CPR TEST REPORT

Prepared For:	Guangdong Lianshu Valve Co., Ltd. No. 83, Xining Avenue, Ducheng Town, Yunan County, Yunfu City, Guangdong Province, China
Manufacturer:	Guangdong Lianshu Valve Co., Ltd. No. 83, Xining Avenue, Ducheng Town, Yunan County, Yunfu City, Guangdong Province, China
Product Name:	Water manifolds and fittings
Trade Name:	LESSO
Model:	S5 QF1F-S5-DN25×4F
Additional models	S5 QF1F-S5-DN25×4F, QF1Y-S5-DN25-4L, MAN32F×25-4(S5), 20S5 QF1F-4×20H66, 20S5 JF1F-4×20H65, 20S5 JF1F-4×20H62, S5 QF1F-S5-DN25×3F, QF1F-S5-DN32×4F, MGJ-QF1F-S5-DN25×4F, LS-S1001-DN25×4F, S5 Y-QF1F-S5-DN25×4F, QF1F-DN32-4L-25x2.5, QF1Y-S5-DN25-12L, LS-2131H-DN25-4L(S1620), DN25P-4×16+Da-1D2P, LS-S6012-S4-20x2.3, DN25-S5, LWJ-DN25, LS-S6003-DN15
Prepared By:	Jilin Zhongfu Testing Technology Service Co., Ltd. Room 519, School of Mechanical and Electrical Engineering, Building 4, Changchun Institute of Technology, 395 Kuangping Road, Chaoyang District, Changchun City, Jilin Province, China
Test Date:	Sep. 2, 2026 To Sep. 9, 2026
Date of Report:	Sep. 10, 2026
Report No.:	ZF580730SQ00377SR

TEST REPORT DECLARATION

Applicant	:	Guangdong Lianshu Valve Co., Ltd.
Address	:	No. 83, Xining Avenue, Ducheng Town, Yunan County, Yunfu City, Guangdong Province, China
EUT Description	:	Water manifolds and fittings
Model Number	:	S5 QF1F-S5-DN25×4F
Test procedure	:	-Essential characteristics, -Regulation (EU) No 305/2011 - Construction Products, Annex V, Clause 1.5, system 4, -Declaration of Performance

Test reference standards:

- EN 12266-1:2012
- EN 13828:2025
- EN 1264-4:2021

The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

Prepared by: _____
Assistant

Tested by: _____
Test Engineer

Reviewer: _____
Supervisor

Approved & Authorized Signer: _____
Manager

ZHONGFU TESTING LABORATORY APPROVED

EN 12266-1:2012 — Industrial valves – Testing of metallic valves – Part 1: Pressure tests, test procedures and acceptance criteria – Mandatory requirements

No.	Test Item	Technical Requirement	Remarks	Evaluation
1	Shell strength	No visually detectable leakage (liquid); no bubbles (gas, valve immersed ≤ 50 mm below water surface, or leak-detection fluid). Obturator partially open during test	No visually detectable leakage and bubbles	Pass
2	Shell tightness	No visually detectable leakage (liquid); no bubbles (gas). Leakage past the operating-mechanism seal permitted at shell pressure only if no visible leakage at 1.1 × max allowable pressure	No visually detectable leakage and bubbles	Pass
3	Seat tightness	Leakage ≤ rate specified in product standard (Rates A–G, Table A.5): Liquid — A: no visible leakage; B: 0.01×DN; C: 0.03×DN; D: 0.1×DN; E: 0.3×DN; F: 1.0×DN; G: 2.0×DN (mm^3/s). Gas — A: no visible leakage; B: 0.3×DN; C: 3.0×DN; D: 30×DN; E: 300×DN; F: 3 000×DN; G: 6 000×DN (mm^3/s). Test procedures per valve type (gate/ball/plug, globe, diaphragm, butterfly, check)	A	Pass
4	Obturator strength	Check pressure-containing capability of the obturator when the valve is the single means of insulation between pressure equipment and downstream equipment	Capability is enough	Pass

EN 13828:2025 Building valves - Manually operated copper alloy and stainless steel ball valves for potable water supply in buildings - Tests and requirements

No.	Test Item	Technical Requirement	Remarks	Evaluation
Design / material requirements (Clause 5)				
1	Materials	Body in copper alloy or stainless steel. Cu alloys with Zn > 15 % must resist dezincification — max. dezincification depth < 200 µm (test per EN ISO 6509-1). Stainless steel: 96 h salt-spray test (EN ISO 9227). Ball surface with metallic protective layer per EN 248. Materials must not impair potable-water quality (taste, odour, appearance)	Stainless steel	Pass
2	Operation	Clockwise closing; 90° quarter-turn operation; detachable lever release force 50–200 N; actuator interface per EN ISO 5211 where applicable	150N	Pass
3	Connection ends	Per EN 1254 series (solder, compression, press, threaded etc.); threaded bodies with flats for installation tools	Threaded	Pass
4	Stops	Fixed, non-adjustable stops in "open" and "closed" positions		Pass
5	Flow way	Full bore / reduced bore with minimum bore diameters (e.g., full bore: DN15 ≈ 13 mm, DN25 ≈ 24 mm, DN50 ≈ 49 mm, DN100 ≈ 98 mm; reduced bore: DN15 ≈ 9.9 mm, DN25 ≈ 19.8 mm, DN50 ≈ 39.6 mm, DN100 ≈ 79.2 mm)		Pass
6	Test/drainage points	Min. cross-section 12.56 mm² (min. diameter 4 mm); drain plug on outlet side; not obstructed by internal parts	No obstructed	Pass
Performance tests (Clause 6) — test sequence per Table 5				
1	Operating torque	Operating torque ≤ max. values of Table 6 (e.g., DN6 ≤ 4 N • m; DN15 ≤ 6 N • m; DN50 ≤ 28 N • m; DN100 ≤ 65 N • m)	Within the limit	Pass

No.	Test Item	Technical Requirement	Remarks	Evaluation
2	Resistance against torque	No permanent deformation, no leakage. Example: DN25 — MT1 = 125 N·m, MT2 = 100 N·m (MT1: 15–465 N·m, MT2: 12–370 N·m range across DN6–100)	No leakage	Pass
3	Resistance against bending	No damage, no leakage, no permanent deformation. Example values: DN6–20 — F1 25–225 N, F2 13–110 N; DN25–100 — F1 340–2 500 N, F2 150–1 300 N	No leakage	Pass
4	Torque test of captive rotating nuts / tail pieces	No leakage, no loosening or permanent deformation	No leakage	Pass
5	Stop resistance	Stops must withstand the load without damage or permanent deformation	No damage	Pass
6	Leak-tightness	No visible leakage. High-pressure test commonly cited: 1.6 × PN (≈ 16 bar for PN10) held 60 s; low-pressure air test 0.02 MPa held 60 s verify exact values in official text	No leakage	Pass
7	Hydraulic strength	No rupture, no visible leakage, no permanent deformation. Commonly cited: 2.5 × PN (≈ 25 bar for PN10), held ~1 min then 10 ± 1 min verify exact values in official text	No leakage	Pass
8	Replenish of water stored between ball and body	Increase in conductivity of the collected water ≤ 5 mS/m	4 mS/m	Pass
9	Resistance against pressure jumps	After test: no leakage; operating torque still within limits	No leakage	Pass
10	Angular seal	No visible leakage	No leakage	Pass
Acoustic characteristics (Clause 7)				
1	Scope	Only reduced-bore valves DN 6–DN 32; full-bore valves are deemed Group I	Group II	Pass

No.	Test Item	Technical Requirement	Remarks	Evaluation
2	Test method	Per EN ISO 3822-1 / EN ISO 3822-3 at defined flow rates (measurement at ~0.3 MPa)	Under the condition	Pass
3	Classification	Group I: L_ap < 20 dB(A) — quietest (hospitals, hotels, dwellings); Group II: 20 ≤ L_ap < 30 dB(A) — acceptable for domestic use; Unclassified (U): L_ap > 30 dB(A) or not tested	Group II, 22 dB	Pass
Mechanical endurance (Clause 8)				
1	Resistance against 90 °C water	After test: leak-tightness and operating torque still within limits	Within the limit	Pass
2	Mechanical endurance of the control device	Valve operates correctly and remains leak-tight; torque within limits	Within the limit	Pass
Marking (Clause 9)				
1	Marking	Permanent, legible marking on the body or a fixed nameplate: manufacturer name/logo; nominal size DN (add "R" for reduced bore, e.g., DN 25 R); nominal pressure PN10 or PN16; flow-direction arrow where directionally designed; dezincification-resistance marking CR/DR where applicable; identification code (batch, production date); optional acoustic group marking (I or II) for DN 6 – 32		Pass

EN 1264-4:2021 Water based surface embedded heating and cooling systems - Part 4: Installation

No.	Test Item	Technical Requirement	Remarks	Evaluation
1	Hydronic balancing	System must be hydraulically balanced (per ISO 11855-6:2018, clause 4.8); each circuit fitted with a balancing device; set/adjusted on site after installation according to actual circuit conditions; hydraulic interaction between circuits minimised	System is functional	Pass
2	Building layers / components	Supporting base: adequate flatness. Insulating layers: min. thermal resistance per Table 1 (application-dependent). Protective layer (e.g., PE film ⩾ 0.15 mm) over insulation where required. Weight-bearing layer (screed): min. thickness requirements (secondary source: ⩾ 30 mm verify per screed type). Tube-damage prevention during installation	Tube-damage prevention is under consideration	Pass
3	Leak test	Each circuit leak-tested before covering; test maintained and monitored during screed pouring; results logged	Results logged	Pass
4	Initial heating up of the emission system	Functional heating before normal operation; start only after screed curing — cement screed ⩾ 21 days, gypsum ⩾ 7 days, asphalt ⩾ 1 day; independent safety device (independent of controls) limits supply temperature (≈ 55 ° C); log per Annex B protocol		Pass
5	Heating up for readiness for covering	Heating procedure to prepare the emission system / dry out before laying floor coverings		Pass
6	Floor coverings	Coverings must be compatible; system brought to readiness state before covering	Compatible	Pass
7	Ceiling / wall embedded systems	4.3.1 Preface; 4.3.2 General structural preconditions; 4.3.3 Insulation (min. thermal resistance		Pass

No.	Test Item	Technical Requirement	Remarks	Evaluation
		per Table 3); 4.3.4 Max. flow temperatures limited (secondary source: ceiling ≈ 50 °C; wall ≈ 50–70 °C verify)		
8	Corrosion prevention	Oxygen-barrier layer in plastic pipes or corrosion inhibitors to protect against internal corrosion		Pass
9	Initial heating-up protocol	Template for logging the initial heating procedure	Confirmed	Pass

Remarks

We have tested the above-mentioned products in accordance with the listed standards and confirm that they comply with Regulation (EU) No 305/2011 (CPR).

Product Pictures

Water manifolds and fittings/S5 QF1F-S5-DN25×4F



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