ROBBINS
SBU DIVISION

REMOTE CONTROLLED SMALL BORING UNIT (SBU-RC)

ABOUT

The SBU-RC is a game-changer for the trenchless industry, making long, line-and-grade-sensitive crossings possible at small diameter. The SBU-RC is an unmanned, articulated mixed ground and hard rock boring machine for use with standard Auger Boring Machines (ABMs) or pipe jacking systems. In a launch pit or shaft, the SBU-RC is attached to the lead steel casing. The ABM or pipe jacking system provides thrust through this steel casing.

To excavate the material, a circular cutterhead mounted with disc cutters fractures hard rock into chips. In mixed ground, two-row carbide cutters can be used. An in-shield drive motor provides torque for cutterhead rotation, while muck is removed via a tube connected to a vacuum truck at the surface.

PINPOINT STEERING

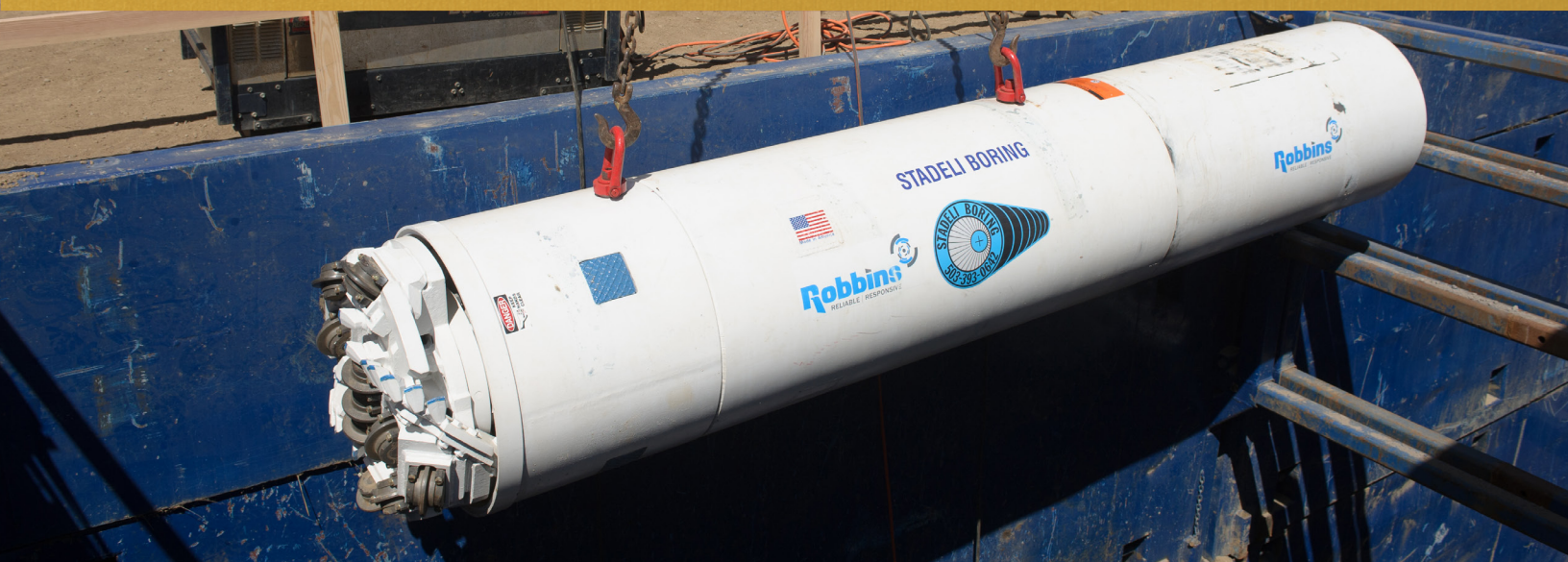
The SBU-RC incorporates a smart guidance system, installed in an operator's station at the surface. The guidance system shows an operator projections of the future bore path so steering corrections can be made before the machine is ever out of line and grade. An articulated forward shield is able to make adjustments within two degrees in all directions.

SBU-RC APPLICATIONS

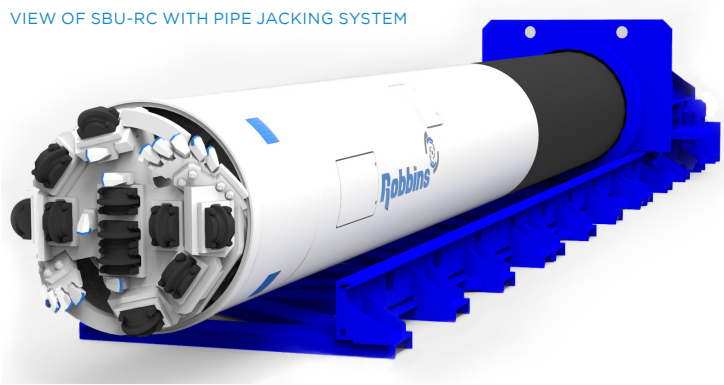
- Line-and-grade-sensitive crossings
- Small diameter crossings
- Long crossings up to 150 m, depending on conditions
- Cost effective alternative to microtunneling in hard rock and mixed ground

A COST-EFFECTIVE ALTERNATIVE TO MICROTUNNELING

Because the SBU-RC uses vacuum spoil removal, there is no slurry as would be needed for standard microtunneling. The simplified operation takes out the extra step of slurry cleaning and gives contractors a more cost-effective alternative. The end result is a highly successful machine with a price tag that wins bids, time and again.

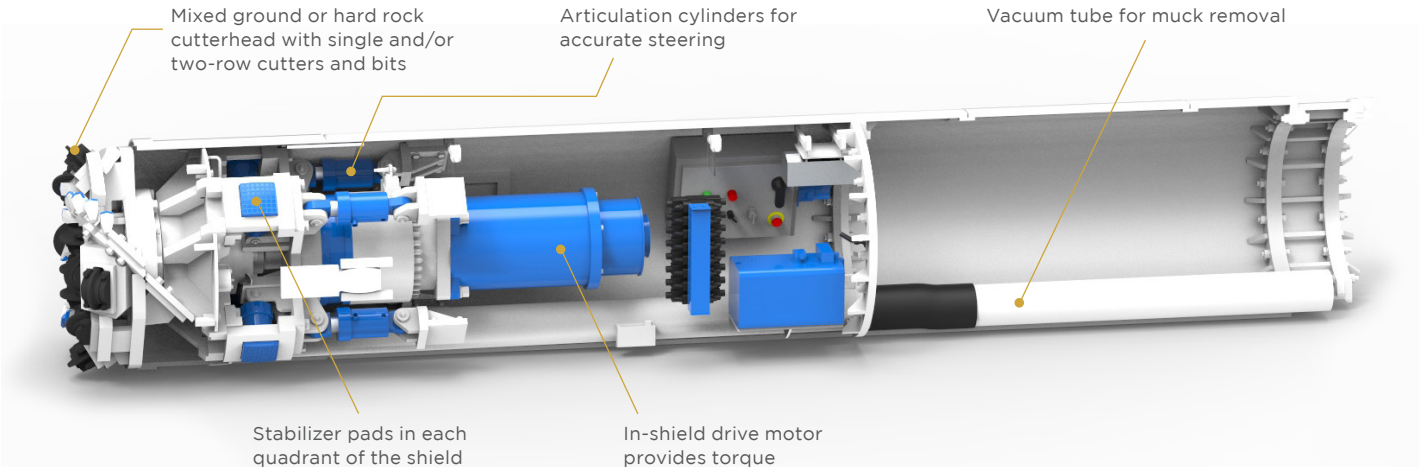


VIEW OF SBU-RC WITH PIPE JACKING SYSTEM



SBU-RC CUTTERHEAD

SBU-RC CUTAWAY VIEW



SPECIFICATIONS

MACHINE DIAMETERS
600 to 1,100 mm

ROCK STRENGTHS
Up to 137 MPa UCS

GROUND CONDITIONS
Medium to hard rock or mixed ground above the water table. Mixed ground may include rock with gravel and clay seams or other non-compressible materials.

VACUUM SYSTEM
170 m^3/min - supplied by customer

ELECTRICAL
Powered by VFD. 50 Hz or 60 Hz acceptable

LEASING AVAILABLE WORLDWIDE

SBU-RC 24
Bore Diameter - 660 mm

Approx. Weight - 2,720 kg

Approx. Length - 3.05 m

Power Required - 40 kW generator

Max. Thrust - 400 kN

Cutterhead Torque - 11,250 N-m at 16 RPM

SBU-RC 30
Bore Diameter - 813 mm

Approx. Weight - 3,990 kg

Approx. Length - 3.05 m

Power Required - 40 kW generator

Max. Thrust - 445 kN

Cutterhead Torque - 11,250 N-m at 16 RPM

SBU-RC 36
Bore Diameter - 965 mm

Approx. Weight - 5,170 kg

Approx. Length - 3.20 m

Power Required - 75 kW generator

Max. Thrust - 800 kN

Cutterhead Torque - 21,970 N-m at 16 RPM

SBU-RC 42
Bore Diameter - 1,117 mm

Approx. Weight - 6,850 kg

Approx. Length - 3.20 m

Power Required - 75 kW generator

Max. Thrust - 960 kN

Cutterhead Torque - 21,970 N-m at 16 RPM

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