director of Water Supplies

Encl.

c.c. WSD 3321/1/82 ] - without catalogue  
ME/MC ] - with soft copy only



# Acme Sanitary Ware Co. Ltd.

1/F, Acme Building, 22-28 Nanking Street, Kowloon, Hong Kong  
Tel: 2388 7171 Fax: 2710 8012  
Email: acme@acmesanitary.com.hk  
Website: www.acmesanitary.com.hk

PROJECT		REF		REV	ITEM CODE	
LOCATION		DATE			PAGE	

## SANITARY WARE SPECIFICATION SHEET

Item Descriptions	QEST (USA) 13mm plastic angle valve with riser pipe 1/2" Female threaded for sea water use	<p>Illustration/ Drawing</p> <p>ACME SANITARY WARE</p>
Model	QV302/12C	
Material	Plastic	
Manufacturer	QEST (USA)	
Source	Acme Sanitary Ware Co. Ltd Mr. Eric Wong/ Mr. Don Yuen	
Contact Tel/Fax	(852) 2388-7171 / (852) 2710-8012	
E-mail	acme@acmesanitary.com.hk	
Website	www.acmesanitary.com.hk	

Note: The color of the supply pipe may be varied without the prior notice.

\* All information of the above is for the reference only. No prior notice is made if any changes.



水務署  
Water Supplies Department

總辦事處 Headquarters



香港灣仔道七號入境事務大樓 48 樓  
48/F, Immigration Tower, 7 Gloucester Road, Wan Chai, Hong Kong

本署檔  
Our ref.  
來函檔號  
Your ref.

WSS/2020 T/J(1114/2020)

電話  
Tel. :  
傳真  
Fax. : 2824 0578

19 November 2020



**Approval of “QEST” Angle Valve  
(General Acceptance No. C20201033F)**

Your letter ref. SL20200813-1 dated 13 August 2020 and subsequent clarification by email on 20 October 2020 refer.

Having considered the test report ref. J25511 issued on 10 August 2020 by Nutek Systems (HK) Limited, this Authority accepts that the fitting described below complies with, and its use when correctly installed does not contravene, the Waterworks Ordinance and Regulations.

**Name of Manufacturer:** Zurn Industries LLC  
**Country of Origin:** USA  
**Brand:** QEST  
**Details of Fitting:** 1/2" Plastic angle valve  
**Model:** QV302  
**Body Markings:** QEST  
**Expiry Date:** 3 August 2025





**Proviso:** As the fitting has not been tested for use in contact with water intended for human consumption, the fitting can only be used in flushing water plumbing system.

This Authority hereby permits the use of the above fitting in flushing water plumbing systems subject to full adherence to Waterworks installation requirements.

A condition of this acceptance is that the fitting to be installed shall be replicas of the sample as certified by the testing agent mentioned above and without modifications. This acceptance may be withdrawn at any time if the standard of the fitting installed fails to meet that of the approved sample or if the fitting is found to be unsuitable for use in flushing water plumbing systems.

For the use of the fitting in any project, the General Acceptance Number of this letter must be quoted as a means of identification of acceptance of the fitting by this Authority.

Should you have any enquiries, please contact our Engineer Mr. Terry KUNG at tel. no. 3583 4086.

Yours faithfully,



(CHAN Chung-kun)

for Director of Water Supplies

Encl.

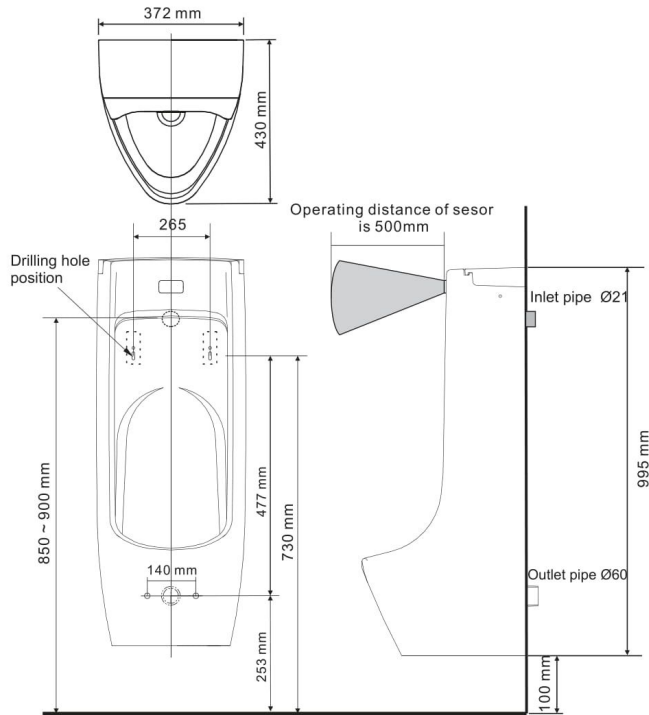
c.c. WSD 3321/1/82 ] - without catalogue  
ME/MC ] - with soft copy only

# MANUAL FOR INSTALLATION AND USING URINAL

Product code: ASU-500VS (FOR SEA WATER USE IN HONG KONG)

The advanced technology from japan  
Please read carefully before installing and using to promote 100% of products effect

## 1. Installation drawing.



## 2. Detail of part

No	Product name	Product code	Quantity
1	Urinal	ASU-500VS	01
2	Dish on hole	H-63V	01
3	Back hanger	A-U114V-1	01
4	Flange	UF-13AWP	01
5	Flushing valve	OKUV-50SE	01

## 3. Safety attention

- Before installation, please read carefully document to install properly and check the product has been cracked, broken in the process transport?
- After installation, please confirm the product were cracked, broken and operated normally during installation yet.
- The broken positions cause injury to users or leaking water as dirty floor.
- Do not tighten closely (Ceramic may be cracked, broken).
- Please keep this manual during using period.

## 4. Specification

Product	Wall-hang urinal
Product code	ASU-500VS
Specification	- Automatic flushing valve. - Operating distance of sensor is 500mm
Pressure water	0.07~0.75Mpa <b>Note:</b> - If water is not enough necessary pressure it will be flow weakly an do not ensure features of product. - If water is higher than maximum pressure it may be cause of broken.

## 5. Installation method

### 5.1. Determine Inlet pipe and Outlet pipe position.

Please refer position of Inlet pipe and Outlet pipe as the installation drawing.

Remark:

- + Please remove of dirty rubbish before install the supply and drainage pipe.
- + Put the cover button on the head of supply water pipe (as plastic bag).
- + Please keep this manual during using period.

## 5.2. Install flange.

1. Cut the waste water pipe for connect with flange.
2. Fixing T-screw from back side of flange.

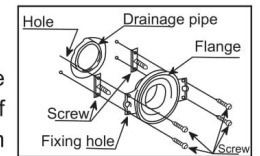
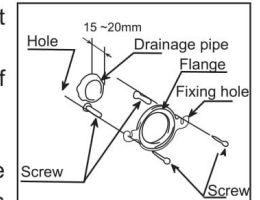
Note:

- Where is the concrete wall, use more fixing screw-plug and drill holes (Ø7.5mm; depth 45mm).
- 4 holes parallel with the floor.

3. Apply silicon to the glue side of flage (which fixed T screw) and inside of drainage pipe then fitted tightly them together.

Note: Fitted tightly on the T screw in concave position behind flange. If not tightly fitted, the water can be leak.

4. Fixed flange with wall by screw.



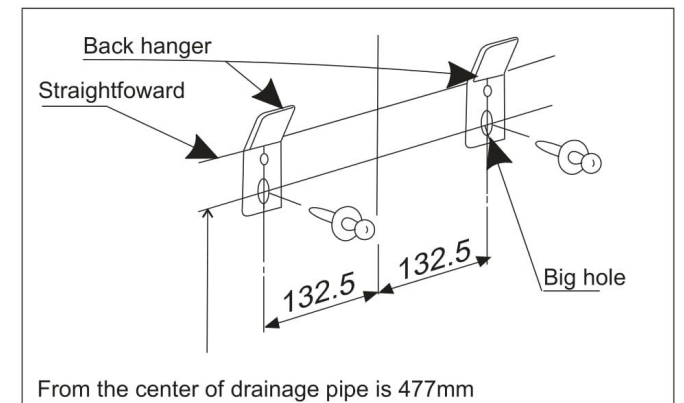
**NOTE**

If there are a slit, use silicone to re-plaster.

+ Cause leakage of water and bad odor

## 5.3. Fix back hanger with the wall.

1. Fix back hangers temporary on the wall with the dimensions as the figure.



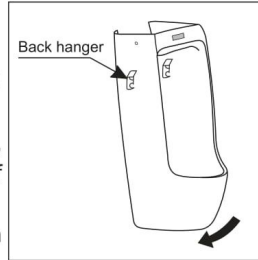
## MANUAL FOR INSTALLATION AND USING URINAL

Product code: ASU-500VS (FOR SEA WATER USE IN HONG KONG)

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Please read carefully before installing and using to promote 100% of products effect

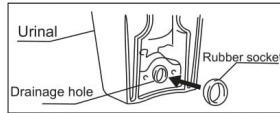
### Note:

- Back hangers is straight line.
  - In case concrete wall, use fixing screw-plug and drill holes.
- Hang urinal on back hangers, confirm screw properly inside hole of urinal. After that remove urinal.
  - Fix 2 back hangers by 2 screw with each.



### 5.4. Install flange and fix urinal.

- Laid washer into drainage hole of urinal, hang product on back hangers.

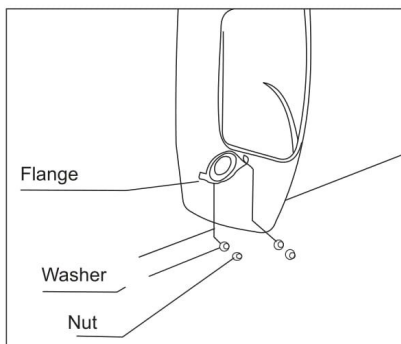


### Note:

- Clear stains and water around drainage hole.
  - Put washer in bottom side of drainage hole and wall.
- Tighten rubber socket and screw with flange, fixing rear of urinal.

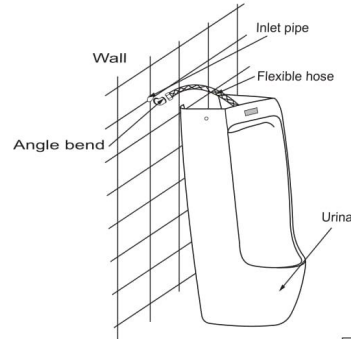
### Note:

- + Tight balance both screw-nut on the left, right.
- + Do not tight closely, it can be cause of cracked or broken.



### 5.5. Connect supply water pipe.

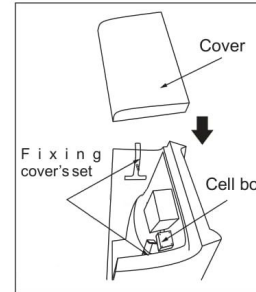
- Install angle bend with head of inlet pipe.
- Connect flexible hose with angle bend and indoor of flushing valve (Fixed with urinal).



- Use 2 nuts to fix T-shape bar with 2 holes on product.

**Note:** Only fix temporary, Tighten when close cover of urinal.

- Put cover on product as the figure (Note the direction of cover) after that tightend nuts to fixing cover.



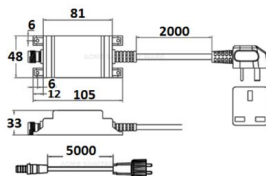
- Manual for replace battery
  - Use screw driver remove screw at 4 corners of box after that replace new batteries. (Quantity: 4 pcs)

### Note:

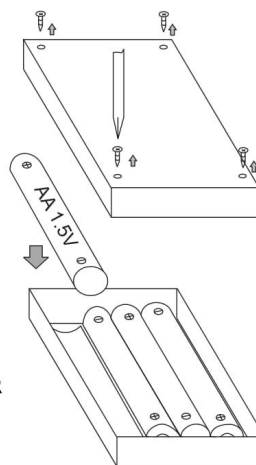
- Position of box as the figure

### OR

5.2 5m wire AC 100-240 Vac 50/60Hz 0.5A to DC 6V 1A IP68 waterproof transformer.



OR



### 6. Maintenance

#### Maintenance Attention

- Use toilet detergent with soft brush when clear. Do not use metal brush or glass paper to avoid scratching surface of product.
- Clean by water and use dry leather clear carefully.
- Do not use unsafe detergent which can effect to part as flushing valve, drainage pipe.
- When sensor doesn't operate, please check battery of product.

### Attention

During the process of assembly or use, if there's something question, please contact with us at the following addresses:

**Ha Noi Office:** 18<sup>th</sup> floor, Charmvit Tower, 117 Tran Duy Hung, Cau Giay District, Hanoi City

Tel: (84)4 3556 6639/40 | Fax: (84)4 3556 6031

**Hai Phong Office:** 4<sup>th</sup> floor, No. 3 Pham Van Dong, Duong Kinh District, Hai Phong City

Tel: (84)31-3814638/-639; Fax (84)31-3814637

**Nha Trang Office:** 9<sup>th</sup> floor, Nha trang Building, No. 42 Le Thanh Phuong, Nha Trang City

Tel: (84)58 3812 558/-557 | Fax: (84)58 3812 556

**Da Nang Office:** 2<sup>nd</sup> floor, No. 189 Dien Bien Phu Str., Thanh Khe Dist., Da Nang

Tel: (84)511 365 9111/-113 | Fax: (84)511 365 9115

**Ho Chi Minh Office:** 2<sup>nd</sup> floor, INTAN Building 97 Nguyen Van Troi, Commune 12, Phu Nhuan Dist., HCM City

Tel: (84)8 39972013/ -035 / -064 | Fax: (84)839972023

**Can Tho Office:** 5<sup>th</sup> floor, PVcomBank Building, 131 Tran Hung Dao, An Phu Commune, Ninh Kieu Dist., Can Tho City

Tel: (84)710 625 2246 | Fax: (84)710 625 2202



## Test Report

### Test

Title : Testing of Vitreous china bowl urinals (rimless type)  
 Method : BS 5520: 1977  
 Report No. : J27789A  
 Completion : 26 Apr., 2022

### Applicant (Information below provided by client)

Name :  
 Address :



### Sample (Information below provided by client)

Brand : INAX  
 Model : ASU-500VS  
 Body marking :

**INAX**

Manufacturer : LIXIL Vietnam Corporation  
 Origin : Vietnam  
 Description : Wall Hung Sensor Urinal

### Approved Signatory

Signature :

Name (title) : Chung Siu Yu, Alan (Engineer)  
 Date : 05 May, 2022

Nutek Systems is a testing agency  
 accredited by the Water Supplies  
 Department, for testing water supply  
 fittings.

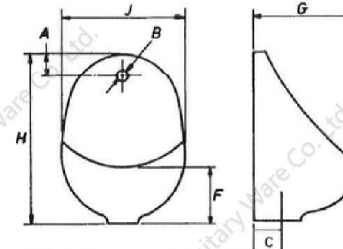
REPORT NO.: J27789A

## Summary

Test	Remark
Dimensions	As shown in section 1

## Results (apply only to samples tested)

### 1 Dimensions BS 5520: 1977



Variable	Denote	Unit	Measured
Dimensions from top of bowl to centre of water supply hole or spreader	A	mm	Not Applicable
Diameter of water supply hole (when provided)	B		Not Applicable
Centre of waste outlet from back of bowl	C		181.0
Dimension of outlet of the waste flange	D		73.0
Diameter of waste outlet	E		50.0
Distance from underside of waste outlet to lowest point of rim	F		253.0
Overall projection of bowl from back surface	G		425.0
Distance from underside of waste outlet to top of bowl	H		1005.0
Width of bowl at widest point	J		383.0
Depth of waste outlet	K		80.0

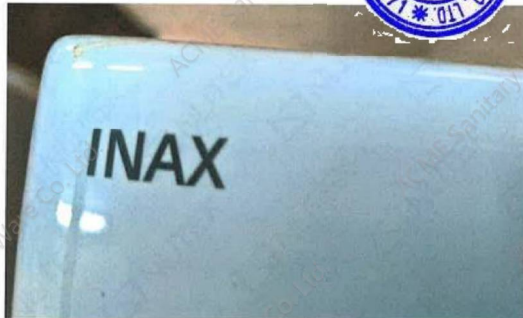


Figure 1 - Sample

REPORT NO.: J 27789A



Figure 2 - Body Marking



REPORT NO.: J 27789A

### General Note(s)

#### Definitions:

- C - conformance
- N - no requirement
- NC - non-conformance
- R - remainder

#### Organizations:

- WSD - Water Supplies Department (of Hong Kong)
- WHO - World Health Organization



- End of report -

## Test Report

**Test**  
 Title : Testing of Urinal  
 Method : BS 3402: 1969  
 Report No. : J 27789B  
 Completion : 27 Apr., 2022 to 27 May, 2022

**Applicant** (Information provided by client)  
 Name : \_\_\_\_\_  
 Address : \_\_\_\_\_

**Sample** (Information provided by client)  
 Description : Wall Hung Sensor Urinal

Brand : INAX  
 Model : ASU-500VS  
 Body Marking : **INAX**  
 Manufacturer : LIXIL Vietnam Corporation  
 Origin : Vietnam

**Approved Signatory**

Signature : Hing Kah Kuin  
 Name (title) : Hing Kah Kuin (Engineer)  
 Date : 17 Jun., 2022

Nutek Systems is a testing agency, accepted by the Water Supplies Department, for testing water supply fittings.



REPORT NO.: J 27789B

## Summary

Test	Remark
1 Visual Examination	C
2 Water Absorption	C
3 Crazeing	C
4 Chemical Resistance Test	C
5 Resistance to Staining and Burning	C

## Results (apply only to samples tested)

### 1 Visual Examination

BS 3402: 1969 Cl. 5.1, 5.4 & Table 2

Location	Blemish or defect	Maximum per	Remark
General	Wavy finish	None on all visible surfaces	C
	Warpage	Not more than 6mm	C
	Discoloration	None on all visible surfaces	C
Flushing surface and horizontal face of rims of WC pans bidets and urinals	Spots, blister and pinholes	A total of not over three; no grouping; for coloured appliances, blister and pinhole limited to one.	C
	Bubbles and specks	Not over two in one pottery square; a total of not over four	C
	Polishing marks	One only; none permitted for coloured figures	C
Visible surfaces other than above	Spots, blisters and pinholes	A total of not over five; no grouping; for coloured appliances, no blisters are permitted and pinholes are limited to a total of two	C
	Bubbles and specks	Not over three in one pottery square; a total of not over ten	C
Overall result			C

### 2 Water Absorption

BS 3402: 1969 Cl. 6

ID	Weight (g)		Absorption (%)	Required	Remark
	Before Test	After Test			
Sample 1	127.40	127.46	0.05	0.75% max.	C
Sample 2	125.04	125.09	0.04		C
Sample 3	123.80	123.87	0.06		C
Average			0.05	0.50% max.	C
Overall result					C



REPORT NO.: J27789B

**3 Crazing**

BS 3402: 1969 Cl. 7

ID	Variable	Unit	Measured	Required	Remark
1	Saturated steam	MN/m <sup>2</sup>	0.34	0.33 - 0.35	C
	Duration	h	10	10	C
	Sample 1	---	No	No	C
	Sample 2	---	No		C
Sample 3	---	No	C		
Overall result					C

**4 Chemical Resistance Test**

BS 3402: 1969 Cl. 8

Table 4 — Chemical solutions

Name of Chemical	Strength of solution	Time	Temperature
	%	hours	°C
Acetic acid	10	16	100
Citric acid	10	16	100
Detergent (Note 1)	(Note 1)	48	60
Hydrochloric acid	(Note 2)	48	15 to 21
Sodium hydroxide	5	0.5	60
Sodium stearate	0.15	48	60
Sulphuric acid	5	16	100

NOTE 1: This consists of an aqueous solution containing 0.04% (w/vol) of a condensation product of nonylphenol with 8-10 molecules of ethylene oxide. A suitable solution which contains 0.15% (w/vol) of the product is obtainable commercially under the trade name "Lissapol N".

NOTE 2: This solution consists of equal volumes of water and of hydrochloric acid of specific gravity 1.18.

ID	Solution	Time (h)	Temperature (°C)	Measured	Required	Remark
1	Acetic acid	16	100	No Loss	No loss of reflectivity on glaze	C
	Citric acid	16	100	No Loss		C
	Detergent	48	60	No Loss		C
	Hydrochloric acid	48	20	No Loss		C
	Sodium hydroxide	0.5	60	No Loss		C
	Sodium stearate	48	60	No Loss		C
	Sulphuric acid	16	100	No Loss		C
Overall result						C

**5 Resistance to Staining and Burning**

BS 3402: 1969 Cl. 9

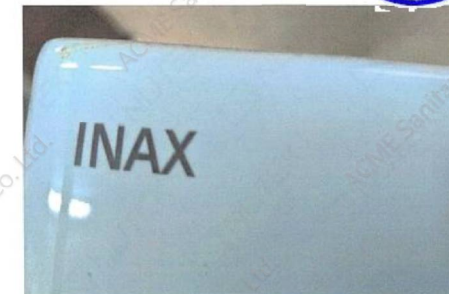
ID	Variable	Unit	Measured	Required	Remark
1	Methylene blue	---	No Stain	No stain remains	C
	Sodium hypochlorite	---	No Stain		C
	Hydrogen peroxide	---	No Stain		C
	Amyl acetate	---	No Stain		C
	Iodine in ethanol	---	No Stain		C
2	Lighted cigarette	---	No Stain		C
Overall result					C

REPORT NO.: J 27789B

Figure 1 - Sample



Figure 2 - Body marking



### General Note(s)

#### Definitions:

- C - conformance
- N - no requirement
- NC - non-conformance
- R - remainder


#### Organizations:

- WSD - Water Supplies Department (of Hong Kong)
- WHO - World Health Organization



- End of report -

I certify this to be a true copy of the original document.

Signed:   
Date: 2022-11-9

## Test Report

#### Test

Title: Testing of wall hung Urinal bowl  
Method: BS EN 13407: 2015  
Report No.: J 27789C  
Completion: 26 Apr., 2022 to 25 May, 2022


#### Applicant (Information below provided by client)

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

#### Sample (Information below provided by client)

Brand: INAX  
Model: ASU-500VS  
Body marking: **INAX**  
Manufacturer: LIXIL Vietnam Corporation  
Origin: Vietnam  
Description: Wall Hung Sensor Urinal

#### Approved Signatory

Signature:   
Name (title): Chung Siu Yu, Alan (Engineer)  
Date: 08 Nov., 2022

Nutek Systems is a testing agency, accepted by the Water Supplies Department, for testing water supply fittings.



### Summary

Test	Remark
1 Flushing volume and flow rate	C
2 Depth of water seal	C
3 Wash of bowl	C
4 Oversplashing	C
5 Discharge	C
6 Water Absorption	C



### Results (apply only to samples tested)

#### 1 Flushing volume and flow rate BS EN 13407: 2015 Cl. 4.2

Type	Variable	Unit	Measured	Required	Remark
II	Flushing volume	l	1.00	> 0.5, ≤ 5.0	C
	Flow rate	l/s	0.1	0.2 +0.2/-0.1	C
Overall result					C

#### 2 Depth of water seal BS EN 13407: 2015 Cl. 6.1

ID	Variable	Unit	Measured	Required	Remark
1	Depth of water seal	mm	52.0	≥ 50	C
Overall result					C

#### 3 Wash of bowl BS EN 13407: 2015 Cl. 6.2.1

ID	Variable	Unit	Measured	Required	Remark
1	1st flushing operation	mm2	0.0	---	---
	2nd flushing operation		0.0	---	---
	3rd flushing operation		0.0	---	---
	4th flushing operation		0.0	---	---
	5th flushing operation		0.0	---	---
	Average		0.0	≤ 80	C
Overall result					C

#### 4 Oversplashing BS EN 13407: 2015 Cl. 6.2.3

ID	Variable	Unit	Measured	Required	Remark
1	Splash beyond the edge of bowl and wet the floor	---	No	No	C
Overall result					C

#### 5 Discharge BS EN 13407: 2015 Cl. 6.2.4

ID	Variable	Unit	Measured	Required	Remark
1	Run over the rim of the bowl.	---	No	No	C
Overall result					C

#### 6 Water Absorption BS EN 13407: 2015 Cl. 6.3

ID	Weight (kg)		Absorption (%)	Required	Remark
	Before Test	After Test			
Sample 1	57.1	57.1	0.04	1.00% max.	C
Sample 2	60.3	60.3	0.05		C
Sample 3	72.8	72.8	0.03		C
Average			0.04	0.75% max.	C
Overall result					C

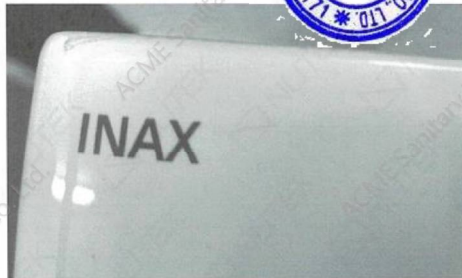


REPORT NO.: J 27789C

Figure 1 - Sample



Figure 2 - Body Marking



REPORT NO.: J 27789C

### General Note(s)

#### Definitions:

- C - conformance
- N - no requirement
- NC - non-conformance
- R - remainder

#### Organizations:

- WSD - Water Supplies Department (of Hong Kong)
- WHO - World Health Organization



- End of report -

## Test Report

**Test**  
Title: Testing of Urinal  
Method: HTM 64: 2006; BS 3402 & BS EN 274-1: 2002  
Report No.: J 27789D  
Completion: 27 Apr., 2022 to 27 May, 2022

**Applicant** (Information provided by client)  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_



**Sample** (Information provided by client)  
Description: Floor standing Sensor Urinal

Brand: INAX  
Model: ASU-500VS  
Body Marking: **INAX**

Manufacturer: LIXIL Vietnam Corporation  
Origin: Vietnam

### Approved Signatory

Signature: \_\_\_\_\_  
Name (title): Lam Kwai Wah, Terry (Operations Manager)  
Date: 22 Nov., 2022

Nutek Systems is a testing agency, accepted by the Water Supplies Department, for testing water supply fittings.

REPORT NO.: J 27789D

## Summary

Test	Remark
1 Visual Examination	C
2 Water Absorption	C
3 Cracking	C
4 Chemical Resistance Test	C
5 Resistance to Staining and Burning	C
6 Water Seal	C

Note: Conformed to HTM64:2006 UR H/1/2/3 Urinal requirement



## Results (apply only to samples tested)

### 1 Visual Examination BS 3402: 1969 Cl. 5.1, 5.4 & Table 2

Location	Blemish or defect	Maximum permitted	Remark
General	Wavy finish	None on all visible surfaces	C
	Warpage	Not more than 6mm	C
	Discoloration	None on all visible surfaces	C
Flushing surface and horizontal face of rims of WC pans bidets and urinals	Spots, blister and pinholes	A total of not over three; no grouping; for coloured appliances, blister and pinhole limited to one.	C
	Bubbles and specks	Not over two in one pottery square; a total of not over four	C
	Polishing marks	One only; none permitted for coloured fixtures	C
Visible surfaces other than above	Spots, blisters and pinholes	A total of not over five; no grouping; for coloured appliances, no blisters are permitted and pinholes are limited to a total of two	C
	Bubbles and specks	Not over three in one pottery square; a total of not over ten	C
Overall result			C

### 2 Water Absorption BS 3402: 1969 Cl. 6

ID	Weight (g)		Absorption (%)	Required	Remark
	Before Test	After Test			
Sample 1	127.4	127.5	0.05		C
Sample 2	125.0	125.1	0.04	0.75% max.	C
Sample 3	123.8	123.9	0.06		C
Average			0.05	0.50% max.	C
Overall result					C



**3 Cracking**  
BS 3402: 1969 Cl. 7

ID	Variable	Unit	Measured	Required	Remark
1	Saturated steam	MN/m <sup>2</sup>	0.34	0.33 - 0.35	C
	Duration	h	10	10	C
	Sample 1	---	No	No	C
	Sample 2	---	No		C
Sample 3	---	No	C		
Overall result					C

**4 Chemical Resistance Test**  
BS 3402: 1969 Cl. 8

**Table 4 — Chemical solutions**

Name of Chemical	Strength of solution %	Time		Temperature °C
		hours	minutes	
Acetic acid	10	16		100
Citric acid	10	16		100
Detergent (Note 1)	(Note 1)	48		60
Hydrochloric acid (Note 2)	(Note 2)	48		15 to 21
Sodium hydroxide	5	0.5		60
Sodium stearate	0.15	48		60
Sulphuric acid	3	16		100

NOTE 1 This consists of an aqueous solution containing 0.04% (w/vol) of a condensation product of nonylphenol with 8-10 molecules of ethylene oxide. A suitable solution which contains 0.1% (w/vol) of the product is obtainable commercially under the trade name "Lissapol N".

NOTE 2 This solution consists of equal volumes of water and of hydrochloric acid of specific gravity 1.18.



ID	Solution	Time (h)	Temperature (°C)	Measured	Required	Remark
1	Acetic acid	16	100	No Loss	No loss of reflectivity on glaze	C
	Citric acid	16	100	No Loss		C
	Detergent	48	60	No Loss		C
	Hydrochloric acid	48	20	No Loss		C
	Sodium hydroxide	0.5	60	No Loss		C
	Sodium stearate	48	60	No Loss		C
	Sulphuric acid	16	100	No Loss		C
Overall result						C

**5 Resistance to Staining and Burning**  
BS 3402: 1969 Cl. 9

ID	Variable	Unit	Measured	Required	Remark
1	Methylene blue	---	No Stain	No stain remains	C
	Sodium hypochlorite	---	No Stain		C
	Hydrogen peroxide	---	No Stain		C
	Amyl acetate	---	No Stain		C
	Iodine in ethanol	---	No Stain		C
2	Lighted cigarette	---	No Stain		C
Overall result					C

**6 Water Seal**

BE EN 274-1: 2002 Cl. 4.5

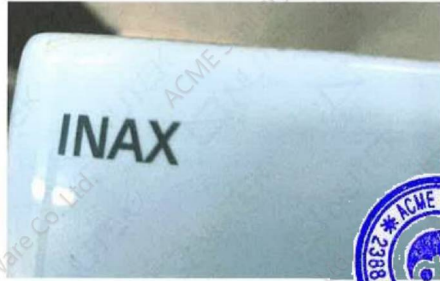
Variable	Unit	Measured	Requirement	Remark
Depth of water seal	mm	58	≥50 for partly filled discharge branches	C
Overall result				C

Figure 1 - Sample





Figure 2 - Body marking



### General Note(s)

**Definitions:**

- C - conformance
- N - no requirement
- NC - non-conformance
- R - remainder

**Organizations:**

- WSD - Water Supplies Department (of Hong Kong)
- WHO - World Health Organization

- End of report -