

**P.A. – S.p.A. – EQUIPAGGIAMENTI TECNICI DEL LAVAGGIO**

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**UR36 CT** Balanced rotating nozzle for hydro-excavation**PATENT PENDING**

Nozzle with balanced rotating mass to reduce vibrations.

Technical manual: MPA0011EN• **25.1000.xx**

1/2" NPT



- Reduced vibrations for greater comfort during use. (solution subject to patent application)
- Cover made of wear-resistant, antistatic material.
- Tungsten carbide nozzle and seat, for longer life.
- The nozzle can be started in any position thanks to the patented system with internal spring, which eliminates clearance between the seat and the nozzle.
- Integrated filter for easy inspection.
- Low rpm to optimize the impact of the jet.

TECHNICAL SPECIFICATIONS

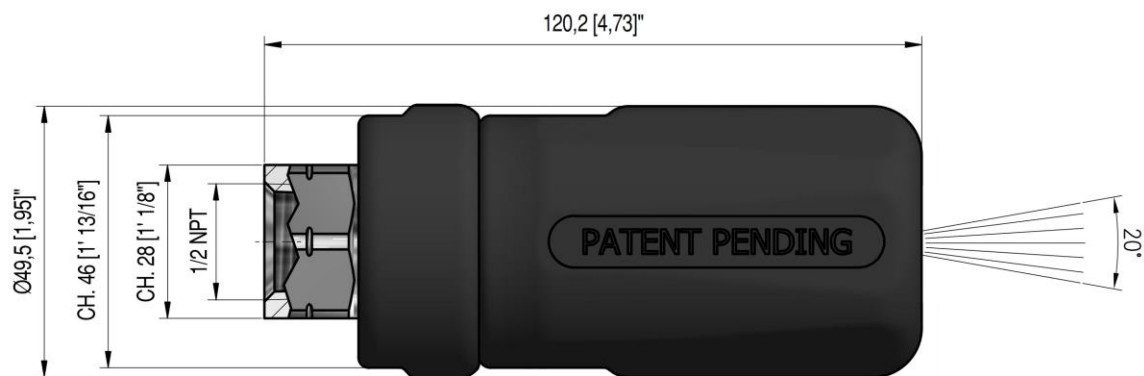
Construction material		Body and internal parts in Stainless Steel				
Nominal Pressure		210 bar – 21 MPa – 3045 psi				
Minimum operating pressure		40 bar – 4 MPa – 600 psi				
Maximum working temperature *		60 °C – 140 °F				
Maximum temperature *		100 °C – 212 °F				
PART NUMBER	FLOW FACTOR (FP)	MAX FLOW		WEIGHT		INLET
		l/min	USGpm	g	oz	
25.1000.40	04	13,2	3,5	508	18,1	1/2" NPT F
25.1000.60	06	19,9	5,2	508	18,1	1/2" NPT F
25.1000.80	08	26,4	7,0	508	18,1	1/2" NPT F
25.1000.10	10	33,3	8,8	508	18,1	1/2" NPT F
25.1000.12	12	39,1	10,3	508	18,1	1/2" NPT F

* The rotating nozzle was designed to work continuously at the maximum working temperature (60 °C – 140 °F). Over this temperature it could not work properly. However, its materials can withstand a maximum temperature of 100 °C (212 °F) without being damaged.

Instruction manual, maintenance, installation, spares.

n. MPA0011EN

OVERALL DIMENSIONS



SELECTION

This product is suitable for use with fresh and clean water, or with small addition of mild detergents. For use with different or even corrosive fluids, please contact our technical office. Adequate filtration must be used in presence of unclean fluids. Select the nozzle size based on the operating data of the machine on which it is to be installed (permissible pressure, maximum flow rate and maximum system temperature). In any case, the pressure of the machine should not be higher than nominal pressure stamped on the cover.

OPERATION

The UR uses hydrokinetic energy for the movement of a turbine, which in turn turns a nozzle. The latter rotates on a highly wear-resistant seat, creating a movement with an angle of about 20 degrees. Pressurized water comes out of the nozzle during rotation, drawing an empty cone. The water jet created with this system will not be a constant jet (as in the case of a fixed nozzle) but a pulse jet proportional to the number of RPMs of the nozzle.

INSTALLATION

This product is intended to be incorporated into a finished machine. In a system that generates hot water, provide for the assembly of equipment that limits the accidental increase in the temperature of the fluid.

Always insert a safety valve in the circuit.

If the nozzle wears out, the working pressure is lowered. To restore the working pressure, the worn nozzle must be replaced. When a new nozzle is installed, the system must be re-calibrated to the original working pressure.

TROUBLESHOOTING

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
The pressure increases by triggering the unload valve.	Nozzle blockage possible.	Disassemble and air blow the nozzle. Provide or clean an inlet filter. Re-assemble.
The nozzle is blocked and does not rotate.	Nozzle case gasket rupture.	Disassemble and replace any broken gaskets that block the rotation, with new gaskets. Re-assemble.
The nozzle is blocked and does not rotate.	The balancing counterweight came out of the turbine.	Disassemble and push the counterweight into the turbine all the way down, taking care not to damage it. Re-assemble.
The nozzle is blocked and does not rotate.	Presence of impurities and dirt inside. Clogged filter.	Disassemble and blow the internal parts. Clean the filter. Re-assemble.

MAINTENANCE

ORDINARY: every 150 working hours, air blow the internal parts and lubricate the gaskets with water resistant grease.

EXTRAORDINARY: every 300 working hours, check the state of wear of the gaskets and internal components, and if necessary, replace them with original PA spare parts, taking care during assembly to lubricate with water resistant grease.

Maintenance must be performed by specialized technicians.

The manufacturer is not to be held responsible for damage resulting from incorrect installation and / or maintenance.

REGULATORY

For a correct use, follow the warnings contained in this manual and report them on the Use and Maintenance manual of the machine. As a standard, request the original Declaration of Conformity, for the component adopted. This manual is valid for all types of rotating nozzles called **UR36 CT**.

The technical data, descriptions and illustrations are indicative and can be modified without notice.