

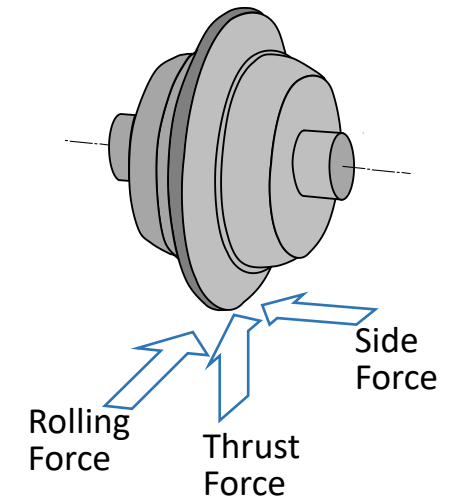
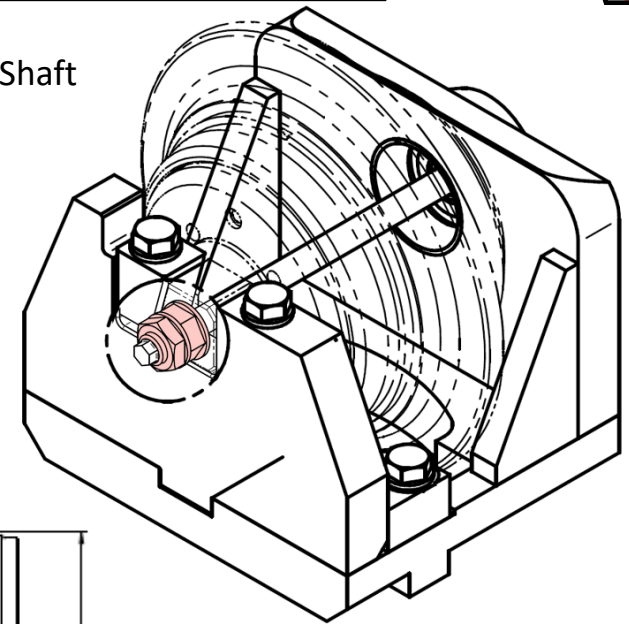
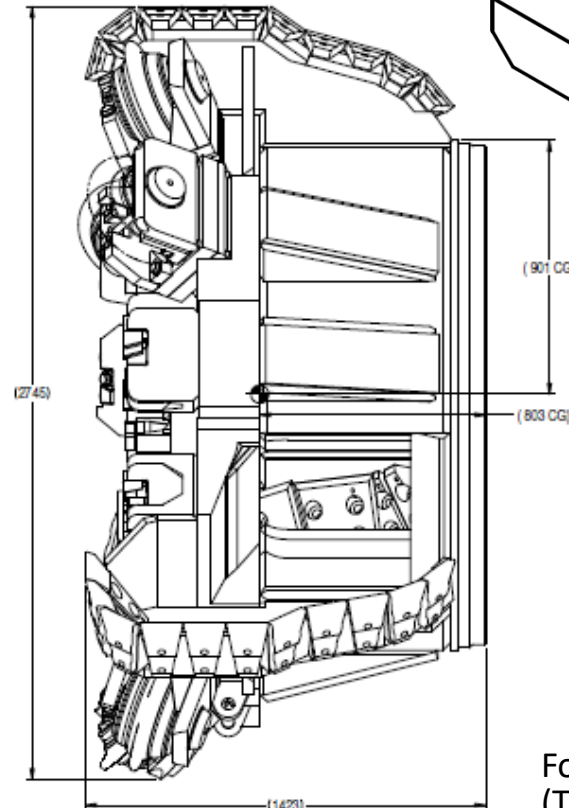
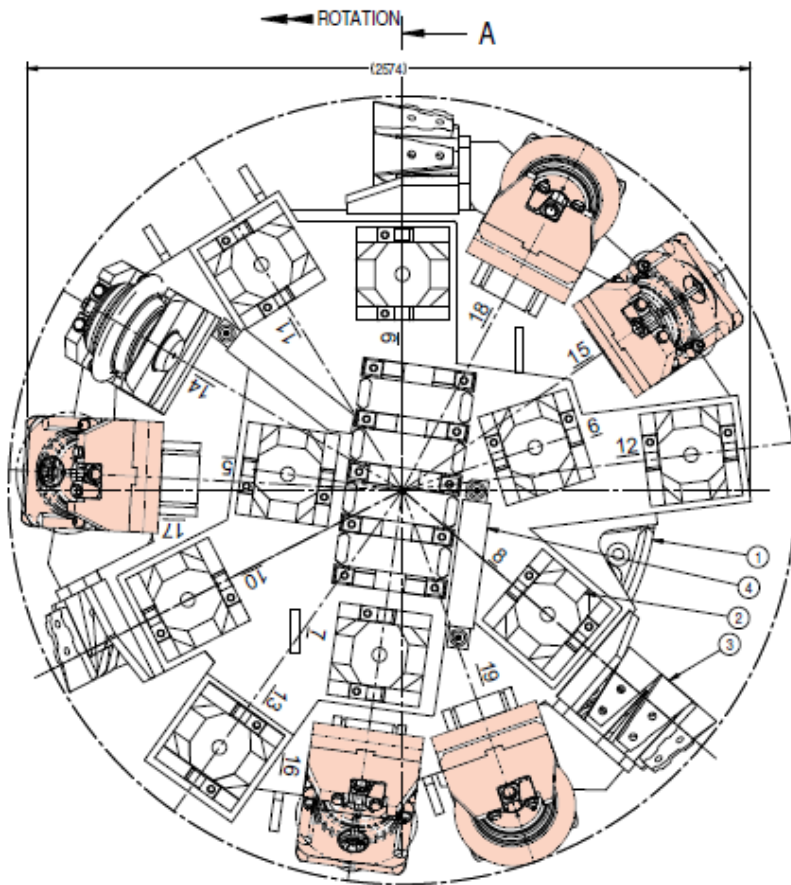
HARDLOCK[®]
Solution

**Tunnel Boring
Machine Applications**

HARDLOCK Nut Use on Cutter Head of TBM (Tunnel Boring Machine)

HARDLOCK Nuts are used on the disc cutter of the outer position of cutter head
M30x3.5 Class 10

To fix Cutter Shaft



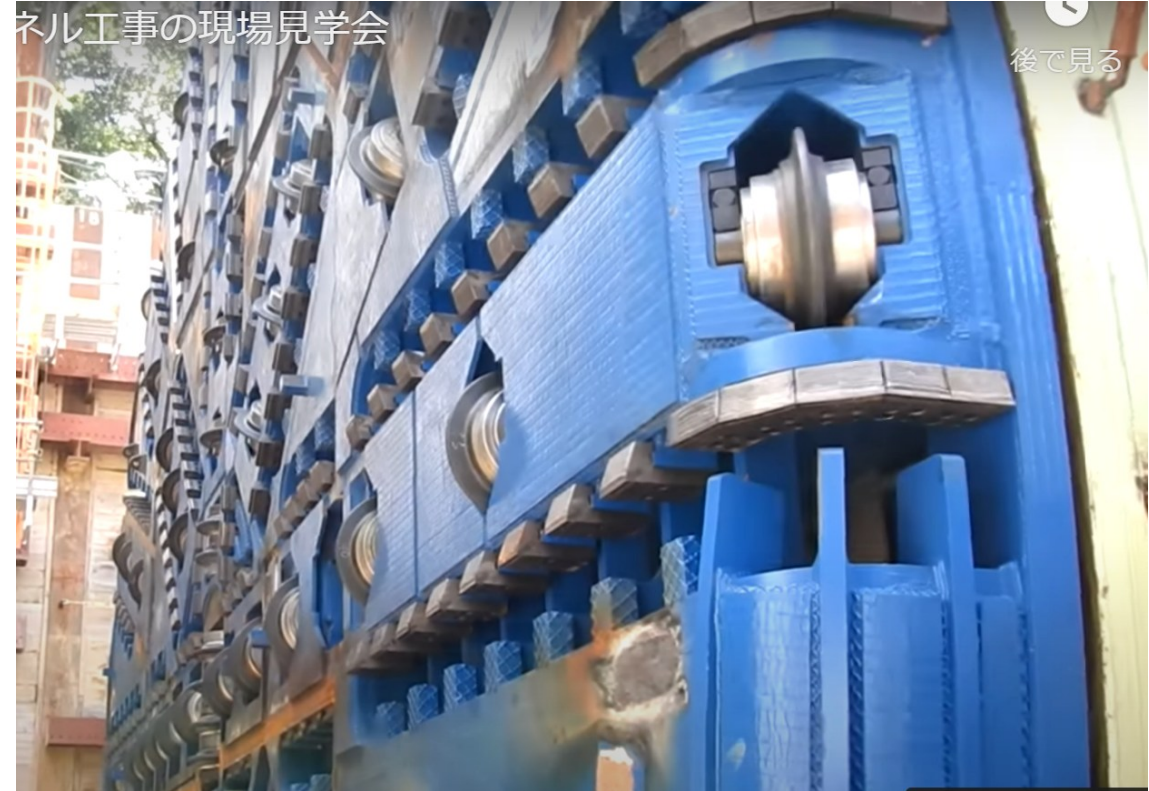
Forces acting on a disc cutter
(The actual loads during the excavation are extremely complicated.)



Safety is power!

HARDLOCK®

HARDLOCK Nuts are used to fix the mounting of the disc cutter M30x3.5 Class 10



Safety is power!

HARDLOCK®