

# MAI®400NT

## THE RELIABLE INJECTION PUMP FOR EXTREME CONDITIONS

Tried and tested technology for optimum reliability: the MAI®400NT is designed for extreme conditions and has been successfully used throughout the world for many decades in mining, tunnel and underground construction and for securing mountain slopes and excavation pits. With the patented MAI conveying and mixing technology, material is mixed by a single motor in one pass and delivered in the required quantity. The machine is designed to cope with hard-to-process materials, long conveying distances and/or high pressures. The use of different worm pumps allows the feed rate to be adjusted to suit the respective application.



## INTELLIGENT TECHNOLOGY CREATES A WORLD LEADER

In a decades-long innovation process, the MAI®400NT has been refined in close consultation with users and therefore represents the current State of the Art in tunnel-building and ground engineering applications. Its easy-to-maintain and robust construction, specially adapted to the demands of a construction site, helps to minimize expenditure on maintenance, troubleshooting and cleaning. It allows operating pressures in excess of 40 bar and conveying distances of up to 60 m. Sustainability is ensured by hot-dip galvanized parts, stainless steel components and MAI®CODUR plastic components in the wet and dry section.

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## ESPECIALLY SUITABLE FOR

■ Grouting rock bolts ■ Injections ■ Geothermal drilling ■ Backfilling

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The MAI®400NT is a fully automatic grout mixing pump for continuous processing of cement and all machine-compatible injection mortars. Its main application is in tunnel construction and it is also frequently used for ground engineering applications. In conjunction with the MAI®LOG, injection data can be recorded: e.g. pressure, volume and time.

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- 1 SPUR GEAR MOTOR** ensures that the material is mixed in one pass and delivered in the required quantity. The feed rate can be adapted to different needs by using different sizes of worm pump.
- 2 CONTROL** with automatic phase inverter ensures that the motor rotates in right direction. The modern control technology and an integral overload protection with auto-reset function ensure fluid operation and minimized downtime.
- 3 FILLING HOPPER** easy-to-clean stainless steel hopper with low-level protective grid. The galvanized frame ensures a long service life and protects against corrosion.
- 4 WATER SYSTEM** with adaptive pressure reducer for variable site conditions. The vertical arrangement allows self-emptying and prevents frost damage.
- 5 MAI®CODUR** all components in the wet section are made from extremely wear-resistant plastic, allowing easy and complete cleaning.
- 6 MIXING CHAMBER** the patented mixing and conveying technology and innovative water injection ensure homogenous mixing and processing quality.  
(Patent No. WO 2004/080676 A1)
- 7 PUMP OUTLET** with integral pressure gauge. The special shape ensures linear material flow, as well as easy assembly and maintenance
- 8 OPTIONAL** injection pressure switch for monitoring injection pressures to safeguard the structure and the health of operators. Adjustment ranges: 0 – 16 bar, 0 – 25 bar or 0 – 40 bar.

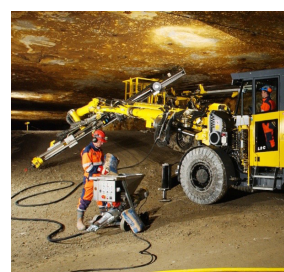
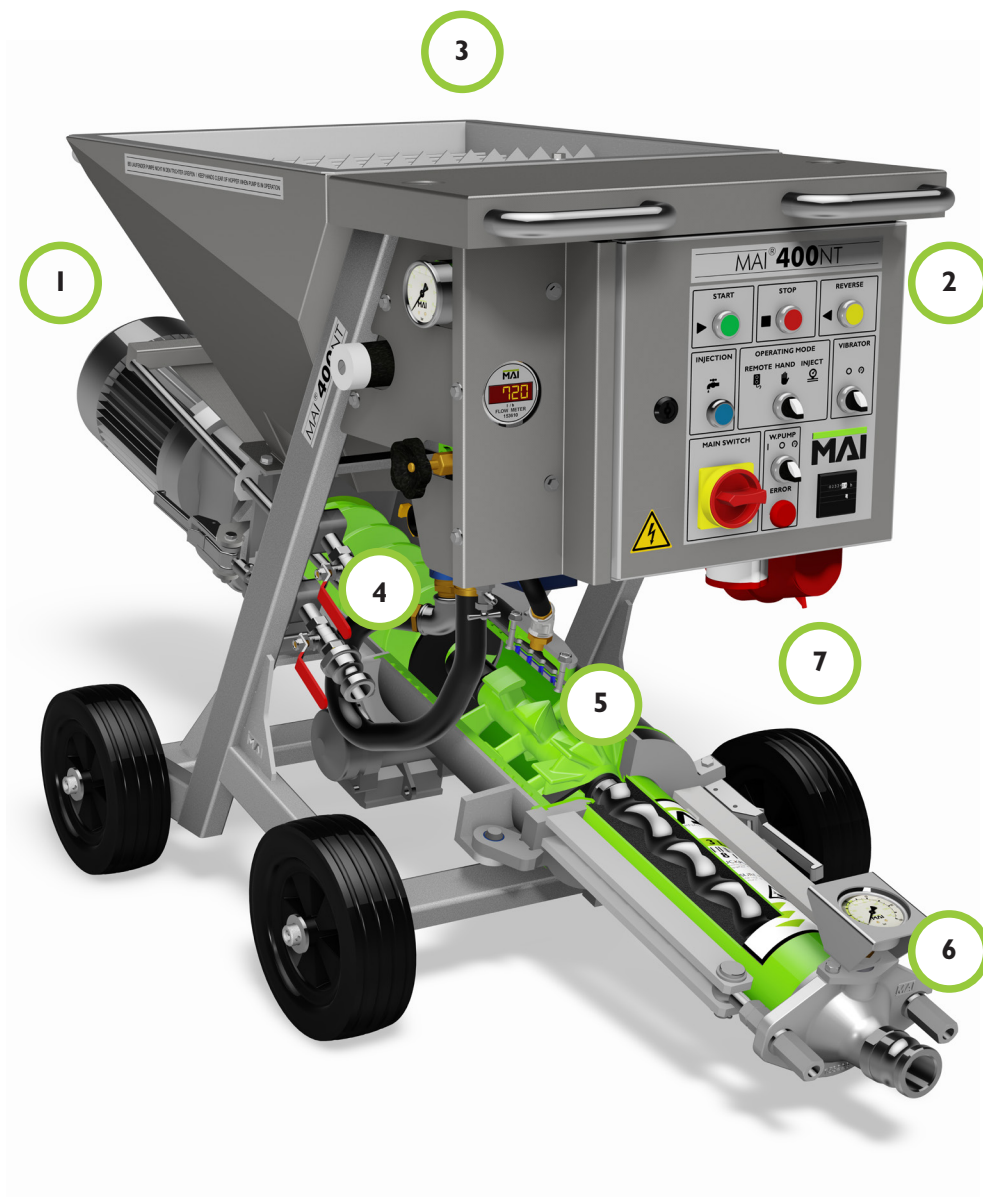


**Josef Kramser (66)**

**Civil engineering consultant, Lienz, Austria**

"I have been working with MAI® pumps since 1985. The MAI®400NT is a great machine: it is so robust that you can even hit it with a hammer to clean it without breaking it. We now have 20 machines in service and every year we inject around 400 tonnes of anchor grout with the MAI®400NT. Grain sizes of 4 mm and hose lengths of 100 m are no problem at all, because we know how to handle them with the machine."

## MAI®400NT IN DETAIL



Drilling & injection



Geothermal drilling



Injection of self-drilling anchors



MAI®400NT with automated feeding

**THE INDIVIDUAL IS OUR MAIN CONCERN**

# BENEFITS AT A GLANCE

## Optimum mix quality

thanks to unique mixing and conveying technology plus innovative water injection.

## Top performance

with operating pressure in excess of 40 bar and hose lengths of up to 60 m.

## Long service life and high added value

due to rust-proof, hot-dip galvanized and stainless steel construction as well as high-quality, three-dimensionally cross-linked plastics.

## Thorough and convenient cleaning,

due to modular, easily dismantled design and innovative full plastic lining of the mixing zone using MAI®CODUR.

# MAI SAVES TIME AND MONEY

MAI®400NT compared to compulsory mixer/pump-operated systems.



MAI

Compulsory mixer/pump

ca. 40%

Time saving because mixing and pumping of the material is fully automatic and there is no idle time.



MAI

Compulsory mixer/pump

ca. 10%

Easier to operate and greater process reliability, as water metering is automatic after one-off basis adjustment.



MAI

Compulsory mixer/pump

ca. 20%

Means cost savings due to quicker project completion and reduced resource costs.

## TECHNICAL SPECIFICATIONS

Operating voltage:	400V/3/PE/N/50Hz
	other voltage
	options possible
Nominal capacity:	6,2 kW
Fuse protection:	25 A
Feed rate:	6,5 bis 35 l/min
Dimensions	173 x 57 x 96 cm
Filling height:	96 cm

## WEIGHT

Total weight:	213 kg
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## INDIVIDUAL EQUIPMENT ACCORDING TO YOUR REQUIREMENTS

A comprehensive range of accessories is available for all MAI®400NT models, allowing the machine to be customized to meet your specific needs. As well as various types of worm pump with different conveying capacities, other available options include an injection pressure switch for pressure limitation and the MAI®LOG control and data recording system. It can also be fitted with crane lugs, a delivery hood or injection hood.

