

Secoroc Rock Drilling Tools

# Tapered equipment



*Atlas Copco*



# The lowest cost per metre drilled is now lower than ever

**“The lowest cost per metre drilled” has long been synonymous with Secoroc products. Our Uppercut tapered equipment is no exception. In fact, we’re confident that you’ll be enjoying higher drilling productivity, straighter holes and a longer service life than ever before.**

## **These days, tapered is favoured**

Increased penetration rate, longer service life and lower drilling costs. With benefits like these, it’s easy to see why tapered equipment is grabbing market share from integrals – especially in mining applications and the dimensional stone industry. To us, it makes perfect sense. Tapered products first appeared on the scene in the 1960s. To say that quality has improved since those bygone days is an understatement. Today, good tapered equipment can readily handle the 5 kW brought to bear by modern pneumatic and hydraulic rock drills, while it’s also ready to cope with the 7-10 kW looming in the near future.

## **Bits with bite**

Our bit design and production processes are also in a state of constant refinement. The Secoroc Uppercut range comprises button and cross-type bits in an extensive selection of design configurations. Moreover, we’ve added two new models with an extra front button for improved hole straightness, higher penetration rate and a longer service life. These designs can be used in a variety of rock formations for maximum productivity. Furthermore, our range of ballistic button bits is in the process of being extended to meet ever more diverse demands.

## **Tough rods for a tough life**

Rods have a tough life, transferring the percussion energy from rock drill to bit and then into the rock. They’re also subjected to high bending stress, not to mention corrosive water in the flushing hole. These harsh facts have not only guided us in our selection of steel quality, manufacturing technique and heat treatment processes, but also in our decision to have a rolled-in stainless lining throughout the entire length of the flushing hole.



## **At your service**

Your tapered equipment will need care and maintenance to stay productive over its service life. Bits have to be reground at regular intervals to crush rock efficiently. Armed with a Secoroc Grind Matic grinder, your tools will stay on the cutting edge. Moreover, thanks to the global reach of Atlas Copco’s service network, know-how and support are never more than a phone call away.



# Secoroc Uppercut tapered rods are built to take the heat

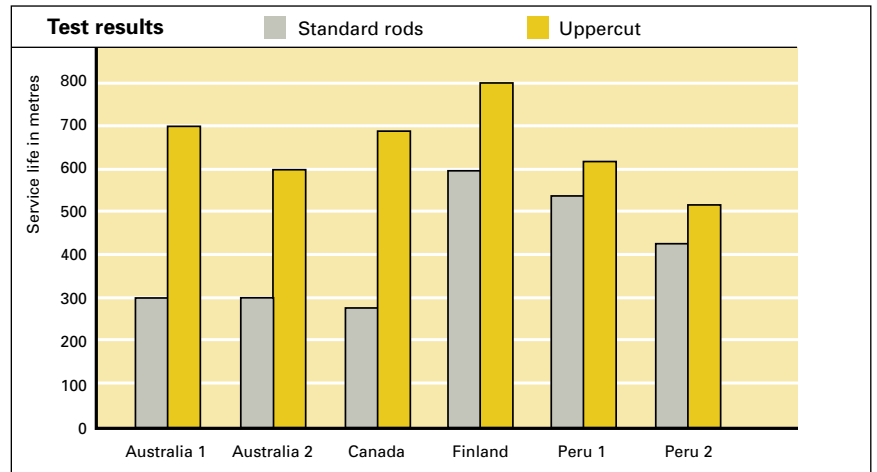
**Secoroc tapered rods are renowned for their superior fatigue strength and resistance to bending stress. With the launch of the Uppercut range, we've increased fatigue resistance still further. Thanks to a unique heat-treatment process, the internal stresses of the steel are released, while high durability is retained. The result is a tapered rod that's better able to handle the strain of 7-10 kW rock drills.**

What's more, these rods feature a rolled-in stainless steel lining throughout the length of the flushing hole. Even the drifted flushing hole at the shank end is lined in the same way.

The flushing hole is also protected by special anti-corrosion oil as standard – to prevent rod breakage. And for even greater protection, our Uppercut rods have surface hardened shank and tapered sections for high wear resistance on those parts exposed to severe stresses during drilling. All in all, drillers can look forward to a longer-lasting, and utterly dependable product.

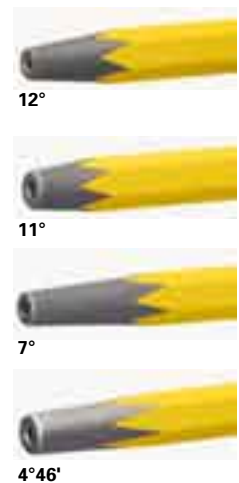
## A question of degrees

Different taper angles are used for different rock formations and rock drills. A wide taper angle is normally used when drilling with high impact



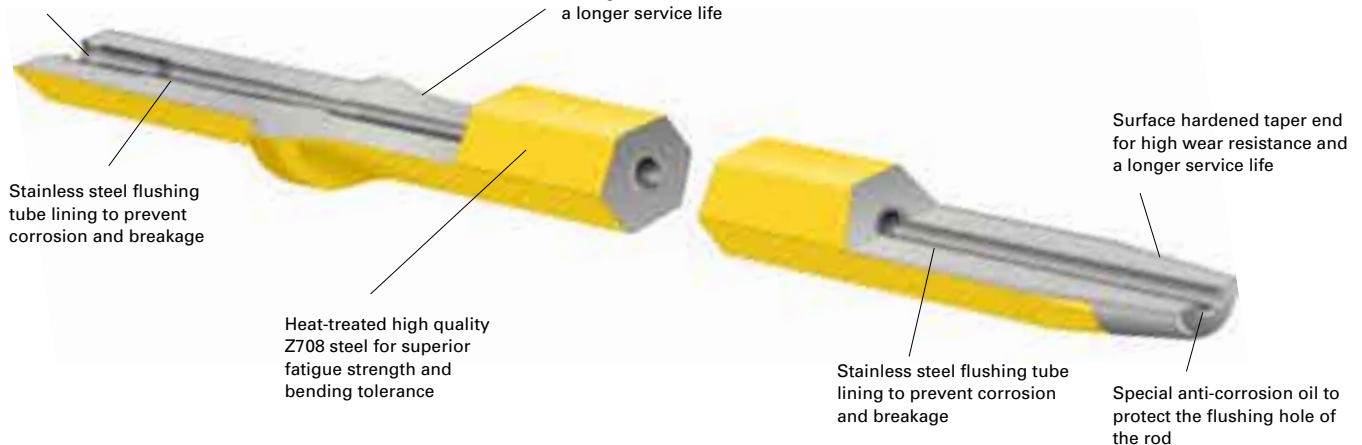
hydraulic rock drills in medium hard to hard and abrasive rock formations. Taper angles of 11° and 12° are common on modern rigs.

A narrow taper angle of 7° is used for low impact rock drills and softer rock formations. This angle can also be used if you have spinning problems when using 11° or 12° equipment. In addition, a 4°46' angle is ideal for soft rock when you're using pneumatic or hydraulic drill rigs – to prevent bits from spinning or becoming detached.

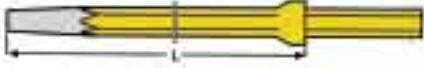
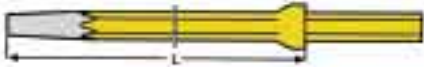
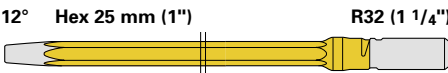
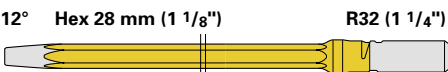


Drifted flushing hole with stainless steel lining at the shank end prevents breakage and increases service life

Surface hardened shank end for high wear resistance and a longer service life



# Tapered rods

Hexagonal shank end	Length (L)		Part No.	Weight approx. kg
	mm	foot		
 <p>22 mm (7/8") hex rod. 108 mm (4 1/4") shank.</p>	<b>4°46' taper</b>			
	800	2' 7 1/2"	578-0108	2.9
	1600	5' 3"	578-0116	5.4
	2000	6' 6 3/4"	578-0120	6.6
	2200	7' 8 3/8"	578-0122	7.1
	2400	7' 10"	578-0124	7.8
	3200	10' 6"	578-0132	10.2
	3500	11' 5 3/4"	578-0135	11.1
	4000	13' 1 3/8"	578-0140	12.7
	<b>7° taper</b>			
	400	1' 3 3/4"	573-0104	1.7
	800	2' 7 1/2"	573-0108	2.9
	1830	6'	573-0118	6.0
	2000	6' 6 3/4"	573-0120	6.5
	2435	8'	573-0124	7.8
	3050	10'	573-0131	9.9
	3200	10' 6"	573-0132	10.1
	4000	13' 1 3/8"	573-0140	12.7
	<b>11° taper</b>			
	610	2'	579-0106	2.4
	1220	4'	579-0112	4.2
	1525	5'	579-0115	5.0
	1830	6'	579-0118	6.1
	2000	6' 6 3/4"	579-0120	6.6
	2435	8'	579-0124	7.9
	2600	8' 6 5/16"	579-0126	8.4
	3200	10' 6"	579-0132	10.3
	3655	12'	579-0137	11.7
	4000	13' 1 3/8"	579-0140	12.8
	4800	15' 8 7/8"	579-0148	15.1
	5600	18' 4 5/16"	579-0156	17.5
	6400	21'	579-0164	20.0
	7200	23' 7 1/4"	579-0172	22.4
	8000	26' 2 3/4"	579-0180	24.9
	<b>12° taper</b>			
	610	2'	577-0106	2.3
	1220	4'	577-0112	4.2
	1525	5'	577-0115	5.1
	1830	6'	577-0118	6.1
	2000	6' 6 3/4"	577-0120	6.6
	2435	8'	577-0124	7.9
	3050	10'	577-0131	9.8
	3200	10' 6"	577-0132	10.2
	3655	12'	577-0137	11.7
	3965	13'	577-0140	12.8
4800	15' 8 7/8"	577-0148	15.2	
5600	18' 4 5/16"	577-0156	18.4	
6400	21'	577-0164	20.0	
7200	23' 7 1/4"	577-0172	22.0	
8000	26' 2 3/4"	577-0180	24.8	
 <p>25 mm (1") hex rod. 159 mm (6 1/4") shank. Seal part No. 9150-08.</p>	<b>12° taper</b>			
	3965	13'	580-1540	15.3
Threaded shank end*	Length (L)		Part No.	Weight approx. kg
	mm	foot		
 <p>12° Hex 25 mm (1") R32 (1 1/4") Rod section 28.5 mm</p>	2475	8' 1 3/8"	277-0324-03-91-C	9.7
	2780	9' 1 3/8"	277-0328-03-91-C	10.5
	3090	10' 1 9/16"	277-0331-03-C	12.0
	3400	11' 1 3/4"	277-0334-03-C	13.2
 <p>12° Hex 28 mm (1 1/8") R32 (1 1/4") Rod section 32 mm</p>	2000	6' 6 11/16"	280-0420-03-C	10.2
	2600	8' 6 5/16"	280-0426-03-C	13.5
	2800	9' 2 3/16"	280-0428-03-C	14.3

\* Fully carburized, no Uppercut treatment

# Tapered bits for underground and dimensional stone drilling

Our tapered button bits have been tried and tested in an array of different rock formations. That's why we're confident they'll exceed even your toughest demands.



**Model -12**  
This bit is used in medium to hard rock formations. One front flushing hole and two side flushing holes.



**Model -14**  
For soft to medium-hard rock. One side and two front flushing holes.



**Model -17**  
All-round drill bit for soft to medium-hard rock. Front and side flushing. Diameters up to 34 mm.



**Model -23**  
For soft and abrasive rock. Front and side flushing.



**Model -25**  
For soft to medium-hard rock. Flushing concentrated to the sides of the bit.



**Model -27**  
All-round drill bit for medium-hard to hard rock formations. Front and side flushing. Diameters from 35 mm.



**Model -33**  
All-round bit with six gauge buttons for medium hard to hard rock formations. Front and side flushing. Buttons inclined 15°.



**Model -34**  
All-round bit for soft to hard rock formations. Two front flushing holes for optimal speed and less hole deviation. Front buttons inclined 15°.



**Model -40**

All-round bit for medium-hard to hard rock. Side flushing only. Front buttons inclined 20°.



**Model -41, short skirt**

All-round bit for medium-hard to hard rock. Front and side flushing. Front buttons inclined 15°.



**Model -56**

All-round bit for medium-hard to hard rock formations. Front and side flushing.



**Cross-type insert bit**

For hard and abrasive rock. Front and side flushing.

# Tapered bits

Button bit	Diameter		Part No.	Length		No. of buttons	Buttons x button diameter		Gauge buttons angle°	Front buttons angle°	Flushing hole		Weight approx. kg
	mm	inch		mm	inch		Gauge	Centre			Side	Centre	
	<b>22 mm (7/8") rod. 4° 46' taper. Short skirt.</b>												
36	1 27/64	178-9036-14-67	50	2	7	5 x 7	2 x 7	35			1	2	0.30
43	1 11/16	178-9043-14-67	50	2	7	5 x 7	2 x 7	35			1	2	0.35
<b>22 mm (7/8") rod. 11° taper. Short skirt.</b>													
32	1 1/4	179-9032-12-67	50	2	5	3 x 8	2 x 7	35			2	1	0.20
32	1 1/4	179-9032-33-67	50	2	8	6 x 7	2 x 7	39	15		1	2	0.20
32	1 1/4	179-9032-56-67	50	2	6	4 x 7	2 x 7	35			1	1	0.15
33	1 19/64	179-9033-40-67	60	2 3/8	9	6 x 7	3 x 7	40	20		2	-	0.20
33	1 19/64	179-9033-56-67	50	2	6	4 x 7	2 x 7	40			1	1	0.20
34	1 11/32	179-9034-56-67	50	2	6	4 x 7	2 x 7	40			1	1	0.30
35	1 3/8	179-9035-41-67-L*	55	2 11/64	7	5 x 8	2 x 7	40	15		1	1	0.30
36	1 27/64	179-9036-12-67	50	2	5	3 x 8	2 x 8	40			2	1	0.30
36	1 27/64	179-9036-23-67	50	2	4	3 x 9	1 x 8	35			1	1	0.20
36	1 27/64	179-9036-27-67	50	2	7	5 x 8	2 x 7	35			1	1	0.30
36	1 27/64	179-9036-56-67	50	2	6	4 x 7	2 x 7	40			1	1	0.35
38	1 1/2	179-9038-23-67	50	2	4	3 x 9	1 x 9	40			1	1	0.35
38	1 1/2	179-9038-27-67	50	2	7	5 x 9	2 x 7	35			1	1	0.35
40	1 37/64	179-9040-12-67	50	2	5	3 x 9	2 x 9	40			2	1	0.35
40	1 37/64	179-9040-23-67	50	2	4	3 x 9	1 x 9	40			1	1	0.35
41	1 5/8	179-9041-27-67	50	2	7	5 x 9	2 x 7	35			2	1	0.35
<b>22 mm (7/8") rod. 12° taper. Short skirt.</b>													
27	1 1/16	177-9027-56-67	50	2	6	4 x 6	2 x 6	40	15		1	1	0.20
28	1 7/64	177-9028-23-67	50	2	4	3 x 7	1 x 7	20			1	1	0.20
29	1 9/64	177-9029-23-67	50	2	4	3 x 7	1 x 7	40			1	1	0.20
30	1 3/16	177-9030-23-67	50	2	4	3 x 7	1 x 7	40			1	1	0.20
30	1 3/16	177-9030-56-67	50	2	6	4 x 7	2 x 7	30			1	1	0.20
32	1 1/4	177-9032-14-67	50	2	7	5 x 7	2 x 7	35			1	2	0.20
32	1 1/4	177-9032-17-67	50	2	7	5 x 7	2 x 7	35			1	1	0.20
32	1 1/4	177-9032-34-67	55	2 11/64	8	6 x 7	2 x 7	39	15		1	1	0.22
33	1 19/64	177-9033-14-67	50	2	7	5 x 7	2 x 7	35			1	2	0.20
33	1 19/64	177-9033-17-67	50	2	7	5 x 7	2 x 7	35			1	1	0.20
33	1 14/64	177-9033-41-67	55	2 11/64	7	5 x 8	2 x 7	40	15		1	1	0.30
33	1 14/64	177-9033-41-67-L*	55	2 11/64	7	5 x 8	2 x 7	40	15		1	1	0.20
34	1 11/32	177-9034-17-67	50	2	7	5 x 8	2 x 7	35			1	1	0.22
35	1 3/8	177-9035-27-67	50	2	7	5 x 8	2 x 7	35			1	1	0.22
35	1 3/8	177-9035-56-67	50	2	6	4 x 7	2 x 7	35			1	1	0.22
36	1 27/64	177-9036-27-67	50	2	7	5 x 9	2 x 7	35			1	1	0.30
37	1 27/64	177-9037-27-67	50	2	7	5 x 9	2 x 7	40			1	1	0.30
38	1 1/2	177-9038-23-67	50	2	4	3 x 9	1 x 9	40			1	1	0.20
38	1 1/2	177-9038-27	50	2	7	5 x 9	2 x 7	35			1	1	0.25
38	1 1/2	177-9038-27-67	50	2	7	5 x 9	2 x 7	35			1	1	0.25
41	1 5/8	177-9041-27-67	50	2	7	5 x 9	2 x 7	35			1	1	0.35
<b>22 mm (7/8") rod. 7° taper. Long skirt.</b>													
32	1 1/4	173-5032-17	80	3 9/64	7	5 x 7	2 x 7	35			1	1	3.30
32	1 1/4	173-5032-17-67	80	3 9/64	7	5 x 7	2 x 7	35			1	1	0.30
33	1 14/64	173-5033-17-67	80	3 9/64	7	5 x 7	2 x 7	35			1	1	0.30
35	1 3/8	173-5035-27	80	3 9/64	7	5 x 8	2 x 7	35			1	1	0.33
35	1 3/8	173-5035-41	80	3 9/64	7	5 x 9	2 x 7	25	15		1	1	0.33
<b>22 mm (7/8") rod. 12° taper. Long skirt.</b>													
32	1 1/4	177-5032-17-67	71	2 3/4	7	5 x 7	2 x 7	35			1	1	0.30
33	1 19/64	177-5033-17-67	71	2 3/4	7	5 x 7	2 x 7	35			1	1	0.30
33	1 14/64	177-5033-34-67	71	2 3/4	8	6 x 7	2 x 7	40			1	2	0.30
33	1 19/64	177-5033-40-67	71	2 3/4	9	6 x 7	3 x 7	40	20		3	-	0.28
35	1 3/8	177-5035-34-67	71	2 3/4	8	6 x 8	2 x 7	39	15		1	2	0.30
<b>25 mm (1") rod. 12° taper. Long skirt.</b>													
35	1 3/8	180-5038-27-67	71	2 3/4	7	5 x 9	2 x 7	35			1	1	0.38
38	1 1/2	180-5041-27-67	71	2 3/4	7	5 x 9	2 x 7	35			1	1	0.38

\* Long head

# Tapered bits

Cross-type bit	Diameter		Part No.	Length		Flushing hole		Weight approx. kg
	mm	inch		mm	inch	Side	Centre	
	<b>22 mm (7/8") rod. 7° taper. Long skirt.</b>							
30	1 3/16	173-7030	71	2 3/4	2	1	0.20	
32	1 1/4	173-7032	71	2 3/4	2	1	0.30	
<b>22 mm (7/8") rod. 12° taper. Long skirt.</b>								
29	1 9/64	177-7029	71	2 3/4	2	1	0.20	
30	1 3/16	177-7030	71	2 3/4	2	1	0.30	
30	1 3/16	177-7030-10	71	2 3/4	2	1	0.30	
32	1 1/4	177-7032	71	2 3/4	2	1	0.30	
32	1 1/4	177-7032-10	71	2 3/4	2	1	0.30	
33	1 19/64	177-7033	71	2 3/4	2	1	0.30	
35	1 3/8	177-7035	71	2 3/4	2	1	0.35	
38	1 1/2	177-7038	71	2 3/4	2	1	0.40	
41	1 5/8	177-7041	71	2 3/4	2	1	0.50	



# Secoroc grinding equipment – for sharp minded drillers

## Stay sharp with Secoroc

To meet the challenging demands of sharp-minded drillers the world over, we offer Secoroc GrindMatic, a comprehensive range of efficient, ergonomically designed grinding machines for fixed installations and field operations. Check out our range and you'll find just the right machine for your site.

Tapered button bits with spherical or ballistic buttons are reground to a perfect finish in the Grind Matic BQ2 or Grind Matic Manual B, both equipped with diamond-coated grinding wheels.

Grind Matic HG, a complete manual grinding system consisting of pneumatic grinding machine with a specially designed chuck, Quick Snap, and matching grinding cups, is ideal for small-scale field operations.



Left: Grind Matic BQ2  
– for large-scale  
operations

Right: Grind Matic  
Manual B – for small  
to medium-size  
operations



Grind Matic HG –  
for smaller operations







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