

PRODUCT TECHNICAL SPECIFICATION

TEST and DRAIN VALVE Y-4030

SCOPE

This Technical specification covers copper alloy Test and Drain Valves equipped with general purpose screw connection orifices.

This technical specification contains design and performance requirements, including pressure/temperature values, dimensions, test procedures, and markings for materials, body, and sealing components.

Range of nominal sizes covers from DN 25 to DN 50, and the range of nominal pressure short designations covers 300 Psi; PN 20.6.

The coverage-related standards are as follows:

- ❖ FM 1625-2009-FM 1625 - 2009 DEC - Sprinkler System Alarm Test Devices

- ❖ UL 258-2004 Shutoff Valves For Trim And Drain Purposes

A. MATERIALS

Body CuZn40Pb2 (Short designation) / CW617N (Number) should be used as the valve body material in accordance with Annex A of TS CEN/TS 13547. The body material should contain a composition conforming to the TS EN 12420 Copper and Copper alloys - Forgings standard.

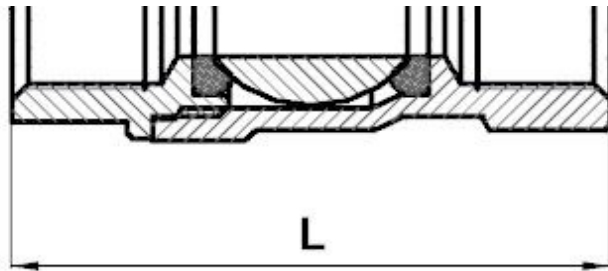
Ball The balls of test and drain valves should be CuZn40Pb2 (Short designation) / CW617N (Number) in accordance with Annex A in TS CEN/TS 13547, as in the "body" section of the "4-3-material" part of the 1st Series. The ball material should also contain a composition conforming to the TS EN 12420 Copper and Copper alloys - Forgings standard.

- Stem** Stems of test and drain valves should be made of AISI-304 stainless material.
- The stem should be designed in such a way that it does not eject under pressure.
- (anti-blowout stem)
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- Teflon** PTFE - Teflon Gaskets shall withstand high temperatures (at least -10/+ 120 ° C) and steam, water, hot water and high temperature fluids without any problems. They should not stick to flange surfaces. They should be suitable for food and chemicals (acid, alkaline, solvents, fuel oil, etc.). Additionally, they should not leave any traces or damage the Teflon surfaces.
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- O-ring** Gaskets and o-rings shall be produced of EPDM rubber.. The surfaces of the gaskets and o-rings shall be completely smooth. They also should withstand temperatures of at least -10/+ 120 °C.
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- Lever** The material used should be St37-2 - steel and it should be galvanized and vinyl coated, respectively, following the processes. There should be a DUYAR brand and logo on the vinyl coating and the opening-closing and test direction of the valve should be indicated. It should contain markings for FM and UL standards.

B. FACE TO FACE DIMENSIONS

The distance (in mm) between two planes perpendicular to the valve axis and passing through the far end parts of the valve body openings or specified in the relevant valve product standard.

The end-to-end lengths (L) of the product as shown in the sample representation are as in the table below,



| | | | | |
|-----------|-----|----|-----|----|
| DN | 25 | 32 | 40 | 50 |
| L | 133 | | 173 | |

C. NOMINAL PRESSURE / OPERATING PRESSURE

PN21 / 300 PSI

D. OPERATING TEMPERATURE RANGE

-10 ~ +120 °C

E. MARKING

Minimal marking that is legible and obtained in the form of embossing from casting;

-DUYAR Logo

-FM/ UL Listed

MATERIAL TYPE OF THE BODY: CuZn40Pb2 ISE: CW617N

PRESSURE GRADING (according to the diameter): 300Psi or PN20

NOMINAL SIZE OF THE VALVE: DN25/DN32/DN50

F. TEST

Mass Manufacturing Test;

| With the Valve in shut position | FUNCTIONAL TEST | | | | | |
|---------------------------------|-----------------|---------------|------------|--------------------------|---------------|---------------------|
| | Nominal Size | Test pressure | Test Fluid | Test Ambient Temperature | Test Duration | Acceptance Criteria |
| | DN25-50 | 6 Bar | Air | 20°C | 10 sec | Must be Leakproof |
| 21 Bar | | Water | 20 sec | | | |

| Valve Drain position | BODY RESISTANCE TO PRESSURE TEST | | | | | |
|----------------------|----------------------------------|---------------|------------|--------------------------|---------------|---------------------|
| | Nominal Size | Test pressure | Test Fluid | Test Ambient Temperature | Test Duration | Acceptance Criteria |
| | DN25-50 | 6 Bar | Air | 20°C | 10 sec | Must be Leakproof |
| 42 Bar | | Water | 40 sec. | | | |

G. WARRANTY

The warranty against workmanship and material defects is 2 years.