

Prüfbericht-Nr.: Test report no.:	CN21PTJI 001	Auftrags-Nr.: Order no.:	244361593	Seite 1 von 9 Page 1 of 9
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	17.09.2021	
Auftraggeber: Client:	Yuhuan Longwang Technology Co.,Ltd EAST AREA OF MEIAO VALVE INDUSTRY FUNCTIONAL ZONE, YUHUAN, ZHEJIANG, CHINA			
Prüfgegenstand: Test item:	waste fitting			
Bezeichnung / Typ-Nr.: Identification / Type no.:	P-trap: T10010-t10050 Bottle trap: T20010-t20013 Round trap:T20030-t20031			
Auftrags-Inhalt: Order content:	Mechanical Test Report according to client's request			
Prüfgrundlage: Test specification:	EN 274-1:2002 & EN 274-2:2002 Waste fittings for sanitary appliances - Part 1: Requirements			
Wareneingangsdatum: Date of sample receipt:	17.09.2021	 P-trap Bottle-trap Round trap		
Prüfmuster-Nr.: Test sample no.:	A003130166-001~002			
Prüfzeitraum: Testing period:	17.09.2021 - 14.10.2021			
Ort der Prüfung: Place of testing:	Kunshan			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shanghai) Co., Ltd. Kunshan Branch.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:	genehmigt von: authorized by:			
Datum: Date: 29.10.2021	Rain wei	Ausstellungsdatum: Issue date: 29.10.2021	Rainbow	
Stellung / Position:	Rain Wei / PE	Stellung / Position:	Rainbow Wang / Reviewer	
Sonstiges / Other:				
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet * Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.				

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Anmerkungen
Remarks

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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>

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Produktbeschreibung
Product description

1	Produktdetails Product details	Waste fitting.
2	Maße / Gewicht Dimensions / Weight	P-trap: T10010·t10050 weight: 272g. Bottle trap: T20010·t20013 weight: 401g. Round trap: T20030·t20031 weight: 647g.
3	Bedienelemente Operating elements	./.
4	Ausstattung / Zubehör Equipment / Accessories	./.
5	Verwendete Materialien Used materials	./.
6	Sonstiges Other	./.



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Absatz Clause	Anforderungen - Prüfungen / Requirements - Tests	Messergebnisse – Bemerkungen / Measuring results - Remarks	Ergebnis Result
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EN274-1:2002 Waste fittings for sanitary appliances - Part 1: Requirements

1	Scope This standard specifies the dimensional, performance, materials and marking requirements for waste outlets, traps and overflows for kitchen sinks, shower trays, wash basins, bidets and baths which are connected to gravity drainage systems, whatever the purpose of the building. This standard does not specify requirements for waste outlets, traps and overflows which are integral with sanitary appliances. <i>NOTE All figures in this standard are diagrammatic only.</i> This standard does not cover the possible effect of aggressive drain cleaning materials on products.		
2	Normative references		
3	Terms and definitions		
4	Requirement		
4.1	General Waste outlets, traps and overflows enable the functioning of sanitary appliances. They shall be capable of being connected to drainage pipework systems in accordance with EN 12056-1 and EN 12056-2.	For drainage pipework system	P ☒ F ☐ N/A ☐ N/T ☐
4.2	Appearance of surfaces When viewed without magnification, the internal and external surfaces of the waste fittings shall be smooth, free from grooving, blistering or any other surface defects likely to impair their functioning. The appearance of visible electrodeposited NiCr coatings shall comply with EN 248.	No defects after EN248 testing.	P ☒ F ☐ N/A ☐ N/T ☐
*4.3	Materials Waste outlets and traps shall be manufactured from materials which withstand intermittent contact with domestic waste water with a temperature range from (20±5)°C to 95 (+0/-2)°C when tested in accordance with clause 3 of EN 274-2:2002. Waste outlets and traps made of only metallic materials are deemed to satisfy this requirement. The materials used shall be such that the finished products meet the requirements of this standard. It is the responsibility of the manufacturer of the waste fittings to employ materials which are fit for this purpose. This requirement does not cover the use of aggressive drain cleaning materials. The use of such materials is beyond the scope of this standard.	Positive result after temperature cycling test.	P ☒ F ☐ N/A ☐ N/T ☐

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4.4	Design		
4.4.1	Waste outlets Waste outlets may be manufactured in one piece or may comprise various pieces joined together mechanically, either with or without an overflow. They can include a trap. Waste outlets not fitted with a trap shall have a threaded or a plain outlet dimensioned as given in Table 1. Waste outlets can be fitted with a fixed or removable grille.		P ☐ F ☐ N/A ☒ N/T ☐
4.4.2	Traps Traps may be either tubular or bottle type, the latter having either a division or diptube. All traps shall be capable of being cleaned. Other designs are permissible, provided that they meet all the requirements of this standard. In all cases it shall not be possible to reduce the depth of the water seal below the minimum as given in Table 2. Trap inlets shall be such that they can be connected to waste outlets of the appropriate size when the trap is supplied as a separate item. Additional inlets and overflows shall be connected in such a way that the depth of water seal H, in accordance with Table 2, is ensured. Any overflow connection incorporated into a trap shall be positioned as specified in Figure 1. This requirement shall apply to all types of trap.	Traps, details see cl. 4.5.	P ☒ F ☐ N/A ☐ N/T ☐
4.5	Dimensions The waste fittings dimensions specified in Tables 1 and 2 ensure that the waste fittings can be assembled to the appropriate sanitary appliances in accordance with EN 31, EN 32, EN 35, EN 36, EN 111, EN 232, EN 251 and EN 695 and connection to drainage pipework systems. <i>Remark:</i> Dimensions of traps <i>H</i> Depth of water seal <i>D</i> Connection to the discharge pipe <i>L</i> Length of straight part of plain ended trap outlet <i>K</i> Length for connection through walls <i>B</i> Thread of nuts <i>m</i> Useful length of thread <i>M</i> Total height of waste outlet with trap <i>r</i> Useful length of thread of waste outlet	Unit in mm Required P-trap H: ≥ 50 mm 75.1 D: DN/ID 30, 40, 50, 60 30.61 DN/OD 32, 40, 50, 63 31.87 L: ≥ 30 mm 132 K: ≥ 245 mm NA B: G 1 ¼ G 1 ¼ M: ≤ 128 mm NA r: ≥ 11 a) NA m: 6.5~10mm 8.49 Round trap Bottle trap H 63.29 61.70 ID 30.62 30.64 OD 31.99 31.75 L 302 205 K NA NA B G 1 ¼ G 1 ¼ M NA NA r NA NA m 7.92 9.44	P ☒ F ☐ N/A ☐ N/T ☐

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*4.6	Hydraulic requirements When tested in accordance with clause 5 of EN 274-2:2002 the flowrates of waste fittings shall not be less than the values given in Table 3. <table><tr><th colspan="6">Table 3 — Minimum flowrates</th></tr><tr><th colspan="6">Minimum flowrate for waste fitting/component for sanitary appliance</th></tr><tr><th>Waste fitting/ component</th><th>Wash basin, bidet</th><th>Bath</th><th>Kitchen sink</th><th>Shower tray with waste outlet hole size 52 mm or 62 mm</th><th>Shower tray with waste outlet hole size 90 mm</th></tr><tr><td></td><td colspan="5">l/s</td></tr><tr><td>Waste outlet</td><td>0,6</td><td>1,0</td><td>0,7</td><td>-</td><td>-</td></tr><tr><td>Waste outlet with trap</td><td>0,5</td><td>0,8</td><td>0,6</td><td>0,4</td><td>0,4</td></tr><tr><td>Trap alone</td><td>0,6</td><td>0,85</td><td>0,7</td><td>-</td><td>-</td></tr><tr><td>Overflow</td><td>0,25</td><td>0,6</td><td>0,25</td><td>0,35</td><td>-</td></tr></table>	Table 3 — Minimum flowrates						Minimum flowrate for waste fitting/component for sanitary appliance						Waste fitting/ component	Wash basin, bidet	Bath	Kitchen sink	Shower tray with waste outlet hole size 52 mm or 62 mm	Shower tray with waste outlet hole size 90 mm		l/s					Waste outlet	0,6	1,0	0,7	-	-	Waste outlet with trap	0,5	0,8	0,6	0,4	0,4	Trap alone	0,6	0,85	0,7	-	-	Overflow	0,25	0,6	0,25	0,35	-	Waste outlet Flow rate: P-trap:T10010·t10050: 0.63L/s Bottle trap:T20010·t20013 0.64L/s Round trap:T20030·t20031: 0.67L/s Requirement: Min. 0.6 l/s	P ☒ F ☐ N/A ☐ N/T ☐
Table 3 — Minimum flowrates																																																			
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Trap alone	0,6	0,85	0,7	-	-																																														
Overflow	0,25	0,6	0,25	0,35	-																																														
*4.7	Tightness																																																		
4.7.1	Tightness of waste outlet with plug or flap When tested in accordance with 6.1 of EN 274-2:2002 the leakage shall be less than 1 l/h.		P ☐ F ☐ N/A ☒ N/T ☐																																																
4.7.2	Tightness of waste fitting When tested in accordance with 6.2 of EN 274-2:2002 there shall be no leakage during the test period.	Tested accordingly;	P ☒ F ☐ N/A ☐ N/T ☐																																																
5	Marking All waste fittings shall be marked indelibly with at least: - name or mark of manufacturer; - EN 274. If marking the product is not practical, the packaging shall carry this information.	Not tested acc. to client's request.	P ☐ F ☐ N/A ☐ N/T ☒																																																
6	Quality control The quality control shall be provided as given in EN 274-3. NOTE Annex A (informative) of EN 274-3 gives information in the case that third party control is carried out.		P ☐ F ☐ N/A ☒ N/T ☐																																																
EN274-2:2002 Waste fittings for sanitary appliances - Part 2: Test methods																																																			
1	Scope This standard specifies test methods for the requirements of waste outlets, traps and overflows in accordance with EN 274-1:2002. <i>NOTE All figures in this standard are diagrammatic only.</i>																																																		
2	Normative references																																																		

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*3	Temperature cycling test Waste outlets and traps shall be subjected to the passage of hot and cold water according to the following schedule for 5 cycles: a) X l/s of water of a temperature of 95 (+0/-2)°C over a period of 15 min at a constant flowrate and b) X l/s of water of a temperature of (20 ± 5) °C over a period of 10 min at a constant flowrate. The value of X is the minimum flow rate as given in Table 3 of EN 274-1:2002, but with a maximum of 0,5l/s. The water shall enter the waste outlet having the required temperature. A drainage period between cycles of up to 5 s is permissible.	No failure after testing with a flow rate of 0.5 l/s.	P ☒ F ☐ N/A ☐ N/T ☐
4	Dimensional requirements The dimensions of waste outlets and traps and the depth of water seal shall be measured using conventional methods.	Tested accordingly;	P ☒ F ☐ N/A ☐ N/T ☐
*5	Hydraulic requirements		
5.1	Measurement of flow rates - The waste fitting to be tested shall be fitted to the test tank, which is preferably made of transparent material. If in the case of waste outlets fitted with: • a plug, it is removed; • a flap, it is adjusted to obtain the maximum lift, however it has to be tight when closed. - Fill the test tank with water up to the test level as follows: • test level C = (120 ± 2) mm for waste outlets and traps for basins, bidets, shower trays and kitchen sinks; • test level U = (300 ± 2) mm for waste outlets and traps for baths. The outlet is blocked by hand until the test level is reached. - Stabilize the test level by adjusting the water inflow by means of a regulating valve. - The flow rate of the waste outlets and traps is the flow rate indicated by the flowmeter, when the test water level C or U is stabilized.	Tested accordingly;	P ☒ F ☐ N/A ☐ N/T ☐
5.2	Flow rate of waste outlet The flow rate of waste outlet is tested using a flow stabilizing tube as shown in Figure 3. The flow rate stabilization tube has an internal diameter of - 30 mm for waste outlets for basins and bidets; - 36 mm for waste outlets for shower trays, baths and kitchen sinks. Proceed in accordance with 5.1.		P ☐ F ☐ N/A ☒ N/T ☐

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5.3	Flow rate of waste outlet with a trap The flow rate of waste outlet with a trap is tested with the waste outlet and trap fixed as shown in Figure 4. If an overflow is fitted, it shall be open. When a waste fitting with a horizontal outlet does not have a straight part of a minimum length of 50 mm, a horizontal stabilizing tube, 300 mm long, shall be attached to it. The diameter of the stabilizing tube shall correspond to that of the waste fitting outlet. In the case of waste fitting with adjustable outlet angles the outlet pipe shall be positioned in a horizontal plane. Proceed in accordance with 5.1. In the case of a waste outlet with integral trap for shower trays with a diameter G of 87 mm (see Table 1 of EN 274-1:2002) use the test arrangement as given in Figure 5 and proceed as follows: - Adjust the fitting to the minimum clamping height. - Locate the waste fitting in the test tank. - Fill the test tank up to measuring level. Then adjust the water flow to give a constant test level of (15 ± 1) mm - above the measuring level. - When measuring level is by adjusting the flow rate stabilized, the flow rate of the waste fitting is the flow rate indicated by the flowmeter.		P ☐ F ☐ N/A ☒ N/T ☐
5.4	Flow rate of trap The flow rate of a trap without waste outlet is tested using an appropriate reference outlet as shown in Fig 6. In the case of a trap with adjustable height it shall be measured at the minimum height.	Tested accordingly;	P ☒ F ☐ N/A ☐ N/T ☐
5.5	Flow rate of overflow The flow rate of an overflow is tested using the test arrangement as shown in Figure 7, either a flow stabilizing tube in accordance with 5.2 or, in the case of a waste outlet with trap and overflow the procedure shall be in accordance with 5.3. - Close the waste outlet at the inside of test tank and fill the test tank with water up to the test level above the centre line of the overflow opening. • (60 ± 2) mm for baths and shower trays, • (30 ± 2) mm for kitchen sinks, wash basins and bidets. Stabilize the overflow level acc. Fig 2 by adjusting the water inflow by means of a regulating valve. - The flow rate of the overflow is the flow rate indicated by the flowmeter, when the water level is stable at the required level.		P ☐ F ☐ N/A ☒ N/T ☐

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*6	Leaktightness		
6.1	Leaktightness of waste outlet with plug or flap - Fit the waste outlet to the bottom of the test tank (see Figure 2) with the plug in position or the flap closed. - Fill the test tank with water to a height of 120 mm and collect any water, which flows past the waste outlet flap or plug during a period of 1 h. - Measure the quantity of water collected.		P ☐ F ☐ N/A ☒ N/T ☐
6.2	Leaktightness of traps - Subject all trap parts and connections (see Figure 8) to a water pressure of 0,01 MPa (0,1 bar) for a period of 5 min. For traps which have been subjected to a temperature cycling test, the leaktightness shall be tested immediately after the test.	Tested with satisfactory	P ☒ F ☐ N/A ☐ N/T ☐

Remark: Items marked with "*" were carried out by external laboratory assessed as competent.

- END OF TEST REPORT -