

PLEASE ADDRESS ANY CORRESPONDENCE TO WATER SUPPLY (NETWORK) DEPARTMENT

Your Ref : _

Our Ref : WSN 92413/90/202205/AIRVALVE Tel : 65172925

Date : 1 Sep 2022 E-mail : noryati_abdullah@pub.gov.sg

To water fitting suppliers, test laboratories, Singapore Sanitary Ware Importers & Exporters' Association (SSWIEA), Singapore Plumbing Society (SPS), Licensed Plumbers, Professional Engineers and relevant government agencies and associations.

Dear Sir/Madam

STIPULATION OF STANDARDS AND REQUIREMENTS FOR WATER FITTING:

-AIR VALVES FOR USE IN WATER SERVICE INSTALLATIONS

We wish to inform you that **with effect from 1 Jun 2023 (based on date of test reports)**, only air valves which have been tested for compliance with **BS EN 1074-4:2000** shall be allowed to be offered, displayed or advertised for supply for water service installations in Singapore. The full set of stipulated standards and requirements are given in the attached **Appendix**.

2. **Prior to 1 Jun 2023**, air valves which have been tested for compliance with the stipulated standards in the **Appendix** are allowed for sale and supply for use in water service installations in Singapore.

3. The above-mentioned water fitting are deemed to comply with the stipulated Standards if it is tested as complying with such Standards by a testing laboratory accredited by the Singapore Accreditation Council (SAC) or its Mutual Recognition Arrangement (MRA) partners. For more information, please visit SAC's website at www.sac-accreditation.gov.sg. Test reports issued by a testing laboratory accredited by the SAC or its MRA partners must bear the SAC-SINGLAS mark or the mark of the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC-MRA) respectively. Test laboratories can approach Water Fittings Section, Inspectorate Branch if they have clarifications on acceptance of test reports.

4. Clear and colour photographs of the above water fittings and its associated parts, if any, should be clearly reflected in the test reports. The above water fittings must be supported with valid, complete and full test reports. Suppliers shall ensure that the test reports of the air valves which they offer-for-sale, advertise, display, sell or supply are properly kept and must be produced for verification upon request by PUB. PUB conducts compliance checks and will take action against any non-compliance.

5. A copy of this circular is also downloadable from PUB's website at www.pub.gov.sg. Please disseminate this circular to your relevant staff, members, distributors, retailers and other industry partners for their information and compliance.

6. Please contact me or email to pub_waterfittings@pub.gov.sg if you have any clarifications.

Yours faithfully



NORYATI ABDULLAH
SENIOR ENGINEER (INSPECTORATE)
for DIRECTOR
WATER SUPPLY (NETWORK) DEPARTMENT

Enclosed.

Appendix

PUB's Stipulation of Standards & Requirements for Air Valves for Use in Water Service Installations

Standard to comply with.	Subclause	Requirements and Tests
BS EN 1074-4:2000	4.1 to 4.8	Design requirements
	4.10	Internal corrosion and ageing resistance
	4.11	External corrosion and ageing resistance
	5.1.1	Resistance to internal pressure of the shell and of all pressure containing components
	5.1.2	Resistance of the obturator to differential pressure
	5.1.4	Resistance of valves to operating loads
	5.2.1.1	Leaktightness of the shell and all pressure containing components to internal pressure
	5.2.1.2	Leaktightness of the shell and all pressure containing components to internal pressure
	5.2.2.1	Seat tightness at high pressure
	5.2.2.2	Seat tightness at low pressure
	5.2.3	Maximum operating torque (MOT)
	5.3.1	Airflow characteristics for air release function
	5.3.2	Airflow characteristics for air intake function
	5.3.3	Airflow characteristics for air venting function
	5.4	Resistance to disinfection products
	5.5.1	Endurance for air intake and/or air release function
	5.5.2	Endurance for air venting function
5.5.3	Long term unseating test	
BS EN 10088 Part 2 : 2014 (for stainless steel air valves)		Chemical composition for stainless steel material (minimum grade 304)
BS EN 1092 Part 2 : 1997		- Mating dimensions, where relevant. - Flange thickness, where relevant.
Additional requirements		-Permanent and legible manufacturer's name or trademark on the body of the product. Material requirements: The materials shall comply with the following stipulated standards & requirements, where applicable, under <u>Clause 4 of the PUB S&R</u> : <ul style="list-style-type: none"> • SS 375:2015 or BS 6920:2014 plus compliance to Clause 8 of SS 375:Part 1:2015 for all non-metallic materials in contact with water. • AS/NZS 4020:2018 Appendix H on Extraction of metals test for all metallic materials in contact with water.

- SS 270:2015 Elastomeric seals for joints.
- Dezincification resistance and chemical composition tests for DZR brass. The acceptable DZR brass grades are listed in the PUB S&R.
- BS 3457:1973 for non-metallic seat washers, if applicable.

For more details, please download the PUB S&R from PUB's website at <https://www.pub.gov.sg/compliance/watersupplyservices/standards>.

cc Distribution list – via email only

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