

# Double Shield TBM (SBU-DS)

### Technical Description

The Double Shield TBM (SBU-DS) is ideal for long tunnels (over 3,300 ft) without intermediate access. The SBU-DS is a manned-entry, hard rock tunnel boring machine. The machine is used in conjunction with a single-track back-up system for auxiliary functions. In unstable ground, the SBU-DS can erect liner within the tail skin, while in stable ground the machine can be used without lining. Muck is removed using muck trains with conveyor-loading muck skips.

### Tunneling with No Limitations

Not just for utility crossings, the SBU-DS can bore entire tunnels in much harder rock than other SBU Division products. A ring bearing and bull gear drive allow for larger diameter 17 inch disc cutters to be used, with greater thrust and higher torque. The machine is capable of boring in rock of 44,000 psi UCS or higher over long distances.

### Guided Boring

The SBU-DS can be steered throughout the drive using hydraulic stabilizer pads and articulation cylinders. Line and grade accuracy is continuously monitored with a laser targeting system.



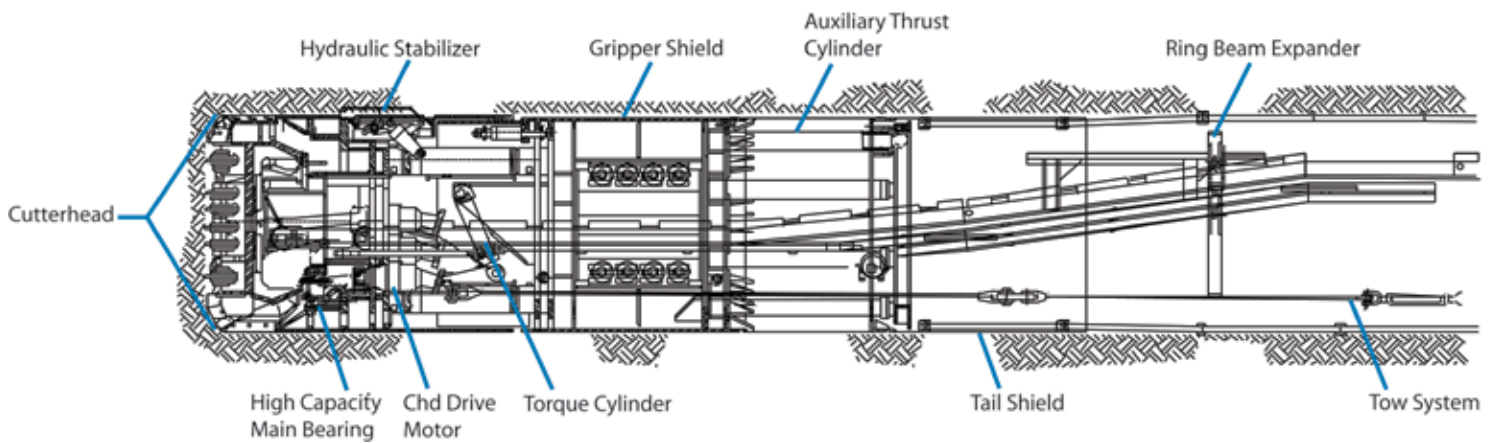
### SBU-DS APPLICATIONS

- Long tunnels with no intermediate access
- Line- and grade-critical tunneling
- Bore lengths from 1,600 to over 20,000 ft

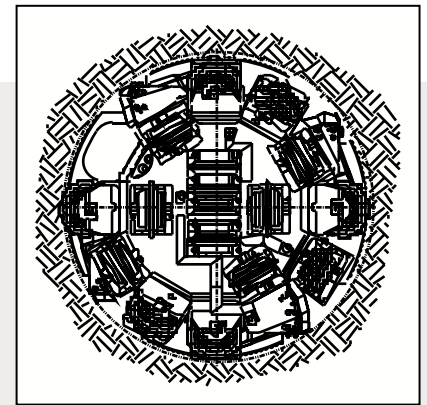
AVAILABLE FOR PURCHASE OR LEASE



## Side View



## Front View



## SPECIFICATIONS

<b>MACHINE DIAMETERS</b>	78 to 118 in (larger sizes available)
<b>ROCK STRENGTHS</b>	4,000 to over 36,000 psi UCS
<b>GROUND CONDITIONS</b>	Medium to very hard rock, or mixed ground
<b>CUTTERHEADS</b>	Both hard rock and mixed ground cutterheads are available
<b>CUTTERS</b>	All machines can be equipped with 14 inch or 17 inch discs

### SBU-DS 88

Bore Diameter	88 in
Boring Stroke	30 in
Main Bearing	Tapered Roller
Machine Thrust	904,778 lbs.
Cutterhead Drive	5 x hydraulic motors
Drive Motors	2 x 350 hp water-cooled
Max. Torque	146,000 ft-lb.
Max. System Press.	5,000 psi
Conveyor	18 in troughed belt

### SBU-DS 97

Bore Diameter	97 in
Boring Stroke	30 in
Main Bearing	Tapered Roller
Machine Thrust	1,414,000 lbs.
Cutterhead Drive	5 x hydraulic motors
Drive Motors	2 x 350 hp water-cooled
Max. Torque	146,000 ft-lb.
Max. System Press.	5,000 psi
Conveyor	18 in troughed belt

The Robbins Company  
29100 Hall Street  
Solon, Ohio 44139  
USA

Corporate Headquarters:  
Phone: +1 440 248 3303  
Fax: +1 440 248 1702  
Email: sbusales@robbinstbm.com



Visit [www.TheRobbinsCompany.com](http://www.TheRobbinsCompany.com) for more information.

© Copyright 2009 The Robbins Company  
US Version