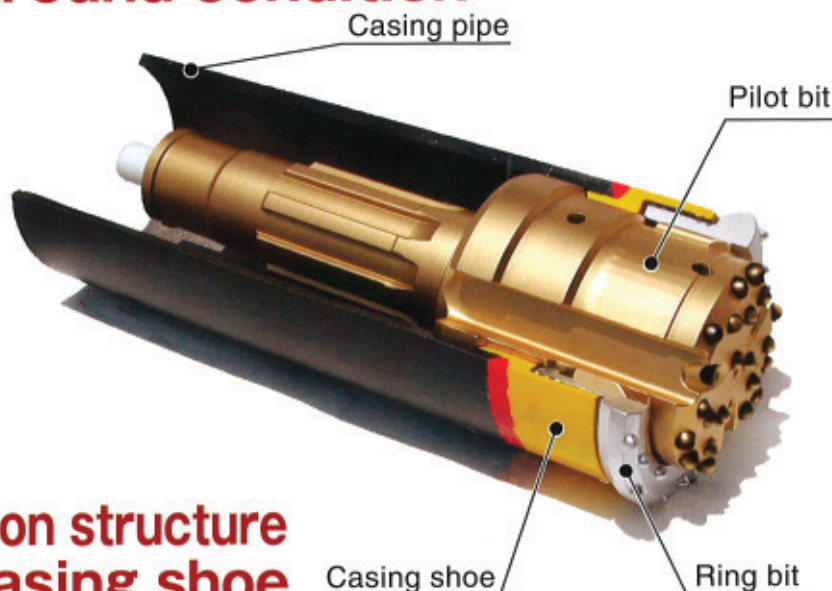


Structure and Mechanism

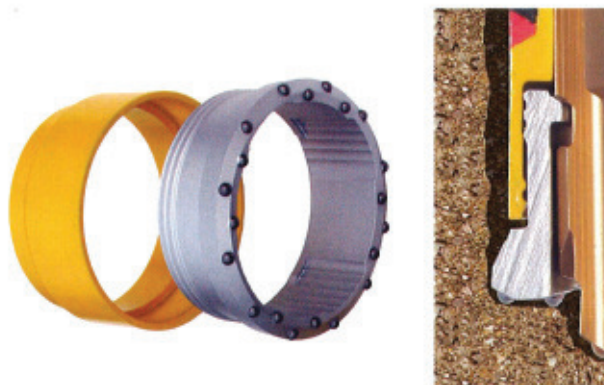
High speed and straight drilling in wide range ground condition

Ultra Maxbit is used for drilling with casing in collapsed soft ground. The Ultra Maxbit is also applicable for a wide range of ground conditions such as sand, gravel and boulders. The dual bit system also allows for vertical, horizontal, and even inclined drilling.



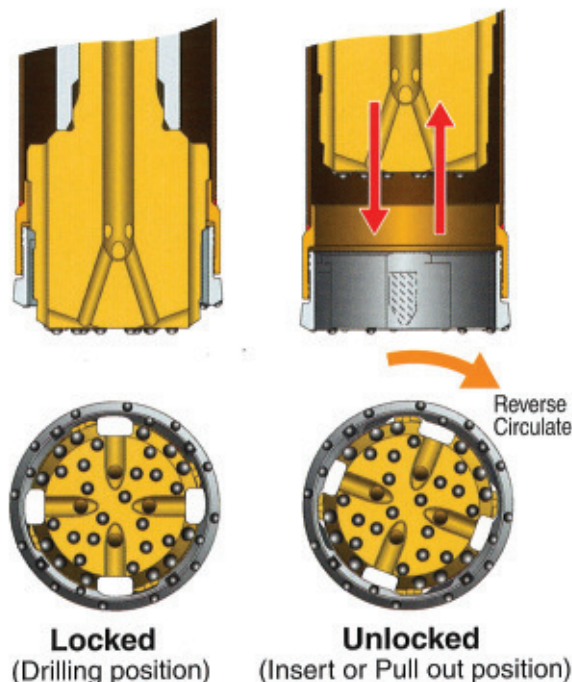
Wonderful connection structure of ring bit and casing shoe

Easy installation and a high safety system.



Easy Operation Lock System.

Full time easy and speedy set-up.



Great Model Line-up

You can choose from three different models for your purpose.



Single pass



Normal



Multi-use

Detail drilling system explanation

Three different drilling models for different purposes.

Single pass

Suitable for relatively soft ground and a short drilling length. Leave casing pipe in the ground.

[Usage] Used for piling construction.



Normal

Heavy duty single pass. Suitable for longer drilling length. Leave casing pipe in the ground.

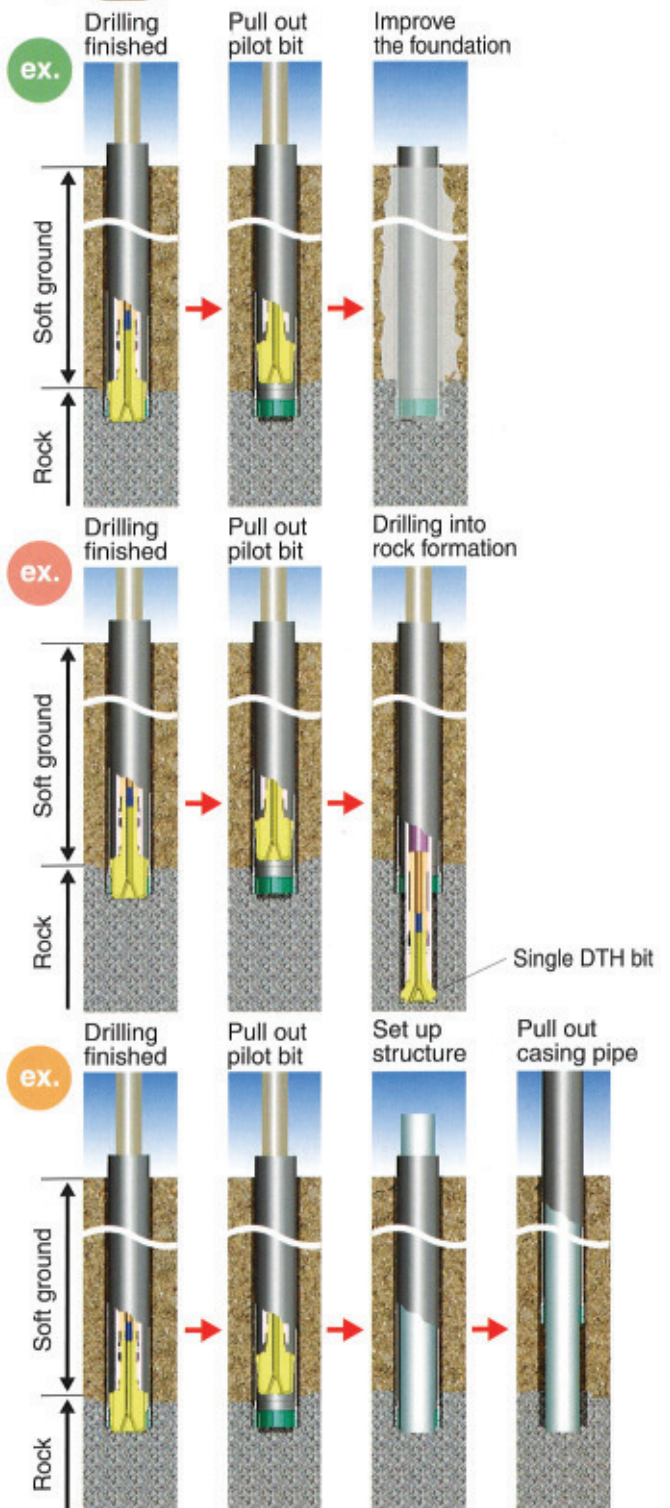
[Usage] Used in well drilling for research purposes.



Multi-Use

Casing pipe and ring bit can be used many times. Normal pulling resistance is reduced

[Usage] Anchor construction, and Foundation construction.



Usage Examples

Foundation construction

The casing drilling system is used for improvement in Foundation construction or in erecting H steel beams.



Micro pile construction

A great reputation for drilling efficiency in underpinning.



Well drilling construction

We recommend normal ring bit if casing is not to be collected. We recommend a multi use model if casing pipe is to be removed.



Pipe roof and Tunnel fore piling

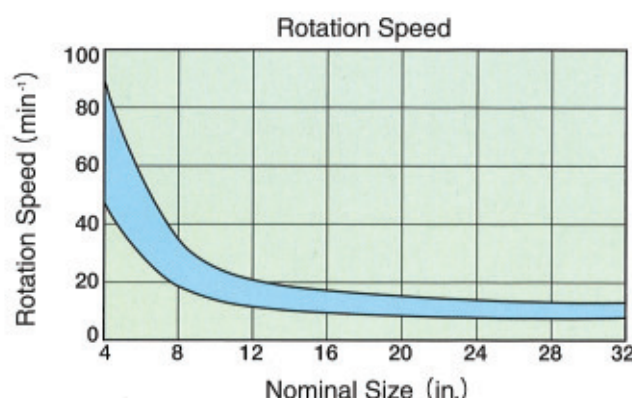
Efficient and stable casing drilling for inclined or horizontal drilling.



Others

Rotation Speed

Target external rotation speed to 15~20m/min. Please refer to the following figure for more details. Establish the parameters to achieve uniform drilling.



Setting Compressor

Pressure

- ◆ Set between 0.7 to 1.0MPa (100~150psi)
- ◆ Check the height of underground water when drilling through the layer.
(In 30m depth, please add 3kg/cm² to the supply air compressor.)
- ◆ Do not set over 1.5MPa (225psi)

Air Consumption

- ◆ Set the air consumption using the following equation.

$$Q = \frac{V(D^2 - d^2)}{1273500}$$

Q : Air consumption (m³/min)

D : Inside diameter of casing (mm)

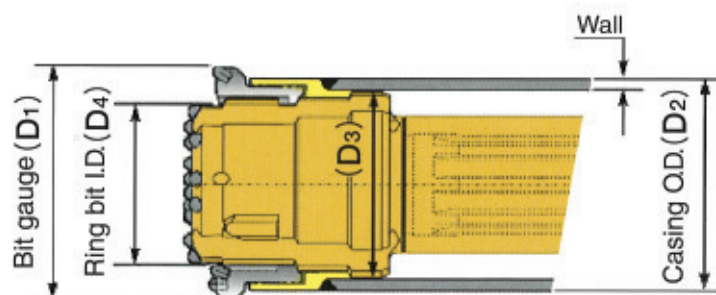
d : Outside diameter of jacket or hammer (mm)

V : Cutting speed 1,100~1,500 (m/min)

Recommended Air Consumption

Nominal size (in.)	Air Consumption	
	(m ³ /min)	(cfm)
4	4 ~ 15	140 ~ 530
8	19 ~ 26	670 ~ 920
12	33 ~ 45	1,170 ~ 1,590
16	42 ~ 57	1,480 ~ 2,010
20	59 ~ 80	2,080 ~ 2,830
24	72 ~ 98	2,540 ~ 3,460
28	81 ~ 111	2,860 ~ 3,920
32	90 ~ 122	3,180 ~ 4,310

List of measurements



タイプ	CASING		RING BIT-ID (D ₄)	RING BIT O.D. (D ₃)			PILOT BIT O.D. (D ₃)	HAMMER SIZE
	O.D. (D ₂)	WALL THICKNESS		Single pass	Normal	Multi use		
	mm	mm	mm	mm	mm	mm	mm	in.
072A	114.3	10.0	72	126	126	122	92.0	3
082A		6.0	82	126	126	122	100.5	
097A	139.8	10.0	97	150	150	147	117.5	4
105A		6.6	105	152	152	150	125.0	
110A	152.4	10.0	110	163	163	160	130.0	4
128A	165.2	6.0	128	178	178	175	149.0	5
118A	168.3	12.7	118	178	178	175	140.0	5
126A		10.0	126	178	178	175	146.0	
140A		5.5	140	188	188	185	155.5	
127A	177.8	12.7	127	188	188	186	149.0	5
143A	193.7	12.7	143	206	206	202	166.0	6
151A		11.0	151	206	206	202	170.0	
167A		6.0	167	209	209	205	180.0	
170A	219.1	12.7	170	231	231	227	191.0	6
192A		5.0	192	234	234	-	207.0	
219A	273.0	12.7	219	284	284	281	245.0	8
232A		8.0	232	284	284	-	255.0	
273A	323.9	12.7	273	338	338	333	296.0	10
281A		8.0	281	338	338	333	255.0	

Please let us know the system type, the casing size, the hammer size, and the ring bit model.

※Special models are available.



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