

Solutions for tunneling and mining

# MEYCO Potenza



Expanding Horizons

Underground

**MEYCO**

MEYCO® spraying mobiles set the standard for sprayed concrete using the wet method in tunnels and other areas of application. They have become common place on many of the world's most important construction sites where shotcrete must be applied in large quantities without compromising on the quality.

The MEYCO Potenza is the result of utilising the experience gained on hundreds of projects and more than 20 years of manufacturing spraying mobiles as we know them today. We have listened to the feedback from our customers and absorbed the advice from our specialists within our MEYCO Global Underground Construction Group to guarantee that the purpose of the equipment is kept at the forefront of all design and construction decisions.

MEYCO's commitment to advancing and improving the equipment is illustrated by the introduction of the MEYCO Maxima spraying manipulator as a further option. Our customers confirm that MEYCO Potenza gives them added value through their continued product loyalty and recommendations.

## Overview

The standard components comprising the complete equipment:

- MEYCO Robojet spraying manipulator
- MEYCO sprayed concrete machine for wet-mix process
- Integrated MEYCO Dosa TDC additive dosing system
- MEYCO Data, performance monitoring system
- Cable remote control
- Chassis, 4 wheel drive and steer, with stabilisers
- Cable reel with hydraulic drive
- Electric supply cable
- MEYCO nozzle system
- Liquid additive tank
- Water storage tank
- Working lights
- Water pump
- Hose reel
- High pressure water cleaner
- Release oil pump
- Fire extinguisher

Options

- Air compressor (rotary vane or screw type)
- Central lubrication
- Radio remote control
- MEYCO Maxima spraying manipulator
- Other voltage supplies are also possible

For technical description please refer to the Specifications.









# Features

## Manipulator

- World famous MEYCO Robojet with parallel spraying action and 8 fields of movement ensures the perfect spraying pattern.
- Control through the remote panel is quickly learnt due to simple spraying action.
- Very strong construction for high volume spraying and 80 mm hoses.
- Option: MEYCO Maxima for extreme spraying reach, together with ability to extend from, and retract to the compact transport position without turning. See Maxima description for full details.

## Central Lubrication

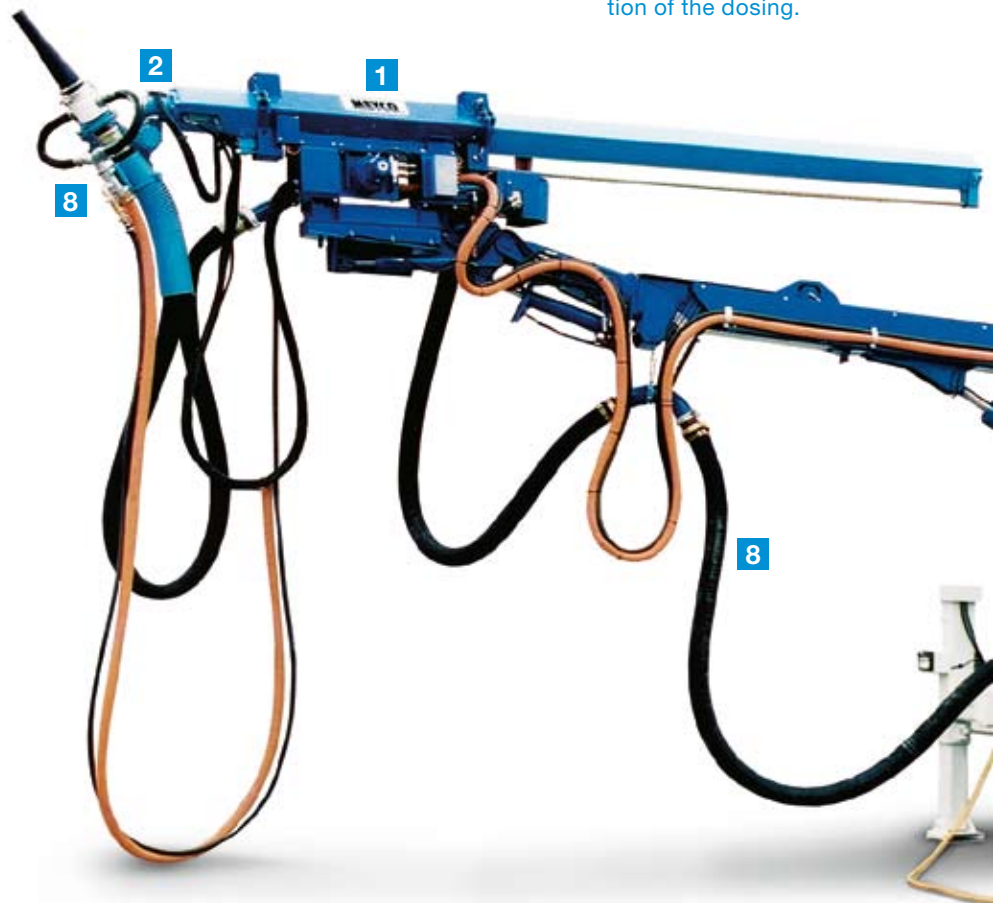
- Option: 47 lubrication points distributed over the entire equipment and supplied automatically reduce maintenance and increase the life and value of the machine. More of a must than an option!

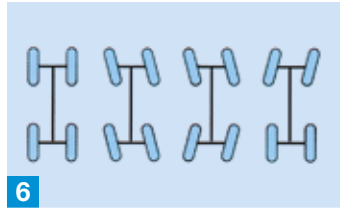
## Sprayed concrete pump

- Double-piston pump with 30 m<sup>3</sup>/h capacity.
- Complete pumping system is designed for low-pulsation spraying.
- Tough hopper and grill constructed for concrete with steel fibres.

## Operation

- Operator terminal near the nozzle-man allows complete control of spraying mobile and components.
- Cable remote control for all movements and other major operation functions.
- Option: Radio remote as lighter and more mobile alternative.
- Display shows all details necessary for an overview of spraying operation and permits quick and easy alteration of the dosing.





#### MEYCO TDC dosing system

- Total Dosing Control does what it says using interaction of frequency controlled dosing pump drive, concrete volume and flowmeter.
- Very accurate dosing adjustment with simple control features.
- PLC unit coordinates rapid automatic adjustments of dosing according to prevailing conditions.
- Low maintenance, low-pulsation pumping.
- Ideal for Akali-Free accelerators.

#### Chassis

- Robust site proven chassis with powerful diesel motor.
- 4 wheel drive and 4 wheel steer including crabwalk for maneuverability in tight situations.
- Cabin FOPS certified with turnable driver's seat and controls.

#### Power and control unit

- One central electric control box and electro-hydraulic unit improves efficiency and aids easy maintenance.
- Reliable, site proven PLC system provides complete system management.

#### Accessories

- All necessary accessories for cleaning the manipulator, concrete pump and nozzle system are fitted as standard for a fast clean-up and to prevent avoidable down-time.
- MEYCO 100 mm concrete delivery lines with 80 mm nozzle system, reduces the occurrence of blockages with stiff and fibre filled mixes. Low material speed leads to less wear costs.
- MEYCO Data for compiling and extracting of performance data, transferring to PC for processing and evaluation.
- Fire extinguisher fitted as standard provides for greater safety.



# Technical Specifications

## MEYCO Potenza with MEYCO® Robojet

Dimensions	Minimum transport measurements	7.8 x 2.5 x 3.27	m
	Width with delivery line	2.85	m
	Weight with compressor	14 400	kg
	Weight without compressor	12 500	kg
Power	Input supply voltage	3 x 400 / 50	V/Hz
	Potenza with compressor	135	kW
	Potenza without compressor	60	kW
Spraying Range MEYCO Robojet manipulator	Max. height	14.5	m
	Max. height – lance parallel	10.5	m
	Max. width	26	m
Capacity	Concrete pump at constant 50 bar*	30	m³/h
	Dosing pump max. at 8 bar	20	l/min
Chassis	Dieci Chassis, 4 wheel drive and steer, stabilisers front and rear, Iveco water cooled diesel engine	74	kW
Air Compressor	Power	75	kW
	Capacity	11.5	m³/min.
	Pressure	0.7	MPa
Accessories	E-Cable min. length	80	m
	Delivery / nozzle system	100/80	mm
	Additive tank	1 000	l
	Water storage tank	430	l
	Working lights	2x 1 500 + 500	W
	Water pump pressure	12	bar
	Water pump volume	1 000	l/h
	High pressure water cleaner	10–155	bar
	Hose reel	15	m
	Release oil pump	5	l

Important | \* Pump performances including maximum volumes are based on theoretical, 100 % filling capacities. Conveying heights and distances are based on experience but are strongly dependent on the granulometry, the cement content and the plasticity of the concrete.



# Applications

Typical areas of work for the MEYCO Potenza are:

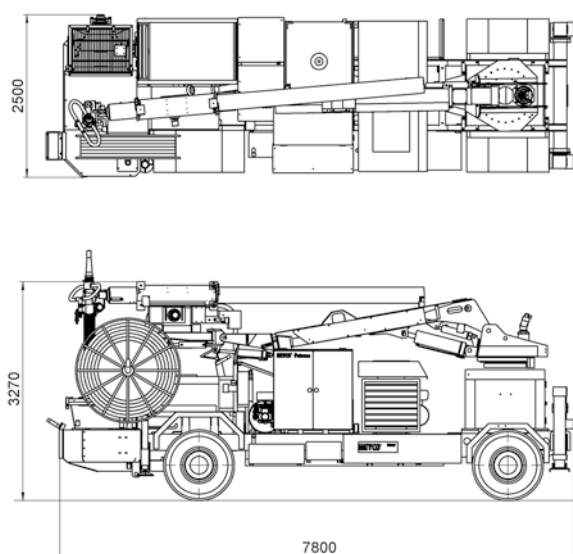
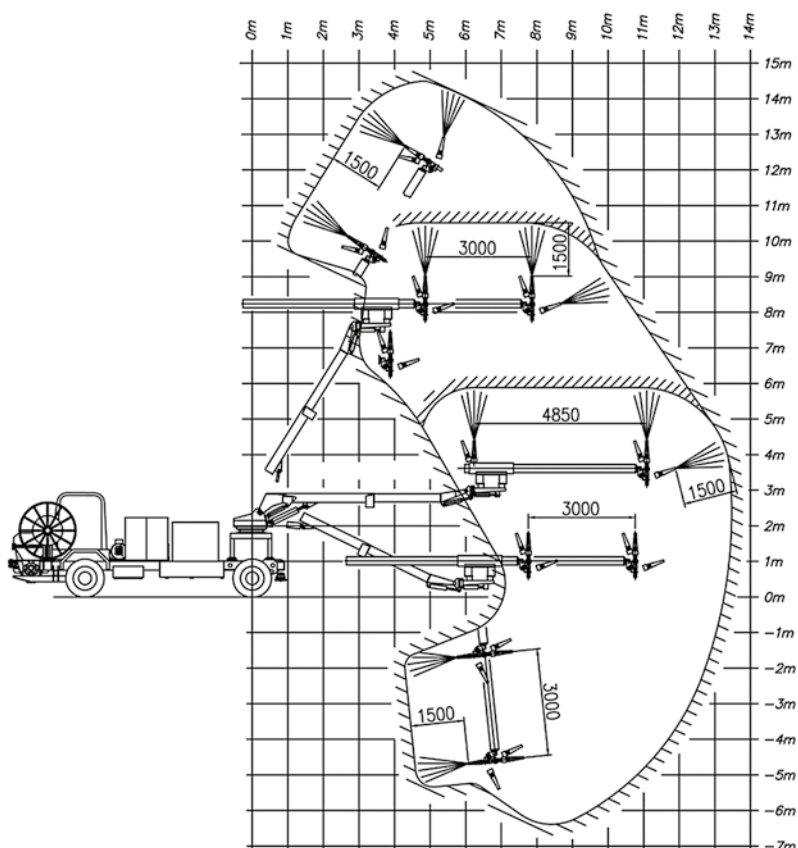
- Tunnelling
- Slope stabilisation
- Building pits
- Mining operations
- Hydropower

On large construction sites such as tunnels, it is imperative that the spraying set-up is installed and ready to start performing within minutes. As soon as the spraying operation is finished, the equipment has to be removed so that the next work cycle can begin immediately. Furthermore, it is a common trend to execute different jobs simultaneously, which demands complete, self-contained equipment as for example the central air supply is seldom large enough to supply all demands, the complete mobile therefore carries it's own compressor.

The MEYCO Potenza is the perfect equipment to use anywhere where large quantities of sprayed concrete are to be applied in the fastest and most efficient manner possible.

Ask us for our reference list today, you will see that, as a customer, you are in very good company!

Spraying range of MEYCO Robojet manipulator





The MEYCO Maxima is absolutely unique! Designed and constructed using MEYCO's extensive experience in the field of spraying manipulators, it is now available as an option for the MEYCO Potenza. It has, among other important features, an undisputable spraying range advantage and can also be extended in any tunnel profile that the MEYCO Potenza can fit into!

Only having 3 main fields of movement guided using an ergonomically designed joystick plus the 2 spraying head movements and nozzle oscillation, the Maxima is very simple to use and the «learning curve» is short. Automatic movement speed is also adjustable from the joystick.

The system has a full Graphic User Interface (touch screen), possible through the use of a reliable industrial computer as controlling unit. This allows the MEYCO Maxima to have advanced attributes valuable to the operator such as a virtual parallel lance movement, through computer controlled nozzle position compensation.

There is also the ability to mark a spraying range and then, in a semi-automatic mode, the operator can easily spray along paths parallel to the predefined axis.

## Option: MEYCO Potenza with MEYCO Maxima Spraying Manipulator



1 Modified MEYCO spraying head for 80 mm hoses and all required nozzle angles.



2 Ingenious construction allowing boom to be easily retracted for transport and extended for spraying.

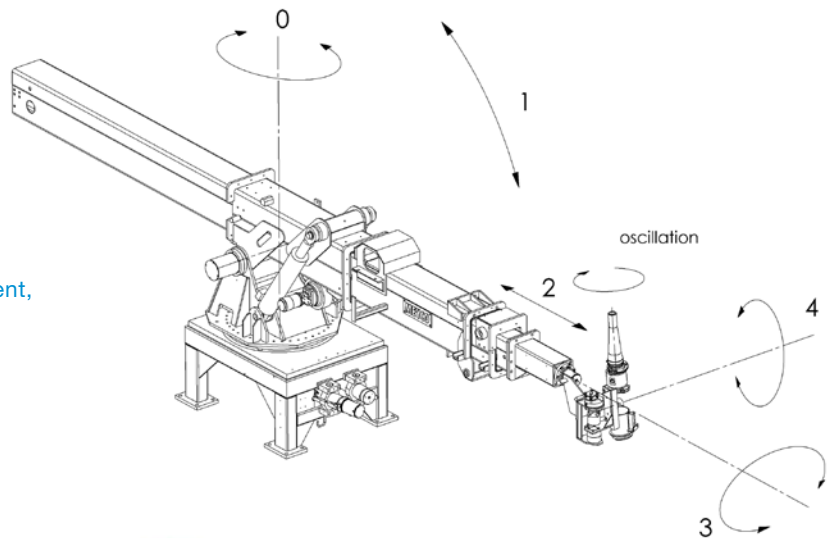


3 Cable remote control with only 2 joysticks (radio remote also available)

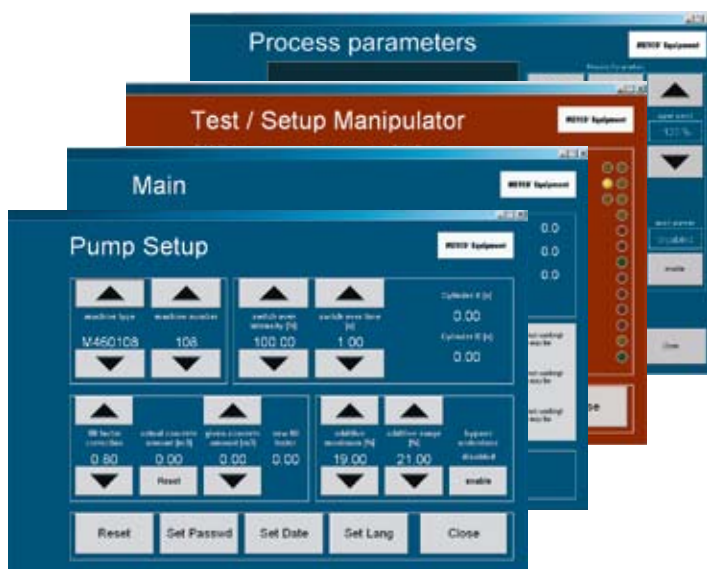


4 Control panel with GUI, positioned near the nozzle-man/operator.

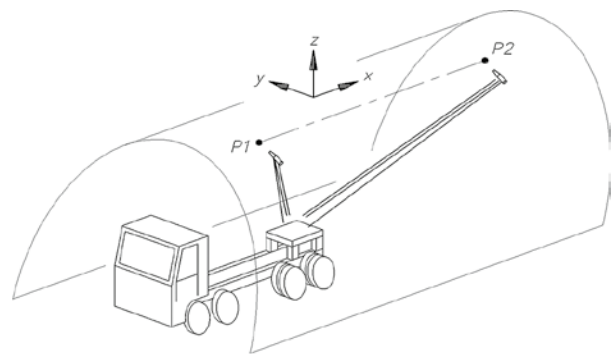
The 5 fields of movement, plus nozzle oscillation



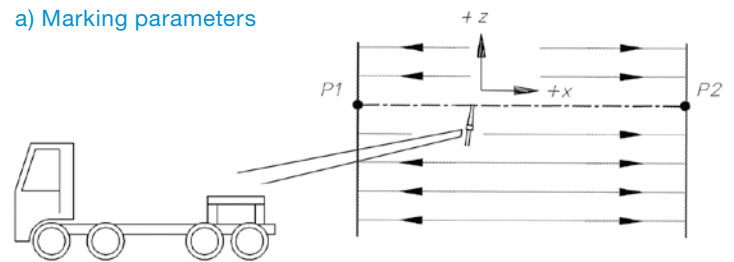




Graphic User Interface (touch screen), enabling intuitive control of all systems



a) Marking parameters



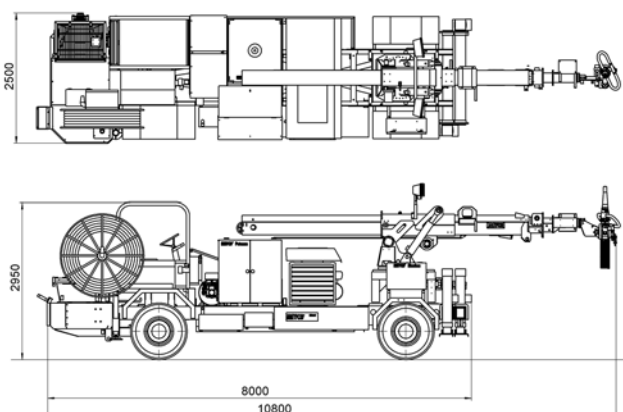
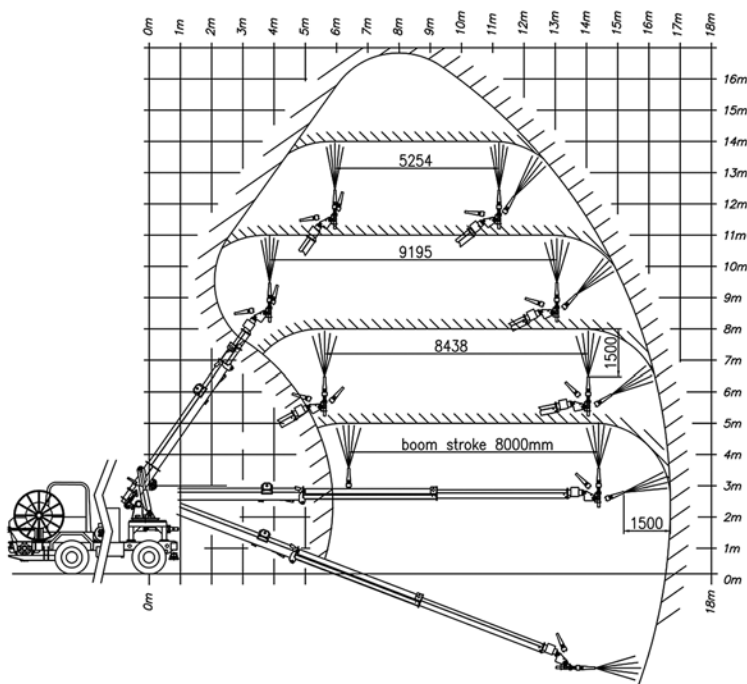
b) Spraying paths parallel to the marked axis in semi-automatic mode



# Added value of MEYCO Potenza with MEYCO Maxima

- Huge reach enables not just a greater spraying area from a single vehicle location but leads to a great time saving in vehicle repositioning.
- Extends from parked position into spraying position in small tunnel profile.
- Smooth and simple operational control with only 2 joysticks and speed control.
- Long «virtual» parallel movement, a nozzle-man's favourite function.
- Computer managed positional sensing, allowing semi-automatic mode.
- Comprehensive self-diagnosis of faults is also possible remotely using network connection.
- Packs away very compactly for driving.
- Less joints than a conventional manipulator reducing wear costs.
- Proportional valve control, soft movement (anti-bounce system).
- Modified MEYCO spraying head to cover all the angles.
- 80 mm heavy duty, high pressure concrete delivery hoses for large volume spraying.
- Central lubrication, reducing both wear and maintenance time (option).

Spraying range of MEYCO Maxima manipulator





# Technical Specifications

## MEYCO Potenza with MEYCO Maxima

Dimensions	Minimum transport measurements	10.7 x 2.5 x 3.10	m
	Width with delivery line	2.85	m
	Weight with compressor	14 750	kg
	Weight without compressor	12 850	kg
Power	Input supply voltage	3 x 400 / 50	V/Hz
	Potenza with compressor	135	kW
	Potenza without compressor	60	kW
Spraying Range MEYCO Maxima manipulator	Max. spraying height	up to 17	m
	Parallel spraying length at 7 m height	up to 8.40	m
	Parallel spraying length at 11 m height	up to 9.20	m
	Parallel spraying length at 14 m height	up to 5.25	m
	Max. spraying width	up to 30	m
Capacity	Concrete pump at constant 50 bar*	30	m³/h
	Dosing pump max. at 8 bar	20	l/min
Chassis	Dieci Chassis, 4 wheel drive and steer, stabilisers front and rear, Iveco water cooled diesel engine	74	kW
Air Compressor	Power	75	kW
	Capacity	11.5	m³/min.
	Pressure	0.7	MPa
Accessories	E-Cable min. length	80	m
	Delivery / nozzle system	100/80	mm
	Additive tank	1000	l
	Water storage tank	430	l
	Working lights	2 x 1 500 + 500	W
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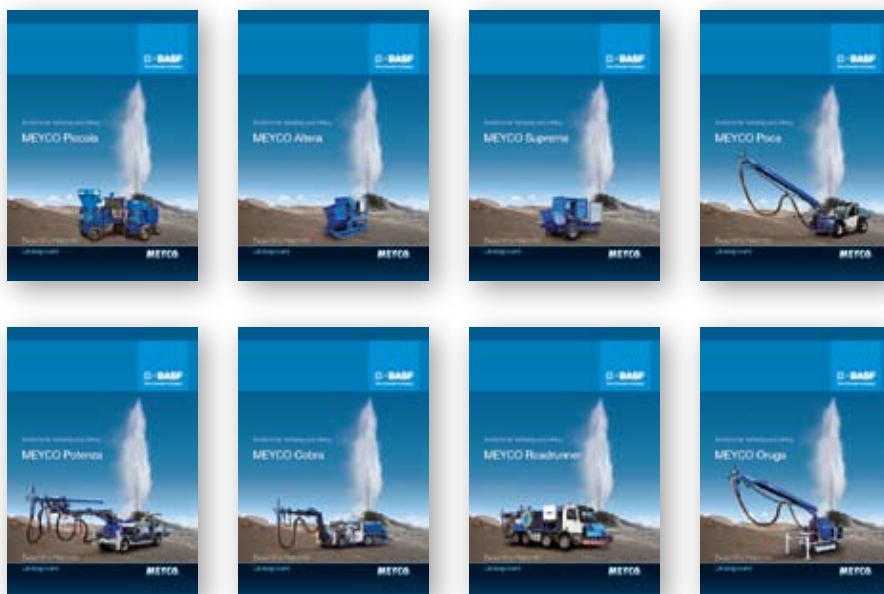
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