

Self-Drilling Hollow Bar System Series R32

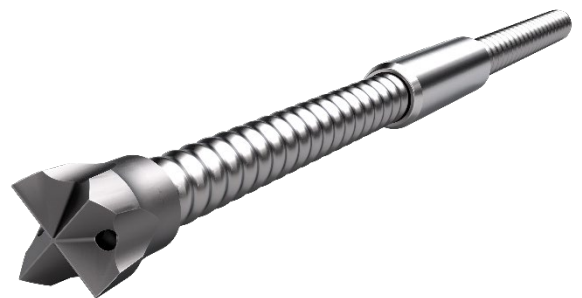
Product code: HBS R32-280(N) & R32-360(S)

Product specification: Tunneling and Mining

Category: Hollow Bar, continuous bonded

Introduction

The Self-Drilling Hollow Bar System is a self-drilling ground control solution used for underground applications and in civil engineering. Underground, it can be used for bolting, piling, face stabilization, as forepoling element for pre-support, or as a lance for injection works. The Self-Drilling Hollow Bar System also features a wide range of applications in civil engineering such as rock and soil nails, micropiles, or ground anchors. The system is an “all in one” tool for drilling, flushing, post- or simultaneous grouting, and finally the load-carrying member itself. Installations in weak ground and unstable borehole conditions represent no difficulty and are ideal for the application of the Self-Drilling Hollow Bar System. Sandvik Ground Support has long-term experience in the design, development, manufacturing, testing, and distribution of the Self-Drilling Hollow Bar System.



Key features

- Self-drilling ground control solution
- Preferably used under unstable borehole conditions
- Self-drilling installation without casing using a lost drill bit
- Installation with standard rotary or rotary-percussive drilling machines
- Hollow bar with continuous left-hand, cold-rolled outside thread utilized as drill rod during installation
- Easy extension of hollow bars using couplings
- Grouting can either be performed simultaneously during drilling with a rotary injection adapter or after the drilling operation (post injection)
- Threaded profile allows an ideal bond between the hollow bar and the grouting medium

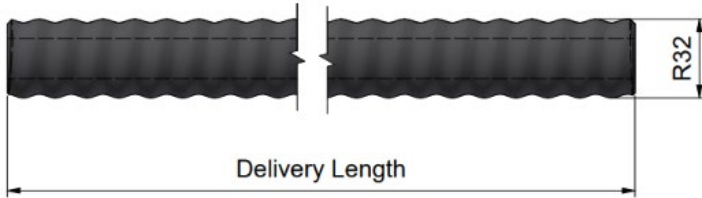
Main advantages

- Fast and safe self-drilling installation
- Trouble-free application in unstable boreholes
- Easy and similar operating principle using on-site personnel and standard drilling machinery
- Drilling, installation, and optional grouting in a single operational step
- Proven installation process in difficult ground conditions
- Sound and efficient alternative compared to time-consuming cased drilling installation methods and products
- Same installation principle for all applications and ground conditions

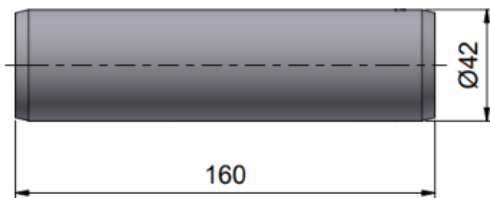
System components

Basic elements

- Hollow bar
Used as drill rod during installation
Suitable for simultaneous or subsequent grouting
Tension or compression member



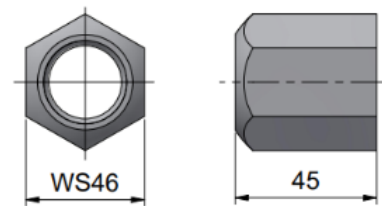
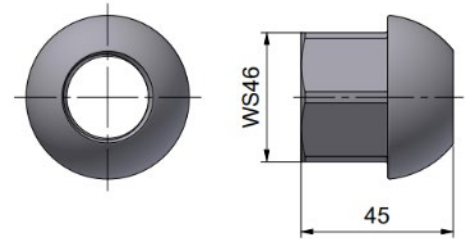
- Coupling
Continuous inside thread with middle stop or center bridge
Controlled drilling energy transmission
Full load-bearing capacity



- Drill bit
One drill bit per installed unit
Different diameters and designs
Hardened and carbide insert versions
Optimized for various ground conditions

Anchorage and foundation constructions

- Nut
Hex or domed version
Weldable square nut
Different designs and dimensions available



- Plate
Flat or domed
Plate design adjusted to system demands
Various solutions for angle compensations and special plate designs available

Specifications

No.	Characteristic value/ type ¹⁾	Symbol	R32-280(N)	R32-360(N)
1	Nominal external diameter	$D_{e,nom}$	32 mm	32 mm
2	Actual external diameter	$D_{e,act}$	31.3 mm	31.3 mm
3	Nominal internal diameter	$D_{i,nom}$	20 mm	17 mm
4	Nominal cross-sectional area ²⁾	S_0	360 mm ²	445 mm ²
5	Nominal weight ³⁾	m	2.83 kg/m	3.50 kg/m
6	Yield load	$F_{p0.2,nom}$	220 kN	280 kN
7	Ultimate load	$F_{m,nom}$	280 kN	360 kN
8	Yield strength ⁴⁾	$R_{p0.2}$	610 N/mm ²	630 N/mm ²
9	Tensile strength	R_m	780 N/mm ²	810 N/mm ²
10	Elongation	A_5	8 %	8 %

1) status: 2026-06, note: all values are subject to changes.

2) calculated from the nominal weight: $S_0 = 10^6 \times m / 7.850 \text{ kg/m}^3$, rounded.

3) Deviation: $\pm 5\%$.

4) Rounded. Steel grade: 40Cr.

Order information

Article number	Article Designation	Unit Weight (kg)	COO
381010281020F	R32-280(N), L=2,000 [mm], 40Cr	5.66	CN
381010281030F	R38-280(N), L=3,000 [mm], 40Cr	8.49	CN
381010281040F	R38-280(N), L=4,000 [mm], 40Cr	11.32	CN
381010281060F	R38-280(N), L=6,000 [mm], 40Cr	16.98	CN
381010361020F	R32-360(S), L=2,000 [mm], 40Cr	7.00	CN
381010361030F	R38-360(S), L=3,000 [mm], 40Cr	10.50	CN
381010361040F	R38-360(S), L=4,000 [mm], 40Cr	14.00	CN
381010361060F	R38-360(S), L=6,000 [mm], 40Cr	21.00	CN
301030060160	Coupling R32x160 [mm], Series "B"	0.84	CN
301020023046	Nut R32, Series "B"	0.37	CN
301020065046	Domed Nut R32-360, series "B"	0.38	CN

- Off-size hollow bar lengths are available on request.
- For GeoTech applications in requirement of a system approval, refer to the DSI Hollow Bar System.
- Order information for further system components is available on request.

System accessories

Structural elements

- S-D expansion bolt
- Expansion shell
- Yielding anchor head
- Lock nut
- Eye nut and loop nut
- Bail nut
- Reverse anchor head
- Lock coupling
- Angle compensation disk
- Sleeve for free length
- Protective cap

Drilling, grouting, and monitoring

- Bayonet connector
- Injection adapter
- Rotary injection adapter
- Grout mixing pump
- DSI Inject Systems
- Sealing coupling
- Post-injection coupling
- Drill bit adapter
- Rock drilling equipment
- Centralizer
- Injection flow-pressure meter
- Pull testing equipment
- Drill rod wrench
- Tensioning tools

Legal disclaimer

All dimensions, weights, quantities, and specifications are those applicable at the time of this publication and may be amended from time to time. Please contact your local representative for final confirmation of any key specifications. This document replaces older versions.