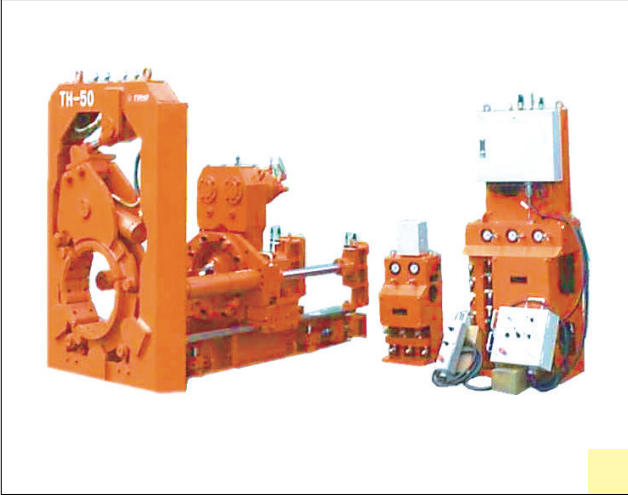# Micro-tunnelling Machine: TH SERIES
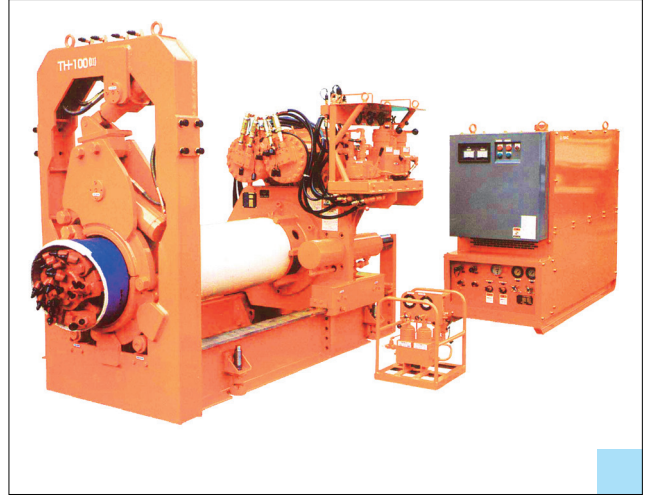
TH-50

TH-50

■ Able to propel L=1000mm steel pipe inside φ2000mm liner plate

TH-100

TH-100 / TH-200

■ Able to propel L=1000mm steel pipe inside φ2500mm liner plate

■ Power wrench

MODEL	TH-50	TH-100	TH-200
Thrust force (kN)	492.6 {50.3 tonf}	1000.0 {102.4 tonf}	2156 {220 tonf}
Pull out force (kN)	251.2 {25.6 tonf}	184.0 {18.8 tonf}	392 {40 tonf}
Steering control system	Twin cylinder oil hydraulic power wrench	Twin cylinder oil hydraulic power wrench	Triple cylinder oil hydraulic power wrench
Applicable pipe (mm)	Steel: 216.3~406.4	Steel: 216.3~508.0	Steel: 812.8 (800A) Hume pipe: 600
Power	Oil hydraulic unit: 30kW/4P	Oil hydraulic unit: 30kW/4P	Machine: 15kW/4P Oil-hydraulic unit: 15kW/4P
Dimensions (L x W x H) (mm)	Machine: 1863 x 1224 x 1650 Oil hyd. unit: 1800 x 700 x 1350	Machine: 2415 x 1385 x 2030 Oil hyd. unit: 1800 x 700 x 1350	Machine: 5740 x 2040 x 1700 Oil-hyd. unit: 1500 x 880 x 955
Mass (kg)	Machine: 2000 Oil hydraulic unit: 1250	Machine: 2800 Oil hydraulic unit: 1250	Machine: 8050 Oil-hydraulic unit: 900

Power wrench (type: 500) is optional equipment

Outline of O.K.MOLE METHOD

Established in 1981 as Micro Pipe Tunneling Method.
Still now "Key Machine" for underground tunneling as more than 1,500km result at JAPAN construction field.

1 **Underpinning**
   (Under pass for Roads, Buildings, Railways, River …etc)

2 **Drainage Pipes**

3 **Pipe-Roof Method**

4 **ST Water Collect and Drain Method**
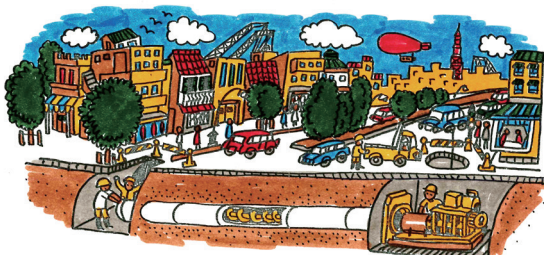
Tools

■ Easy for changing drilling bit

■ Wide range adaptation from Silt Soil to Hard Rock

■ Good performance at complicated land slide ground

Leading Pipe
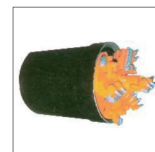

Head Shoe

Auger

Roller Bit (chip inserted)

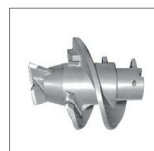DTH Hammer Bit (for hard rock)

Roller Bit, fixed (for soft rock)

En-larging Bit (for soft rock)

Auger Bit (for commom stratum)

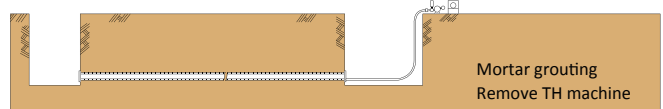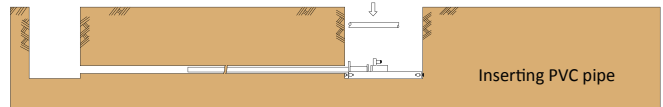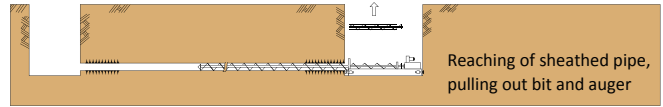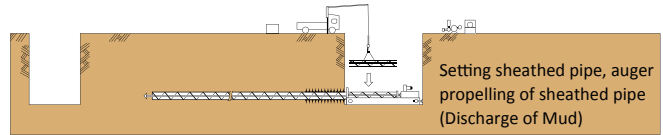Auger Bit (for gravel)
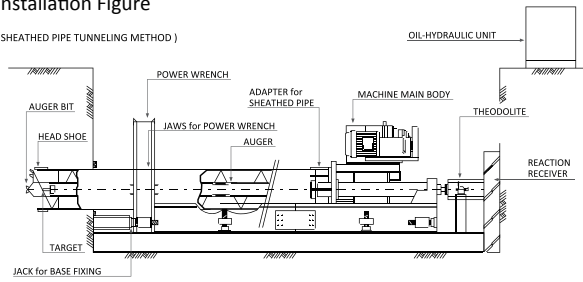

Auger Bit (for tough stratum)
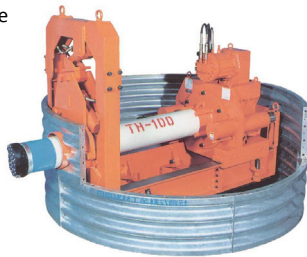

Auger Bit (for aquifer)

Sheathed Pipe Tunneling Method

Installation Figure

(SHEATHED PIPE TUNNELING METHOD)

Labels: OIL-HYDRAULIC UNIT, POWER WRENCH, ADAPTER for SHEATHED PIPE, MACHINE MAIN BODY, THEODOLITE, AUGER BIT, HEAD SHOE, JAWS for POWER WRENCH, AUGER, REACTION RECEIVER, TARGET, JACK for BASE FIXING

φ2500mm Liner plate

Setting sheathed pipe, auger propelling of sheathed pipe (Discharge of Mud)

Reaching of sheathed pipe, pulling out bit and auger

Inserting PVC pipe

Mortar grouting
Remove TH machine
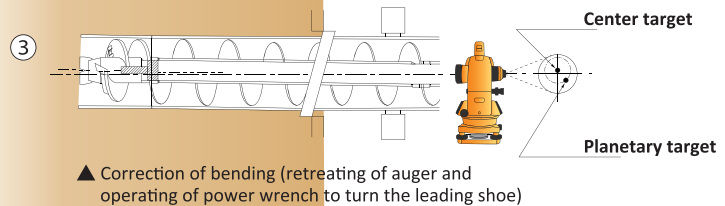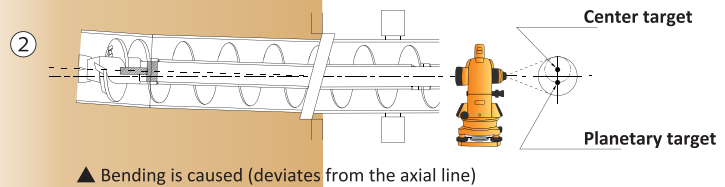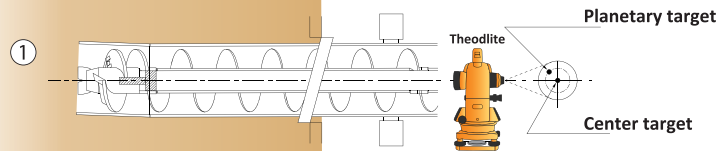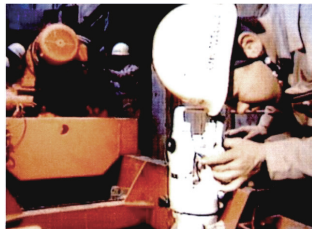
Measuring Mechanism

1. Measured by TV monitor all the time (2-point type luminous diode)

2. Controlled angle by Power Wrench (Using leading pipe shoe)

① Planetary target — Theodlite — Center target

▲ Sheathed pipe or leading pipe is propelling straightly on the axial line.

② Center target — Planetary target

▲ Bending is caused (deviates from the axial line)

③ Center target — Planetary target

▲ Correction of bending (retreating of auger and operating of power wrench to turn the leading shoe)
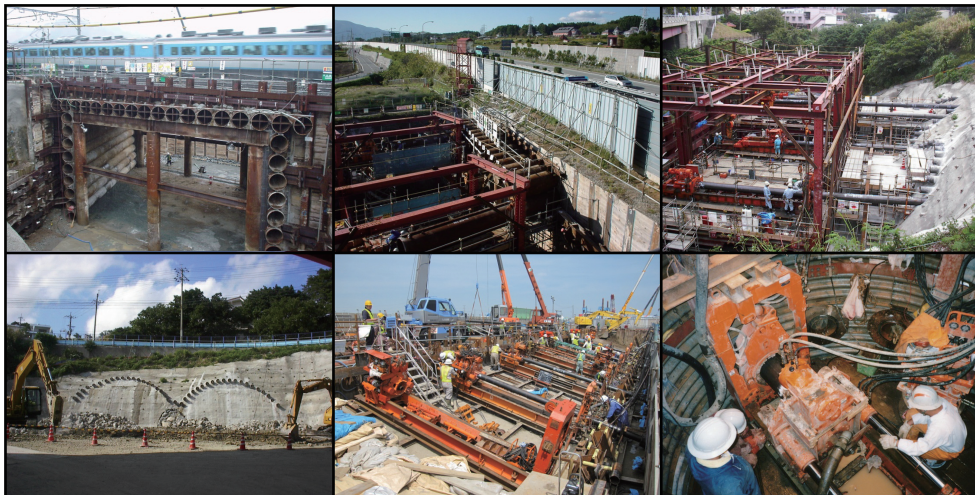
USED FOR

Micro-tunnelling

Pipe roofing

Water drainage

Sewerage