CEN/TR 14920 Moving Jet Test Nozzle

Precision Ceramic Nozzle for Drain and Sewer Pipe Jetting Resistance Testing

Standards: CEN/TR 14920:2005 Figure 1 (Moving Jet Test Method)
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1. Product Overview

The KingPo CEN/TR 14920 Moving Jet Test Nozzle is a precision ceramic nozzle designed for evaluating the jetting resistance of drain and sewer pipes, fittings, and joints using the moving jet test method. It is manufactured in accordance with CEN/TR 14920:2005 Figure 1.

This nozzle is suitable for drain and sewer pipe manufacturers, testing laboratories, certification bodies, and research institutions to assess the durability of pipes under simulated high-pressure cleaning conditions. It helps evaluate resistance to surface erosion and structural degradation caused by repeated high-pressure water jetting during maintenance operations.

2. Key Advantages

- **Designed for CEN/TR 14920:2005 Moving Jet Test Requirements**
  Engineering: Precision ceramic orifice (Φ2.8 mm ± 0.02 mm) manufactured to CEN/TR 14920:2005 Figure 1 specifications for standardized moving jet testing.
  Benefit: Enables repeatable and standardized evaluation of drain and sewer pipe resistance to high-pressure jetting, supporting product development and compliance verification.
- **High-Precision Ceramic Construction**
  Engineering: High-precision ceramic nozzle with stainless steel components, offering excellent wear resistance and dimensional stability under high-pressure conditions.
  Benefit: Maintains consistent jet characteristics (diameter, angle, flow) over repeated tests, ensuring long-term reliability and reduced maintenance.
- **Full Parameter Control for Standardized Testing**
  Engineering: Supports precise control of test pressure (12 MPa ± 0.2 MPa), flow rate (46 L/min ± 0.5 L/min), jet angle (30° ± 1°), moving speed (1 m/min ± 0.1 m/min), and gauge distance (10 mm).
  Benefit: Enables laboratories to perform fully compliant and highly repeatable moving jet tests for accurate assessment of pipe jetting resistance.
- **Suitable for New and Rehabilitated Pipes**
  Engineering: Designed for testing both new drain/sewer pipes and renovated/replacement components under simulated high-pressure cleaning conditions.
  Benefit: Supports quality control and performance verification across the full lifecycle of drainage infrastructure, helping extend service life and reduce maintenance costs.

3. Technical Specifications

3.1 Performance Parameters

Parameter	Specification	Remark / Notes
Applicable Standard	CEN/TR 14920:2005 Figure 1	Moving jet test method for drain and sewer pipes
Nozzle Material	High-precision ceramic + stainless steel	Excellent wear resistance and corrosion resistance
Nozzle Diameter	Φ2.8 mm ± 0.02 mm	Precision ceramic orifice
Test Pressure	12 MPa ± 0.2 MPa	Standard test pressure
Flow Rate	46 L/min ± 0.5 L/min	Controlled water flow
Jet Angle	30° ± 1°	Fixed jetting angle per standard
Moving Speed	1 m/min ± 0.1 m/min	Nozzle travel speed along specimen
Gauge Distance	10 mm [-2, 0]	Distance between nozzle and pipe surface

Testing Principle

The moving jet test directs a high-pressure water jet from the nozzle onto the inner surface of a drain or sewer pipe while the nozzle moves at a constant speed. Key parameters (pressure 12 MPa, flow rate 46 L/min, jet

angle 30°, moving speed 1 m/min) are precisely controlled to simulate real-world high-pressure cleaning conditions.

The test assesses the pipe's resistance to surface erosion, damage, and structural degradation caused by repeated high-pressure jetting. It is applicable to both new pipes and rehabilitated/replacement components.

4. Best Practices

1. Keep the ceramic nozzle orifice clean and free from blockage or wear before each test.
2. Maintain stable water pressure and flow rate within the specified tolerances.
3. Verify the correct jet angle (30° ± 1°) and moving speed (1 m/min ± 0.1 m/min).
4. Secure the test pipe specimen properly to prevent movement during testing.
5. Regularly inspect the ceramic nozzle for damage or wear and perform periodic verification of key dimensions.

5. Typical Applications

- Drain and sewer pipe manufacturers — Jetting resistance testing of pipes, fittings, and joints
- Testing laboratories and certification bodies — Compliance verification per CEN/TR 14920
- Pipeline rehabilitation companies — Performance evaluation of renovated pipes
- Municipal infrastructure projects — Quality control for drainage and sewage networks
- Research institutions — Study of pipe durability under high-pressure cleaning conditions

6. Supply Options & Support

Technical support is available for nozzle installation, test parameter configuration, and application of the moving jet test method in accordance with CEN/TR 14920.

7. Compliance & Manufacturer

This nozzle is designed and manufactured in accordance with CEN/TR 14920:2005 Figure 1 for the moving jet test method used to evaluate jetting resistance of drain and sewer pipes, fittings, and joints.

Manufactured under ISO 9001, ISO 14001, and ISO 45001 certified management systems. CE, RoHS, PSE, and SGS documentation can be provided upon request according to the applicable equipment configuration.

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