



MAXDRILL ROCK TOOLS CO.,LTD

Quarry Drilling Tools



Global drilling industry experts

www.maxdrillrocktools.com

About Us

Introduction

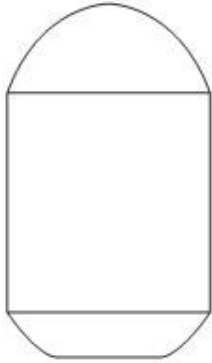
Since 2004, Maxdrill rock tools has been striving to manufacture high quality rock drilling tools and rock anchoring for globe customers in mineral exploration, underground mining in soft and hard rock, surface mining and construction, tunneling, slope stabilization industry and etc. Our aim is to work alongside our customer base to achieve cost savings, quality improvement.



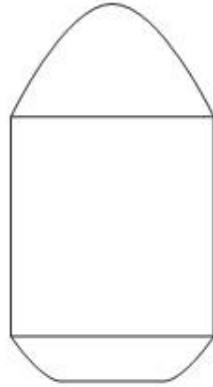
WORK SHOP SHOW



Spherical



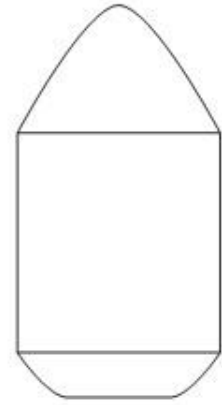
Ballistic



Semiballistic




Conical



● **Taper button Bits (brocas de botones cónicas conectadas)**




Taper button bit	Diameter (mm)	Flushing holes		Buttons(mm)		Weight (kg)	Part No.
		Gauge Qty*Dia	Front Qty*Dia	Gauge Qty*Dia	Front Qty*Dia		
	Button Bits - H22 (7/8"), Taper 11°						
	32	1x5	1x5	5x7	2x7	0.30	303222711
	34	1x5	1x5	5x8	2x7	0.31	303422711
	36	1x5	1x5	5x8	2x7	0.5	303622711
	38	1x5	1x5	5x8	2x7	0.5	303822711
	40	1x6	1x6	5x8	2x8	0.6	304022711
	41	1x6	1x6	5x8	2x8	0.6	304122711
42	1x6	1x6	5x8	2x8	0.61	304222711	

ATTENTION:

Chisel bit, Cross bit ,Button bit - Taper 4°46" ,6°, 7°, 11°, 12° / Conical , Ballistic , Spherical button are available .

● **Tapered Rod (Barras Conicas)**




Taper drill rod	Dimensions D					Weight (kg)	Part No.
	L (mm)	ft	in	Hex (mm)	D in		
	Tapered rods-H22×108mm,Taper 11°						
	610	2'	-	22	7/8"	2.10	10220611
	800	2'	7 1/2"	22	7/8"	2.70	10220811
	1220	4'	-	22	7/8"	4.50	10221211
	1830	6'	-	22	7/8"	6.20	10221811
	2000	6'	7"	22	7/8"	6.50	10222011
	2440	8'	-	22	7/8"	7.99	10222411

ATTENTION :

Hex Shank -H22×108mm,H25×108mm , Taper 4°46" , 6° , 7° , 11° , 12° - more effective length are available .

- **Integral Drill Steel (Barrenos Integrales)**



Integral Drill Steel	Dimensions D					Weight (kg)	Part No.
	L (mm)	ft	in	D (mm)	in		
	600	2'	7"	41	1 5/8"	2.40	00220641
	800	2'	7"	40	1 37/64"	4.00	00220840
	1200	3'	11"	38	1 1/2"	5.60	00221238
	1600	4'	3"	35	1 3/8"	7.30	00221635
	1800	5'	11"	34	1 11/32"	8.20	00221834
	2000	6'	7"	33	1 19/64"	9.20	00222033
	2400	8'	10"	32	1 1/4"	10.70	00222432
	3200	10'	6"	31	1 7/32"	13.90	00223231

Y20 Hand-Held rock drills

- Model Y20 Hand-held Rock Drill is intended for drilling downward and inclined blast holes in medium hard and hard rock ($f=8\sim18$)
- The rock drill is mainly used small quarries. Mines for constructing in mountain areas, water conservancy works in capital construction, also for secondary blasting in large mines and other projects.



Y24 Hand-Held rock drills

- Most suitable for drilling downward and inclined blast-holes in medium hard and hard rock with a hardness of $f=8\sim18$:
- An ideal tool for rock drilling operations in small open-pit quarries, mines, water conservancy projects and road building in hilly areas, etc, and for secondary blasting in large mines.



YT27 & YT28 Air-Leg Rock Drill

- YT27 and YT28 Air-leg Rock drills are new type of effective rock drilling machines, mainly used in mining and tunneling projects, also it can be used in railway, water conservancy and engineering earthworks. Most suitable for wet drilling horizontal and inclined blast-holes in medium hard and hard rock, when removed the air leg, it also can be installed on the drill jumbo to work. Most fit drilling horizontal and inclined blast holes in medium-hard rock with a hardness of $f=8\sim18$.



YN27 Hand-Held Rock Drill

YN27 is a hand hold rock drill, an internal combustion machine, available for drill, split, break, ram, shovel, and widely used in mining, construction, quarries and national defense construction, etc.



Specifications	Y20	Y24	YT27	YT28	YN27
Weight (Kg)	18	24	27	26	27
Total Length (mm)	605	605	668	661	746
Working Pressure (Mpa)	0.4	0.4~0.63	0.63	0.63	//
Impact Frequency (Hz)	$\cong 34$	≥ 27	≥ 27	≥ 37	//
Air Consumption (L/s)	$\cong 25$	≤ 53	≤ 83.3	≤ 81	//
Air Pipe Inner Dia. (mm)	16 or 19	19	25	25	//
Shank Size (hex. mm)	22x108	22x108	22x108	22x108	22x108
Bore Dia. (mm)	30~40	34~42	34~45	34~42	32~45

FAILURE ANALYSIS GUIDE

TAPERED ROD & INTEGRAL FAILURES

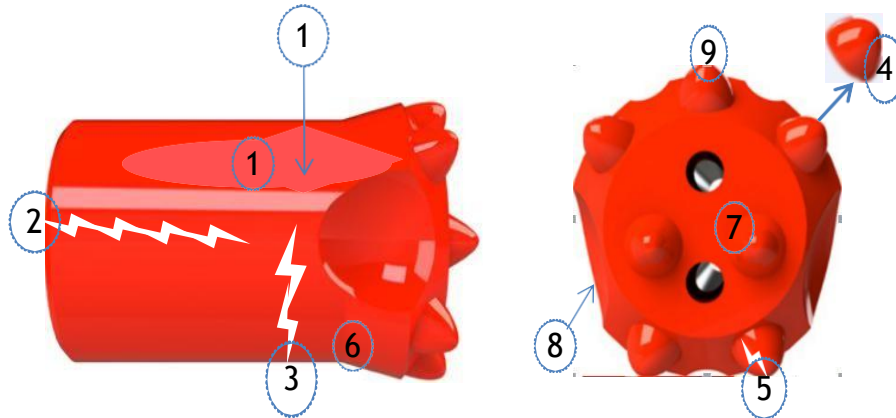


Failure	Probable cause	Recommended action
POSITION-1 STRIKING FACE DEFORMED	<ol style="list-style-type: none"> 1)Worn chuck bushing. 2)Damaged piston. 3)High operating pressures.. 4)Hardness heat treatment not to specification. 	<ol style="list-style-type: none"> 1)Replace worn bushing. 2)Replace piston. 3)Adjust to rock conditions. 4)Return for analysis.
POSITION-2 FAILURE IN THE SHANK END	<ol style="list-style-type: none"> 1)Worn chuck bushing. 2)Lack of or improper lubrication . 3)Excessive feed pressure. 4)Flushing hole in shank incorrectly manufactured. 	<ol style="list-style-type: none"> 1)Replace worn bushing. 2)Check that adequate volume of shank lubrication oil is reaching the shank. 3)Reduced feed pressure. 4)Return for analysis.
POSITION - 3	<ol style="list-style-type: none"> 1)High polish generated by chuck bushing. Lack of lubrication or excessive flushing water pressure. 	<ol style="list-style-type: none"> 1)Check operation pressures-lubrication, water and air pressure.
POSITION – 4 WEAR OR BREAKAGE AT BEGINNING OF COLLAR RADIUS	<ol style="list-style-type: none"> 1)Indentation of the collar by chuck bushing 2)Overheating due to poor lubrication . 3)Worn chuck bushing. 4)Incorrect radius in transition between collar and shank. 	<ol style="list-style-type: none"> 1)Replace worn bushing. Ensure that Sandvik parts are used. 2)Ensure adequate lubrication is applied to shank. 3)Replace worn bushing. 4)Return for analysis.
POSITION - 5 BROKEN IN THE BAR	<ol style="list-style-type: none"> 1) Normally associated with rod alignment 	<ol style="list-style-type: none"> 1) Keep rod alignment as close as possible.
POSITION - 6 SHANK WEAR OR COKE BOTTLE WEAR	<ol style="list-style-type: none"> 1) Worn chuck bushing 	<ol style="list-style-type: none"> 1) Replace worn bushing.

TAPERED ROD & INTEGRAL FAILURES

Failure	Probable cause	Recommended action
POSITION-7 BREAKAGE ON TAPER RADIUS	1)Worn bit socket. 2)Using a damaged bit with a ridge or lip within the socket. 3)Spinning	1)Change bit. 2)Change bit or ream out ridge. 3)Adjust feed force. Use Sandvik bits, do not "mix and match". Use bit with a symmetrical button design.
POSITION-8 BREAKAGE CLOSE TO BIT END	1)Drilling through the bottom of blocks. 2)Excessive gauge wear on gauge. 3)Broken from flushing hole.	1)Improve working practices. 2)Reduce service life. Resharpen bit when wear flats are greater than 1/3 of button diameter. 3)Return for analysis.
POSITION - 9 BREAKAGE AT BAR	1) Normally associated with rod alignment.	1) Keep rod alignment as close as possible.

BUTTON BITS FAILURES



Failure	Probable cause	Recommended action
POSITION-1 BODY WASH	<ol style="list-style-type: none"> 1) Excessive flushing volume 2) Drilling with excessive flushing volume can in some rock cause sand-blasting of the steel and too big protrusion and breakage of the buttons 	<ol style="list-style-type: none"> 1) Reduce flushing volume 2) Shorten grinding intervals
POSITION - 2 SPLIT SKIRT	<ol style="list-style-type: none"> 1) Taper mismatch or worn taper 2) Removing a bit with a hammer or miner's wrench 	<ol style="list-style-type: none"> 1) Use a taper gauge to check taper angle. Change to proper bits. 2) Utilise a proper knock-off block when removing bit.
POSITION - 3 SKIRT RING-OFF	<ol style="list-style-type: none"> 1) Excessive rotational speed applied to stuck bit 2) Bad collaring actives 3) Corrosion 4) Hammering on bit to break connection 5) Excessive back hammering 6) Too low rock resistance 7) Fatigue 	<ol style="list-style-type: none"> 1) Apply minimal amount of hammer pressure to free bit before increasing rotation speed. 2) Reduce percussion and feed when collaring. 3) Improve storage practices. Neutralise flushing agent. 4) Loosen bit with impact mechanism while seated firmly against the rock. Use little feed and no rotation, or use special wrench. 5) Use retrac bit. 6) Reduce impact power. 7) Normal failure with long life

BUTTON BITS FAILURES

Failure	Probable cause	Recommended action
POSITION - 4 LOST BUTTONS	<ol style="list-style-type: none"> 1)Free hammering 2)Inadequate feed pressure 3)Scaling with bit 4)Incorrect size correlation between button and button hole 	<ol style="list-style-type: none"> 1)Do not engage full percussions unless the bit is firmly seated againsts rock. Use reduced percussion when collaring on uneven surfaces. 2)Increase feed pressure. 3)Use proper scaling tool. 4)Return for analysis.
POSITION-5 SHATTERED BUTTONS	<ol style="list-style-type: none"> 1)Overdrilling 2)Drilling into metal 3)Forceful rotation in undersize holes, in broken material or through voids in the rock 4)Snake skin fatigue from extended drilling in non-abrasive material 	<p>1)90% of all button failures are the direct result of continuing to drill with excessive wear flats on the buttons! Remove and service bits once the wear flat on any button reaches 1/3 of the face button diameter.Restore the button profile and protrusion as recommended in the bit sharpening guide before continuing use.</p> <p>2)Even new buttons will break when encountering foreign material like stuck steel,bits, rebar or any other metals trapped in the rock.</p> <p>3)Check that bit diameters are smaller than the hole before attempting to clean or deepen a hole under these conditions.Do not force bits if jamming occurs.Retract until rotating freely then advance slowly with moderate rotation. If this fails, use a scrapped bit or grind down the gauge buttons of the bit to reduce the diameter sufficiently to pass or remove the obstruction.</p> <p>4)Over drilling in soft non-abrasive material leaves a shiny surface on the buttons. Under magnification, a network of microscopic cracks can typically be found.Regularly inspect the bits and re-profile the buttons to remove these cracks from the surface of the carbides once the skin on the carbides starts to show.</p>
POSITION - 6 BUTTONS SHEARED- OFF UNDER BODY LEVEL	<ol style="list-style-type: none"> 1)Excessive button protrusion through incorrect grinding or steel wash. Protrusion greater than 3/4 of the button diameter may not provide sufficient support to resist the tensile forces that the button may encounter. 2)Incorrect size correlation between button and button hole 	<ol style="list-style-type: none"> 1)Shorten grinding intervals. 2)Return for analysis.

BUTTON BITS FAILURES

Failure	Probable cause	Recommended action
POSITION 7 SPLIT BUTTON	1) Overdrilling	1) 90% of all button failures are the direct result of continuing to drill with excessive wear flats on the buttons! Remove and service bits once the wear flat on any button reaches 1/3 of the face button diameter. Restore the button profile and protrusion as recommended in the bit sharpening guide before continuing use.
POSITION - 8 BUTTON WEAR 1/3 DIAMETER	1) Normal button wear	1) Resharpen button and restore to original profile
POSITION – 9 SNAKE SKIN, SHINY- POLISHED APPEARANCE	1) When drilling in non-abrasive rock, microfractures develop in carbide	1) Resharpen bits frequently even if no visible wear is evident

Limited Warranty Policy

Limited Warranty

Kemaico &Maxdrill warrants that each product is made from the highest quality raw materials and free from manufacturer defects with regard to material used and workmanship for one year from the date of shipment. Kemaico & Maxdrill agrees to repairs, replace, or issue credit for future purchases, for any product found to be defective in material or workmanship, provided manufacturer is notified in writing of such defect or defects within the 6 months(180 days) warranty period. At no time will any cash be refund be remitted to resolve a warranty claim.

Kemaico shall also be relieved of responsibility of this warranty for failures caused by improper use, abuse, corrosion, erosion, negligent repaired and normal wear and tear.

Limitation of Liability

The total liability of Kemaico with respect to the sale of drilling consumables therefor, bases on contract, negligence, warranty, indemnity or otherwise shall not exceed the contract price.

Kemaico shall in no way be liable for any consequential or special damage which any person, firm, corporation, or other entity may suffer or claim to suffer or incur or claim to incur as a result of any defect in the product or in any correction or alteration thereof made or furnished by the manufacturer or others. "Consequential" or "Special" damages as used herein includes but in not limited to costs of transportation, lost sales, lost profits, lost income, increased overhead labor and material costs, and costs of manufacturing variances and operational inefficiencies.

Warranty Procedure

Warranty Claims Will Be Resolved When:

1. Detailed photographs, which must include the product serial number, date purchased, and the information required under item #2 which follows.
2. The distributor is to advise of the problem with the product including the footage the product drilled, air pressure, rock type, and drilling location. On bits the diameter over the gage row must be given along with the width across the flats on the gage row buttons. In addition the customer is requested to supply other pertinent information useful in analyzing the claim.
3. Kemaico USA reserves the right of final determination of any credit to be issued.

Products Not Warranted

1. The limited warranty policy applies to our standard line of products as shown in our most current product catalog.
2. Manufacturer does not warranty standard catalog items where defects are caused by improper use or where repairs, or modifications, are made to the product. In addition the manufacturer does not warranty defects caused by improper use, unsafe practices, lack of lubrication, or lack or improper maintenance on any standard catalog item.



No matter what kinds of soft rock, loose-medium rock, hard rock and any other special formations, just tell us what you need, our special tailored service is waiting for you upon your demand.



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