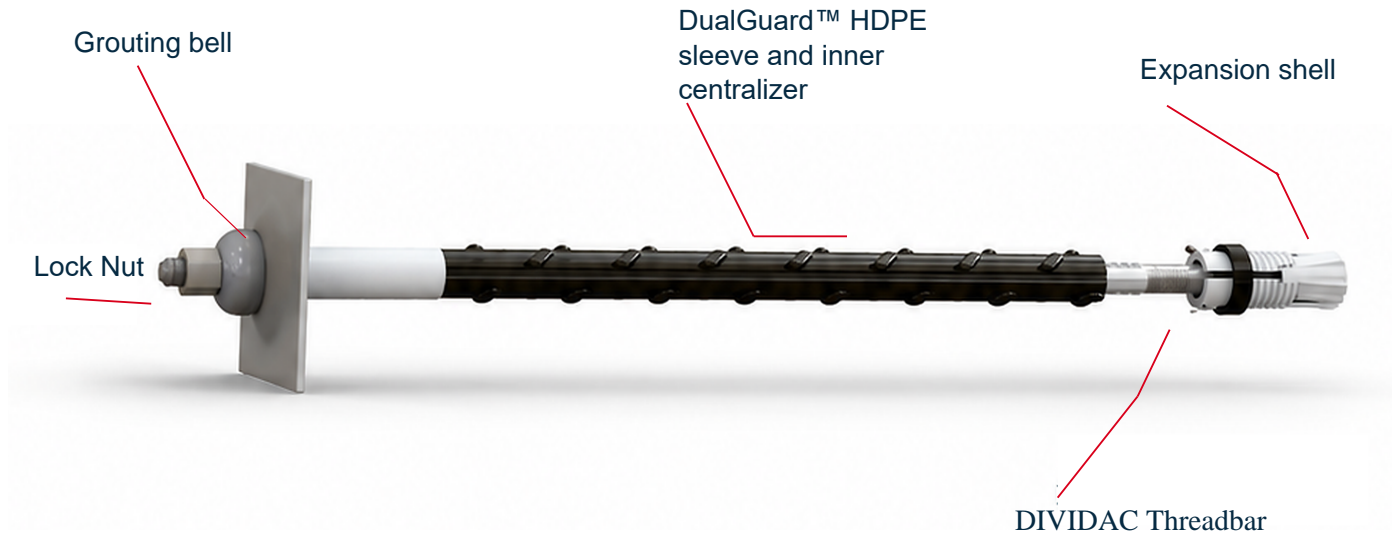


RockMaster Series

System components



Note

1. Available in S316 stainless dome plates and grouting bell
2. Customization, system upgrade and modification of rockbolt system per design
3. Both combo bolt and expansion shell are HK registered intellectual property of DIVIDAC

Expansion-Shell Anchorage

The expansion shell grips the borehole wall, securing the bolt position and enabling torque-activated early mechanical support before final grouting.

Post-Grout Durability

After installation, grout is injected through the system to provide full-length encapsulation and enhanced corrosion protection.

DualGuard™ Centralization

Integrated centralizers help maintain minimum grout cover around the threadbar and tunnel-face interface for consistent installation quality.

Protected Threadbar System

The HDPE sleeve and controlled grout path help isolate the steel threadbar from aggressive ground conditions for long-term service performance.

Efficient Two-Stage Installation

Install, torque and grout - a practical sequence for tunnelling works requiring early support and permanent anchorage in one system.

Coordinated System Assembly

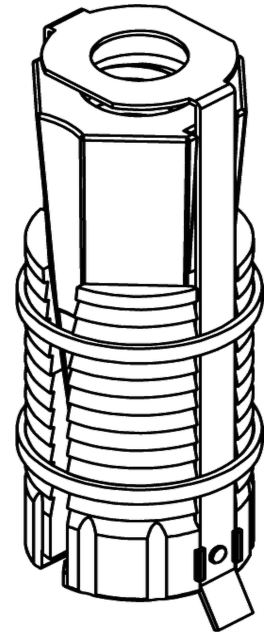
Threadbar, grouting bell, plate, nut, sleeve, centralizers and expansion shell are aligned as one engineered reinforcement assembly.


RockMaster Series

COMBO BOLT SYSTEM - TECHNICAL OVERVIEW

A refined DIVIDAC combo-bolt solution combining early mechanical anchorage with a later grout-injection stage. The system architecture includes face hardware, steel bar, HDPE sleeve, grout pathway and expansion-shell anchoring in one coordinated assembly.

EXPANSION SHELL SYSTEM COMPONENT



 **Expansion Shell -**
HK Registered IP
Protected (RM-001)



Key features

Durable lifetime with qualified anti-corrosion protection options. Immediate ground support through direct load transfer from anchor head to expansion shell and rock mass.



DualGuard™

Dual centralization for uniform minimum grout cover around threadbar and tunnel interface.



Applications

Permanent reinforcement of tunnels and caverns, ground stabilization in slopes, rock bolts, soil nails and ground anchors.

1

Drill

Prepare borehole to project design.

2

Install

Insert assembled combo bolt.

3

Tension

Activate expansion shell by torquing nut.

4

Grout

Pump grout until return/bleed confirms.

Technical Data Chart

Indicative data for RockMaster 001 Series configurations - final selection subject to project review and certification.

Parameter	20	25	25 (1080 Yield)	32
Nom. diameter of threadbar	20 mm	25 mm	25 mm	32 mm
Cross sectional area	314 mm ²	491 mm ²	491 mm ²	804 mm ²
Yield strength	830 MPa	830 MPa	1080 MPa	930 MPa
Ultimate strength	1030 MPa	1030 MPa	1230 MPa	1080 MPa
E-modulus	205 GPa	205 GPa	205 GPa	205 GPa
Yield load	261 kN	408 kN	530 kN	748 kN
Ultimate breaking load	323 kN	506 kN	604 kN	868 kN
Drillhole Recommended	56 mm	67 mm	67 mm	76 mm
Torque at nut	100-250 Nm	150-300 Nm	150-300 Nm	200-350 Nm

Note: Torque at nut depends on in-situ rock mass conditions and borehole size. Technical data should be checked against project specifications, testing and batch records.

Standard references in source data: BS EN13438 / BS EN ISO 2049 / AS/NZS1554.1 / DIN EN 10204.