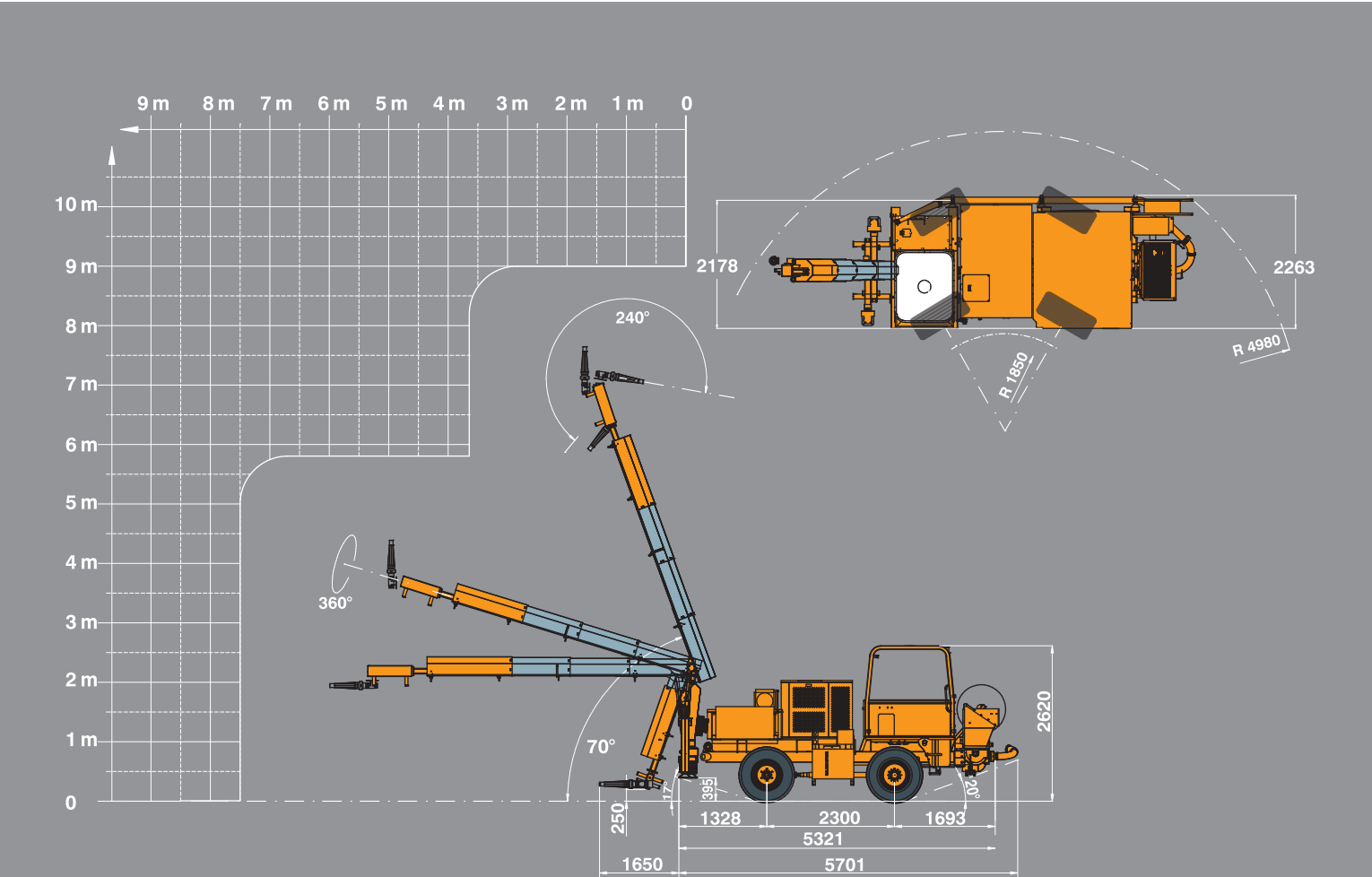
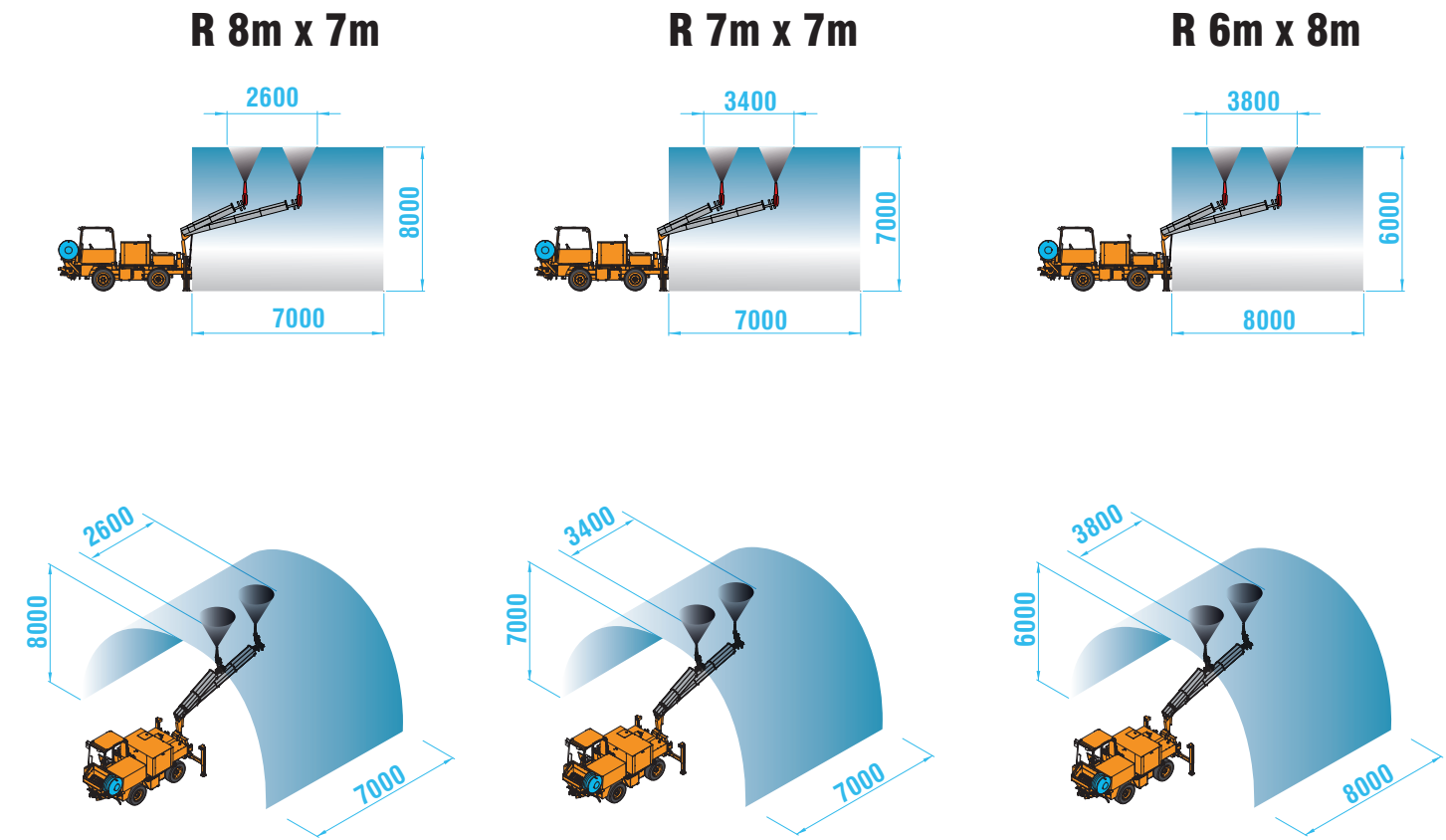


Dragon functional operation



DRAGON

TECHNICAL DATA

CHASSIS	
Engine	Yanmar - 4-cylinder - liquid cooled
Engine power	33 kW
Engine emissions	stage III A
Transmission	hydrostatic with mechanical gearbox
Steering	Steering assisted, dry steering on 4 steering wheels 2 steering wheels - 4 steering wheels, crab steering
Drive	4 wheel drive - 4 wheel steering
Gearbox	4 forward gears, 2 reverse gear
Speed	max. 20 - 5 Km/h
Braking system	- service and emergency brakes on 4 wheels - drum parking brake on the front axle with lever control
Working lights	2 adjustable lights
Driver cabin	Open cabin FOPS with 180° swivelling driving post
Diesel tank	60 l

DIMENSIONS

Weight	5.300 kg
Weight with compressor	6.600 kg
Size (L x W x H)	5.321 x 2.263 x 2.620

TURBOSOL CONCRETE PUMP

Type	Double-piston hydraulic drive
Theoretical concrete output*	15 m³/h (variable 2-15 m³/h)
Cylinder diameter	120 mm
Max. pressure on concrete	80 bar
Max. aggregate size	20 mm

HOPPER

Hopper capacity	250 l
Loading height	122 cm

TELESCOPIC SPRAYING ARM

Maximum spraying reach*	Vertical 9,1 m / horizontal 7,55 m
Minimum spraying reach*	Vertical 2,5 m / horizontal 2,4 m
Arm extensions	4 sections (3 telescopic) proportional drive
Telescopic stroke	3 m
Lights	2 x 500 W

SPRAYING HEAD

Rotation	360°
Inclination	240°
Nozzle	Ø 45

PROPORTIONAL REMOTE CONTROL

Drive	Radio/cable
Cable	15 m

PUMPING AND SPRAYING ELECTRICAL SYSTEM

Motor	30 kW - 400 V - 50 Hz
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*The data indicated are theoretical and depend on the quality and consistency of the materials to be used, wear and tear of the pump and the diameter of the hoses.

SYNCHRONIZED DOSING PUMP

Adjustment range	0 - 960 l/h
Maximum working pressure	12 bar
Additive tank	600 l (1000 l optional)

ELECTRIC COMPRESSOR

Power	37 kW
Max. working pressure	7 bar
Air output	6.500 l/min

HIGH PRESSURE WATER CLEANER

Max. pressure	130 bar
Flow	12 l/m
Hose	15 m
Tank capacity	200 l

CABLE REEL

Operation	manual
Cable length	50 m

ALTERNATIVE VERSION 60 Hz

ENGINE

Engine	Deutz air/oil cooled
Power	54 kW

ELECTRIC COMPRESSOR

Power	44 kW
Max. working pressure	7 bar
Air output	6.500 l/min

ELECTRIC MOTOR

Motor	30 kW - 440 V - 60 Hz
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DRAGON

CONCRETE SPRAYING SYSTEM



Turbosol Dragon: compact, versatile, and high performance unit for your underground shotcrete works.

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DRAGON CONCRETE SPRAYING SYSTEM

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PUMPING TECHNOLOGY FOR THE UNDERGROUND INDUSTRY



Carrier

Front load-bearing and steering with planetary reduction gears on the wheel hubs. Rear load-bearing oscillating (+ - 5") and steering with planetary reduction gears on the wheel hubs and flanged gearbox. Front and rear tyres: 12.0/75 - 18" PR. 12 TR3.

4X4 FWD

Hydrostatic "automotive" transmission with variable displacement pump and variable displacement hydraulic motor with electrohydraulic control, plus reverse gear control on the steering wheel. Mechanical gearbox for "working speed" and "road transfer" speed, with mechanical control.



Cabin

Open cabin FOPS with 180° swivelling driving post, high sitting position guarantees high visibility. 4 working lights for moving into tunnels.

Chassis

The heavy duty chassis is designed to stand the toughest working conditions in mines and tunneling works.

Brakes

Internal oil-bath disc service and emergency brakes acting on the 4 wheels, pump activation on independent dual circuit. Drum parking brake on the front axle with lever control.

Speed

4 forward gears 2 reverse gears
I° 0 - 4.6 Km/h 0 - 4.6 Km/h
II° 0 - 7.2 Km/h 0 - 4.6 Km/h
III° 0 - 12.9 Km/h 0 - 12.9 Km/h
IV° 0 - 20.5 Km/h 0 - 12.9 Km/h
Traction / weight ratio 60%.

Steering

Assisted by dry steering on 4 steering wheels ; steering selection device for: 2 steering wheels, 4 steering wheels - crab steering. Increased manoeuvrability , turning radius in less then 5 m.



Controls

Proportional radio remote control, dual use (radio/cable). Additional heavy duty 10 m cable remote control. Main functions that can be performed: pumping, dosing, boom movement and accelerator adjustment. Input of cement content, desired dosing ratio and accelerator weight can be easily regulated from the switchboard display. Control valve for easy adjustment of concrete volume throw.



Admixture dosing pump

Increased capacity additive tank of 600 liters easy to refill and change (1000 l. optional). Hydraulically operated pulsation-free worm pump, stainless steel rotor to avoid corrosion plus dry running protection. Ideal for all types of accelerator, alkali-free included. Electronic output meter. Additive dosing ratio is synchronized with the concrete flow.



Pumping Group

Double piston pump 15 m³/h theoretical capacity. Pumping system and fast exchange of the valve for pulsation-free spraying. Antiwear materials. Ergonomical design for faster cleaning and easier maintenance operations. Sieve with electric vibrator ideal to be used with steel fibres.



Maintenance

Central lubrication block fixed next to the hopper. 130 bar high pressure cleaner with 200 liters water tank.

Electrics

All electronic components are marked and easy to identify. Working lights: 2x 500 W placed on the spraying boom, plus 2 extra-lights on the concrete pump and working areas. 50 meters of electric supply cables with manual reel.

On-board compressor

Powerful screw type compressor of 6.500 liters/min for full autonomy. (upon request).



Boom

Great manoeuvrability of the telescopic boom with 4 section box beams in high yield point steel, with protection cover and guide bushing for smooth operations. Front hydraulic stabilizers with shaft protection.

Nozzle system

High pressure rubber hose diameter 65mm for concrete, high quality air and chemical hose. Automatic brush movement for the nozzle, rotation 360°, inclination 240°. Easy cleaning of the nozzle group.

