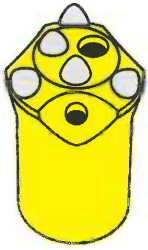


# Tapered equipment

## Drill bit design



### Model -12

For soft to medium-hard rock formations. One front and two side flushing holes.



### Model -14

For soft to medium-hard rock. Two front and one side flushing hole.



### Model -17

All-round drill bit for soft to medium-hard rock. Front and side flushing. Diametres up to 34 mm.



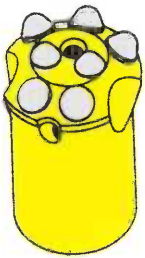
### Model -23

For soft and abrasive rock. Front and side flushing.



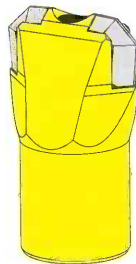
### Model -25

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



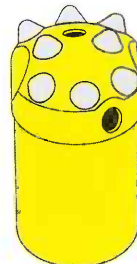
### Model -27

All-round drill bit for medium-hard to hard rock formations. Front and side flushing. Diametres from 35 mm.



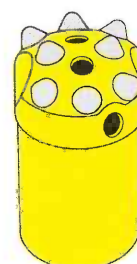
### Model -31 Directional bit

Special designed bit for block splitting in dimensional stone industry (DSI). Front flushing.



### Model -33

All-round bit with six gauge buttons for medium-hard to hard rock formations. Front and side flushing. Inclined front buttons.



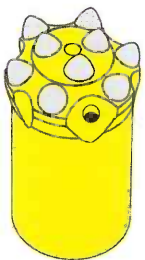
### Model -34

All-round bit for soft to hard rock formations. Two front flushing holes for optimal speed and less hole deviation. Inclined front buttons.



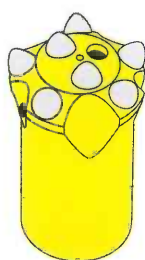
### Model -37

All-round drill bit for soft, medium and hard rock with excellent flushing capacity. Front and side flushing.



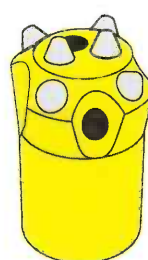
### Model -40

All-round bit for medium-hard to hard rock. Side flushing only. Inclined front buttons.



### Model -41, short skirt

All-round bit for medium-hard to hard rock. Front and side flushing. Inclined front buttons.



### Model -56

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



### Cross-type bit

For hard and abrasive rock. Front and side flushing.

**Please observe that all button bits are manufactured over-sized 0.5–1.0 mm, meaning that for example a 36 mm bit is at least 36.5 mm as new. This is done because of the fast initial wear on button bits.**

**When it is of importance, also consider that the hole is always 1–3 mm bigger than the bit dimension depending on rock formation.**

# Tapered equipment

## Drill bit

Diameter		Product No.	Product code	Length		No. of buttons	Buttons x button diameter (mm)		Gauge buttons angle°	Front buttons angle°	Flushing hole		Weight approx. kg
mm	inch			mm	inch		Gauge	Centre			Side	Centre	
<b>BUTTON BIT - For 22 mm (7/8") rod. 4°46' taper. Short skirt.</b>													
36	1 <sup>13</sup> / <sub>32</sub>	90510678	178-9036-14-67,39-20	50	1 <sup>31</sup> / <sub>32</sub>	7	5x7	2x7	35°	-	1	2	0.3
38	1 <sup>1</sup> / <sub>2</sub>	90512880	178-9038-14-67,39-20	50	1 <sup>31</sup> / <sub>32</sub>	7	5x7	2x7	35°	-	1	2	0.3
<b>BUTTON BIT - For 22 mm (7/8") rod. 11° taper. Short skirt.</b>													
32	1 <sup>1</sup> / <sub>4</sub>	90510100	179-9032-12-67,50-20	50	1 <sup>31</sup> / <sub>32</sub>	5	3x8	2x7	35°	-	2	1	0.3
32	1 <sup>1</sup> / <sub>4</sub>	90512816	179-9032-33-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	8	6x7	2x7	39°	15°	1	1	0.3
32	1 <sup>1</sup> / <sub>4</sub>	90510189	179-9032-56-67,50-20	50	1 <sup>31</sup> / <sub>32</sub>	6	4x7	2x7	35°	-	1	1	0.3
33	1 <sup>5</sup> / <sub>16</sub>	90512712	179-9033-40-67,52-20	50	1 <sup>31</sup> / <sub>32</sub>	9	6x7	3x7	40°	20°	2	-	0.3
33	1 <sup>5</sup> / <sub>16</sub>	90512801	179-9033-56-67,50-20	50	1 <sup>31</sup> / <sub>32</sub>	6	4x7	2x7	40°	-	1	1	0.2
34	1 <sup>11</sup> / <sub>32</sub>	90512881	179-9034-40-67,39-20	50	1 <sup>31</sup> / <sub>32</sub>	9	6x7	3x7	40°	20°	2	-	0.3
35	1 <sup>3</sup> / <sub>8</sub>	90512818	179-9035-41-67-L,39-20*	55	2 <sup>5</sup> / <sub>32</sub>	7	5x8	2x7	40°	15°	1	1	0.3
36	1 <sup>13</sup> / <sub>32</sub>	90509963	179-9036-12-67,39-20	50	1 <sup>31</sup> / <sub>32</sub>	5	3x8	2x8	40°	-	2	1	0.3
36	1 <sup>13</sup> / <sub>32</sub>	90510127	179-9036-23-67,50-20	50	1 <sup>31</sup> / <sub>32</sub>	4	3x9	1x8	35°	-	1	1	0.4
36	1 <sup>13</sup> / <sub>32</sub>	90509968	179-9036-27-67,39-20	50	1 <sup>31</sup> / <sub>32</sub>	7	5x8	2x7	35°	-	1	1	0.3
36	1 <sup>13</sup> / <sub>32</sub>	90510192	179-9036-56-67,50-20	50	1 <sup>31</sup> / <sub>32</sub>	6	4x7	2x7	40°	-	1	1	0.4
38	1 <sup>1</sup> / <sub>2</sub>	90510669	179-9038-23-67,39-20	50	1 <sup>31</sup> / <sub>32</sub>	4	3x9	1x9	40°	-	1	1	0.3
38	1 <sup>1</sup> / <sub>2</sub>	90509966	179-9038-27-67,39-20	50	1 <sup>31</sup> / <sub>32</sub>	7	5x9	2x7	35°	-	1	1	0.3
40	1 <sup>9</sup> / <sub>16</sub>	90512668	179-9040-23-67,39-20	50	1 <sup>31</sup> / <sub>32</sub>	4	3x9	1x9	40°	-	1	1	0.4
41	1 <sup>5</sup> / <sub>8</sub>	90509962	179-9041-27-67,39-20	50	1 <sup>31</sup> / <sub>32</sub>	7	5x9	2x7	35°	-	2	1	0.3
<b>BUTTON BIT - For 22 mm (7/8") rod. 12° taper. Short skirt.</b>													
27	1 <sup>1</sup> / <sub>16</sub>	90512837	177-9027-56-67,39-20	50	1 <sup>31</sup> / <sub>32</sub>	6	4x6	2x6	40°	15°	1	1	0.2
28	1 <sup>1</sup> / <sub>8</sub>	90510695	177-9028-23-67,39-20	50	1 <sup>31</sup> / <sub>32</sub>	4	3x7	1x7	20°	-	1	1	0.1
30	1 <sup>3</sup> / <sub>16</sub>	90509862	177-9030-23-67,39-20	50	1 <sup>31</sup> / <sub>32</sub>	4	3x7	1x7	40°	-	1	1	0.2
30	1 <sup>3</sup> / <sub>16</sub>	90510181	177-9030-56-67,51-20	50	1 <sup>31</sup> / <sub>32</sub>	6	4x7	2x7	30°	-	1	1	0.2
32	1 <sup>1</sup> / <sub>4</sub>	90509650	177-9032-14-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	7	5x7	2x7	35°	-	1	2	0.3
32	1 <sup>1</sup> / <sub>4</sub>	90509841	177-9032-17-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	7	5x7	2x7	35°	-	1	1	0.2
32	1 <sup>1</sup> / <sub>4</sub>	90512817	177-9032-34-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	8	6x7	2x7	39°	15°	1	2	0.3
33	1 <sup>5</sup> / <sub>16</sub>	90512648	177-9033-14-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	7	5x7	2x7	35°	-	1	2	0.2
33	1 <sup>5</sup> / <sub>16</sub>	90509842	177-9033-17-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	7	5x7	2x7	35°	-	1	1	0.2
33	1 <sup>5</sup> / <sub>16</sub>	90513909	177-9033-41-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	7	5x8	2x7	40°	15°	1	1	0.2
34	1 <sup>11</sup> / <sub>32</sub>	90509956	177-9034-27-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	7	5x8	2x7	35°	-	1	1	0.2
35	1 <sup>3</sup> / <sub>8</sub>	90509535	177-9035-27-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	7	5x9	2x7	35°	-	1	1	0.2
35	1 <sup>3</sup> / <sub>8</sub>	90510184	177-9035-56-67,50-20	55	2 <sup>5</sup> / <sub>32</sub>	6	4x7	2x7	35°	-	1	1	0.2
36	1 <sup>13</sup> / <sub>32</sub>	90512721	177-9036-27-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	7	5x9	2x7	35°	-	1	1	0.3
37	1 <sup>15</sup> / <sub>32</sub>	90512710	177-9037-27-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	7	5x9	2x7	40°	-	1	1	0.3
38	1 <sup>1</sup> / <sub>2</sub>	90510676	177-9038-23-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	4	3x9	1x9	40°	-	1	1	0.2
38	1 <sup>1</sup> / <sub>2</sub>	90509554	177-9038-27,39-20	55	2 <sup>5</sup> / <sub>32</sub>	7	5x9	2x7	35°	-	1	1	0.2
38	1 <sup>1</sup> / <sub>2</sub>	90512669	177-9038-27-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	7	5x9	2x7	35°	-	1	1	0.2
41	1 <sup>5</sup> / <sub>8</sub>	90512318	177-9041-27-67,39-20	55	2 <sup>5</sup> / <sub>32</sub>	7	5x9	2x7	35°	-	1	1	0.3

-67 = Ballistic buttons.

\* Long bit head.

# Tapered equipment

## Drill bit

Diameter		Product No.	Product code	Length		No. of buttons	Buttons × button diameter (mm)		Gauge buttons angle°	Front buttons angle°	Flushing hole		Weight approx. kg
mm	inch			mm	inch		Gauge	Centre			Side	Centre	
<b>BUTTON BIT - For 22 mm (7/8") rod. 7° taper. Long skirt.</b>													
30	1 3/16	90512883	173-5030-17-67,39-20	80	3 5/32	7	5×6	2×7	35°	–	2	1	0.2
32	1 1/4	90512799	173-5032-17-67,39-20	80	3 5/32	7	5×7	2×7	35°	–	1	1	0.3
33	1 5/16	90512800	173-5033-17-67,39-20	80	3 5/32	7	5×7	2×7	35°	–	1	1	0.3
33	1 5/16	90515546	173-5033-34-67,39-20	80	3 5/32	8	6×7	2×7	40°	–	1	2	0.3
33	1 5/16	90515547	173-5033-40-67,39-20	80	3 5/32	8	6×7	3×7	40°	20°	3	–	0.4
35	1 3/8	90512663	173-5035-27,39-20	80	3 5/32	7	5×8	2×7	35°	–	1	1	0.4
35	1 3/8	90513908	173-5035-41,39-20	80	3 5/32	7	5×9	2×7	25°	15°	1	1	0.4
<b>BUTTON BIT - For 22 mm (7/8") rod. 12° taper. Long skirt.</b>													
32	1 1/4	90510640	177-5032-17-67,39-20	71	2 25/32	7	5×7	2×7	35°	–	1	1	0.3
33	1 5/16	90512297	177-5033-17-67,39-20	71	2 25/32	7	5×7	2×7	35°	–	1	1	0.3
33	1 5/16	90512825	177-5033-34-67,39-20	71	2 25/32	8	6×7	2×7	40°	–	1	2	0.3
33	1 5/16	90512707	177-5033-40-67,39-20	71	2 25/32	9	6×7	3×7	40°	20°	3	–	0.3
35	1 3/8	90512826	177-5035-34-67,39-20	71	2 25/32	8	6×8	2×7	39°	15°	1	2	0.3
<b>BUTTON BIT - For 25 mm (1") rod. 7° taper. Long skirt.</b>													
41	1 5/8	90512830	194-5041-27,39-20	71	2 25/32	7	5×9	2×8	40°	–	1	1	0.4
41	1 5/8	90512831	194-5041-27-67,39-20	71	2 25/32	7	5×9	2×8	40°	–	1	1	0.4
41	1 5/8	90512984	194-5041-37-67,39-20	71	2 25/32	9	6×9	3×7	40°	–	1	3	0.4
43	1 11/16	90512985	194-5043-37-67,39-20	71	2 25/32	9	6×9	3×7	40°	–	1	3	0.5
<b>BUTTON BIT BIT - For 25 mm (1") rod. 12° taper. Long skirt.</b>													
35	1 3/8	90512064	180-5038-27-67,39-20	71	2 25/32	7	5×9	2×7	40°	–	1	1	0.4
38	1 1/2	90512486	180-5041-27-67,39-20	71	2 25/32	7	5×9	2×7	40°	–	1	1	0.4
<b>CROSS-TYPE BIT - For 22 mm (7/8") rod. 7° taper. Long skirt.</b>													
30	1 3/16	90504779	173-7030,01-17	71	2 25/32	–	–	–	–	–	2	1	0.2
32	1 1/4	90509839	173-7032,01-17	71	2 25/32	–	–	–	–	–	2	1	0.3
<b>CROSS-TYPE BIT - For 22 mm (7/8") rod. 12° taper. Long skirt.</b>													
29	1 5/32	90503889	177-7029,01-17	71	2 25/32	–	–	–	–	–	2	1	0.2
30	1 3/16	90510816	177-7030-10,01-17	71	2 25/32	–	–	–	–	–	2	1	0.2
32	1 1/4	90503024	177-7032,01-17	71	2 25/32	–	–	–	–	–	2	1	0.3
32	1 1/4	90512643	177-7032-10,01-17	71	2 25/32	–	–	–	–	–	2	1	0.3
33	1 5/16	90509505	177-7033,01-17	71	2 25/32	–	–	–	–	–	2	1	0.3
35	1 3/8	90500739	177-7035,01-17	71	2 25/32	–	–	–	–	–	2	1	0.3
38	1 1/2	90500740	177-7038,01-17	71	2 25/32	–	–	–	–	–	2	1	0.4
41	1 5/8	90503890	177-7041,01-17	71	2 25/32	–	–	–	–	–	2	1	0.5

-67 = Ballistic buttons.

# Tapered equipment

## Drill rod



### 22 mm (7/8") hex. rod, 108 mm (4 1/4") shank

Length (L)		Product No.	Product code	Weight approx. kg
mm	foot/inch			
<b>4°46' taper</b>				
800	2'7 1/2"	90510626	578-0108,11	2.9
1600	5'3"	90510627	578-0116,11	5.4
2000	6'6 3/4"	90510628	578-0120,11	6.6
2200	7'2 5/8"	90505240	578-0122,11	7.2
2400	7'10 1/2"	90510629	578-0124,11	7.8
3200	10'6"	90510630	578-0132,11	10.2
3500	11'5 3/4"	90513835	578-0135,11	11.1
4000	13'1 1/2"	90510631	578-0140,11	12.7
4800	15'9"	90515489	578-0148,11	15.1
5600	18'4 1/2"	90515425	578-0156,11	17.7
6400	21'	90515490	578-0164,11	20.1
<b>7° taper</b>				
400	1'3 3/4"	90513772	573-0104,11	1.7
800	2'7 1/2"	90505067	573-0108,11	2.7
1830	6'	90504827	573-0118,11	6.0
2000	6'6 3/4"	90504756	573-0120,11	6.7
2435	8'	90504828	573-0124,11	7.7
3050	10'	90504829	573-0131,11	9.8
3200	10'6"	90504831	573-0132,11	10.1
4000	13'1 1/2"	90513773	573-0140,11	12.7
4800	15'9"	90515495	573-0148,11	15.1
5600	18'4 1/2"	90514493	573-0156,11	17.1
6400	21'	90514494	573-0164,11	19.5
7200	23'7 1/2"	90514495	573-0172,11	22.0
8000	26'3"	90514496	573-0180,11	24.2

### 25 mm (1") hex. rod, 108 mm (4 1/4") shank

Seal Product No. 90000378 / Seal Product code 9150-08.

Length (L)		Product No.	Product code	Weight approx. kg
mm	foot/inch			
<b>7° taper</b>				
1500	4'11"	90514427	594-1115,11	6.5
1600	5'3"	90515264	594-1116,11	6.9
1800	5'10 7/8"	90509502	594-1118,11	8.0
2200	7'2 5/8"	90514319	594-1122,11	9.3
2400	7'10 1/2"	90514718	594-1124,11	10.1
2600	8'6 5/8"	90514756	594-1126,11	10.9
3900	12'9 1/2"	90515304	594-1139,11	16.1

### 22 mm (7/8") hex. rod, 108 mm (4 1/4") shank

Length (L)		Product No.	Product code	Weight approx. kg
mm	foot/inch			
<b>11° taper</b>				
610	2'	90510204	579-0106,11	2.4
1220	4'	90504865	579-0112,11	4.2
1525	5'	90504867	579-0115,11	5.3
1830	6'	90504868	579-0118,11	5.9
2000	6'6 3/4"	90504869	579-0120,11	6.6
2435	8'	90504871	579-0124,11	7.7
2600	8'6 3/8"	90504872	579-0126,11	8.2
3200	10'6"	90510202	579-0132,11	10.3
3655	11'11 1/8"	90510203	579-0137,11	11.7
4000	13'1 1/2"	90510245	579-0140,11	12.8
4800	15'9"	90510817	579-0148,11	15.2
5600	18'4 1/2"	90510894	579-0156,11	17.6
6400	21'	90510895	579-0164,11	20.0
7200	23'7 1/2"	90510896	579-0172,11	22.4
8000	26'3"	90510897	579-0180,11	24.9
<b>12° taper</b>				
610	2'	90504832	577-0106,11	2.2
1220	4'	90504835	577-0112,11	4.2
1525	5'	90504837	577-0115,11	4.9
1830	6'	90001398	577-0118,11	6.1
2000	6'6 3/4"	90504839	577-0120,11	6.8
2435	8'	90504841	577-0124,11	7.6
3050	10'	90504843	577-0131,11	9.9
3200	10'6"	90504844	577-0132,11	9.9
3655	11'11 1/8"	90504845	577-0137,11	11.3
3965	13'	90504846	577-0140,11	12.2
4800	15'9"	90504847	577-0148,11	14.7
5600	18'4 1/2"	90504848	577-0156,11	17.1
6400	21'	90504849	577-0164,11	19.5
7200	23'7 1/2"	90504850	577-0172,11	22.0
8000	26'3"	90504851	577-0180,11	24.2

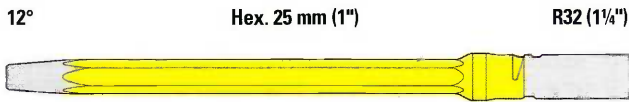
### 25 mm (1") hex. rod, 159 mm (6 1/4") shank

Seal Product No. 90000378 / Seal Product code 9150-08.

Length (L)		Product No.	Product code	Weight approx. kg
mm	foot/inch			
<b>12° taper</b>				
2400	7'10 1/2"	90510520	580-1524,11	10.4
3965	13'	90504876	580-1540,11	15.3

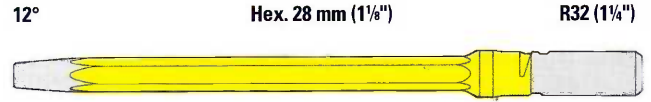
# Tapered equipment

## Drill rod with threaded shank end



Fully carburized. Rod section 28.5 mm.

Length (L)		Product No.	Product code	Weight approx. kg
mm	foot/inch			
2780	9'1½"	90505274	277-0328-03-91-C,02	10.7



Fully carburized. Rod section 32 mm.

Length (L)		Product No.	Product code	Weight approx. kg
mm	foot/inch			
2600	8'6⅞"	90510248	280-0426-03-C,02	13.5

## Directional drilling for dimension stone splitting

### Directional drill rod

22 mm (7/8") hex rod.

108 mm (4¼") round shank. No rotation.

No reaming for flushing tube.



Length (L)		Product No.	Product code	Weight approx. kg
mm	foot/inch			
<b>12° taper</b>				
800	2'7½"	90514184	579-4508-07,11	2.9
1600	5'3"	90514188	579-4516-07,11	5.3
2435	8'	90514190	579-4524-07,11	7.8
3200	10'6"	90514191	579-4532-07,11	10.1
4800	15'9"	90514193	579-4548-07,11	15.0
5600	18'4½"	90514194	579-4556-07,11	17.5
6400	21'	90514195	579-4564-07,11	19.9
8000	26'3"	90514197	579-4580-07,11	24.7

### Directional drill bit

Diameter		Product No.	Product code	Length		No. of buttons	Buttons × button diameter (mm)		Gauge buttons angle°	Front buttons angle°	Flushing hole		Weight approx. kg
mm	inch			mm	inch		Gauge	Centre			Side	Centre	
<b>BUTTON BIT - For 22 mm (7/8") rod. 11° taper. Short skirt. Directional bit.</b>													
38	1½	90512917	179-9038-31,22-03	70	2¾	Pilot hole Ø 32 mm				-	1	0.2	
40	1⅝	90512918	179-9040-31,22-03	70	2¾	Pilot hole Ø 33/34 mm				-	1	0.2	