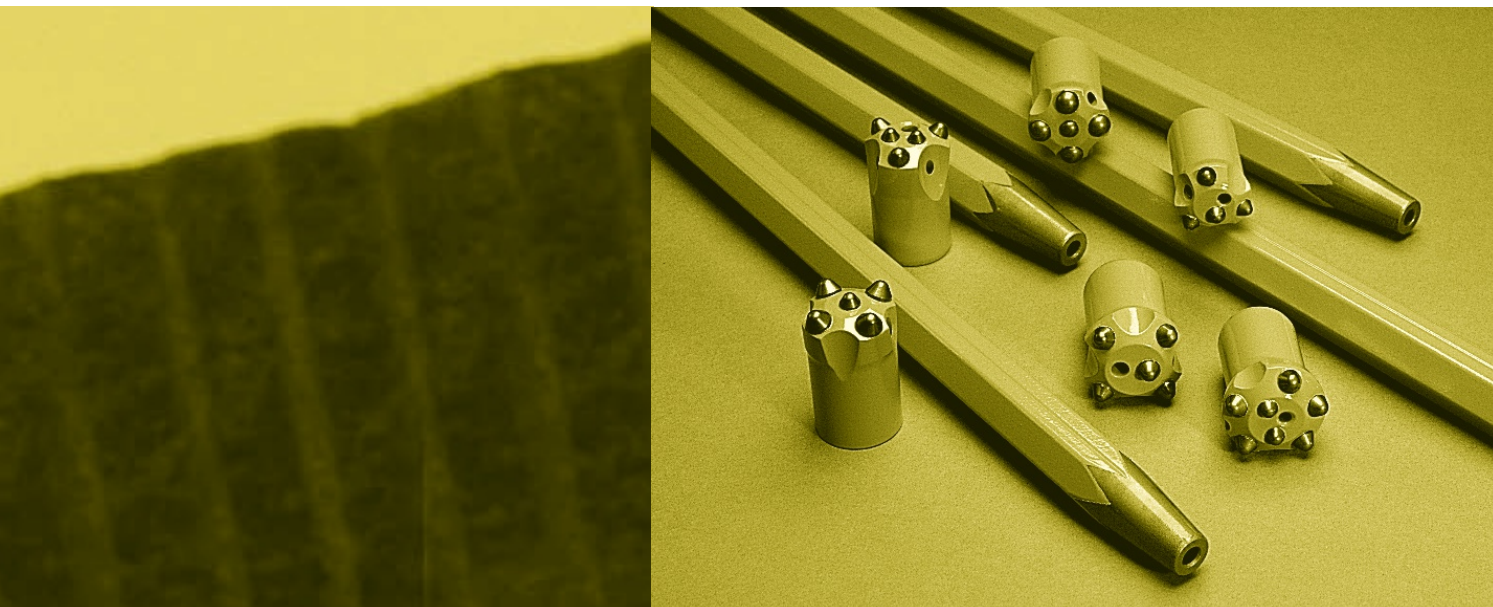




Tapered equipment

Drill bit design	16
Drill rod	19
Directional indicator drill rod	20
Directional indicator drill bit	20

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.



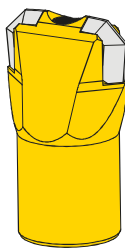
Model -25

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.



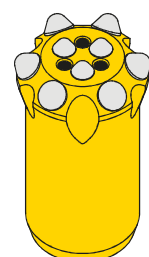
Model -33

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



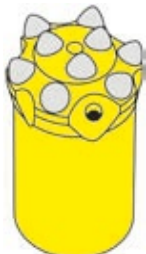
Model -34

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



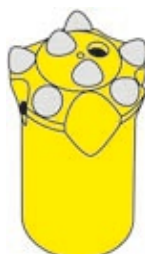
Model -37

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 36,0 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 1,0–3,0 mm bigger than the bit dimension depending on rock formation.

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	
BUTTON BIT - For 22 mm (7/8") hex. rod. 4°46' taper angle. Short skirt.													
36	1 ³ / ₃₂	90510678	178-9036-14-67,39-20	50	1 ³¹ / ₃₂	7	5×7	2×7	35°	–	1	2	0,3
38	1½	90512880	178-9038-14-67,39-20	50	1 ³¹ / ₃₂	7	5×7	2×7	35°	–	1	2	0,3
BUTTON BIT - For 22 mm (7/8") hex. rod. 11° taper angle. Short skirt.													
32	1¼	90510100	179-9032-12-67,50-20	50	1 ³¹ / ₃₂	5	3×8	2×7	35°	–	2	1	0,3
32	1¼	90512816	179-9032-33-67,39-20	55	2 ⁵ / ₃₂	8	6×7	2×7	39°	15°	1	1	0,3
32	1¼	90510189	179-9032-56-67,50-20	50	1 ³¹ / ₃₂	6	4×7	2×7	35°	–	1	1	0,3
33	1 ⁵ / ₁₆	90512712	179-9033-40-67,52-20	50	1 ³¹ / ₃₂	9	6×7	3×7	40°	20°	2	–	0,3
33	1 ⁵ / ₁₆	90512801	179-9033-56-67,50-20	50	1 ³¹ / ₃₂	6	4×7	2×7	40°	–	1	1	0,2
34	1 ¹¹ / ₃₂	90512881	179-9034-40-67,39-20	50	1 ³¹ / ₃₂	9	6×7	3×7	40°	20°	2	–	0,3
35	1 ³ / ₈	90512818	179-9035-41-67-L,39-20*	55	2 ⁵ / ₃₂	7	5×8	2×7	40°	15°	1	1	0,3
36	1 ¹³ / ₃₂	90509963	179-9036-12-67,39-20	50	1 ³¹ / ₃₂	5	3×8	2×8	40°	–	2	1	0,3
36	1 ¹³ / ₃₂	90510127	179-9036-23-67,50-20	50	1 ³¹ / ₃₂	4	3×9	1×8	35°	–	1	1	0,4
36	1 ¹³ / ₃₂	90509968	179-9036-27-67,39-20	50	1 ³¹ / ₃₂	7	5×8	2×7	35°	–	1	1	0,3
36	1 ¹³ / ₃₂	90510192	179-9036-56-67,50-20	50	1 ³¹ / ₃₂	6	4×7	2×7	40°	–	1	1	0,4
38	1½	90510669	179-9038-23-67,39-20	50	1 ³¹ / ₃₂	4	3×9	1×9	40°	–	2	1	0,3
38	1½	90509966	179-9038-27-67,39-20	50	1 ³¹ / ₃₂	7	5×9	2×7	35°	–	1	1	0,3
40	1 ⁹ / ₁₆	90512668	179-9040-23-67,39-20	50	1 ³¹ / ₃₂	4	3×9	1×9	40°	–	1	1	0,4
41	1 ⁵ / ₈	90509962	179-9041-27-67,39-20	50	1 ³¹ / ₃₂	7	5×9	2×7	35°	–	2	1	0,3
BUTTON BIT - For 22 mm (7/8") hex. rod. 12° taper angle. Short skirt.													
27	1 ¹ / ₁₆	90512895	177-9027-56-67,51-20	50	1 ³¹ / ₃₂	6	4×6	2×6	40°	15°	1	1	0,2
28	1 ¹ / ₈	90510695	177-9028-23-67,39-20	50	1 ³¹ / ₃₂	4	3×7	1×7	20°	–	1	1	0,1
30	1 ³ / ₁₆	90509862	177-9030-23-67,39-20	50	1 ³¹ / ₃₂	4	3×7	1×7	40°	–	1	1	0,2
30	1 ³ / ₁₆	90510181	177-9030-56-67,51-20	50	1 ³¹ / ₃₂	6	4×7	2×7	30°	–	1	1	0,2
32	1¼	90509650	177-9032-14-67,39-20	55	2 ⁵ / ₃₂	7	5×7	2×7	35°	–	1	2	0,3
32	1¼	90509841	177-9032-17-67,39-20	55	2 ⁵ / ₃₂	7	5×7	2×7	35°	–	1	1	0,2
32	1¼	90512817	177-9032-34-67,39-20	55	2 ⁵ / ₃₂	8	6×7	2×7	39°	15°	1	2	0,3
33	1 ⁵ / ₁₆	90512648	177-9033-14-67,39-20	55	2 ⁵ / ₃₂	7	5×7	2×7	35°	–	1	2	0,2
33	1 ⁵ / ₁₆	90509842	177-9033-17-67,39-20	55	2 ⁵ / ₃₂	7	5×7	2×7	35°	–	1	1	0,2
33	1 ⁵ / ₁₆	90513909	177-9033-41-67,39-20	55	2 ⁵ / ₃₂	7	5×8	2×7	40°	15°	1	1	0,2
33	1 ⁵ / ₁₆	90510183	177-9033-56-67,50-20	55	2 ⁵ / ₃₂	6	4×7	2×7	35°	–	1	1	0,2
34	1 ¹¹ / ₃₂	90509956	177-9034-27-67,39-20	55	2 ⁵ / ₃₂	7	5×8	2×7	35°	–	1	1	0,2
35	1 ³ / ₈	90509535	177-9035-27-67,39-20	55	2 ⁵ / ₃₂	7	5×9	2×7	35°	–	1	1	0,2
35	1 ³ / ₈	90510184	177-9035-56-67,50-20	55	2 ⁵ / ₃₂	6	4×7	2×7	35°	–	1	1	0,2
36	1 ¹³ / ₃₂	90512721	177-9036-27-67,39-20	55	2 ⁵ / ₃₂	7	5×9	2×7	35°	–	1	1	0,3
37	1 ¹⁵ / ₃₂	90512710	177-9037-27-67,39-20	55	2 ⁵ / ₃₂	7	5×9	2×7	40°	–	1	1	0,3
38	1½	90512232	177-9038-12-67,39-20	55	2 ⁵ / ₃₂	5	3×9	2×8	40°	–	1	1	0,2
38	1½	90512658	177-9038-17-67,39-20	55	2 ⁵ / ₃₂	7	5×9	2×7	40°	–	1	1	0,3
38	1½	90510676	177-9038-23-67,39-20	55	2 ⁵ / ₃₂	4	3×9	1×9	40°	–	1	1	0,2
38	1½	90509554	177-9038-27,39-20	55	2 ⁵ / ₃₂	7	5×9	2×7	35°	–	1	1	0,2
38	1½	90512669	177-9038-27-67,39-20	55	2 ⁵ / ₃₂	7	5×9	2×7	35°	–	1	1	0,2
41	1 ⁵ / ₈	90512318	177-9041-27-67,39-20	55	2 ⁵ / ₃₂	7	5×9	2×7	35°	–	1	1	0,3
45	1¾	90512230	177-9045-12-67,39-20	55	2 ⁵ / ₃₂	5	3×9	2×9	40°	–	1	1	0,2
45	1¾	90512619	177-9045-27-67,39-20	55	2 ⁵ / ₃₂	7	5×9	2×7	35°	–	1	1	0,3

-67 = Ballistic buttons.

Cont. next page

* Long bit head.

Tapered equipment

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	
BUTTON BIT - For 22 mm (7/8") hex. rod. 7° taper angle. Long skirt.													
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	9	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
35	1 3/8	90512922	173-5035-41-67,39-20	80	3 5/32	7	5×8	2×7	35°	10°	1	1	0,4
37	1 15/32	90515584	173-5037-41-67,39-20	80	3 5/32	7	5×9	2×7	40°	15°	1	1	0,4
41	1 5/8	90514506	173-5041-41-67,39-20	80	3 5/32	7	5×9	2×8	40°	15°	1	1	0,4
BUTTON BIT - For 22 mm (7/8") hex. rod. 12° taper angle. Long skirt.													
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	90512847	177-5033-14-67,39-20	71	2 25/32	7	5×7	2×7	35°	–	1	2	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°	15°	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
34	1 11/32	90512955	177-5034-17-67,39-20	71	2 25/32	7	5×7	2×7	35°	–	1	1	0,3
35	1 3/8	90512826	177-5035-34-67,39-20	71	2 25/32	8	6×8	2×7	45°	15°	1	2	0,3
36	1 13/32	90512846	177-5036-34-67,39-20	71	2 25/32	8	6×8	2×7	40°	15°	1	2	0,3
37	1 15/32	90515843	177-5037-27-67,39-20	71	2 25/32	7	5×9	2×7	40°	–	1	2	0,3
38	1 1/2	90502644	177-5038-27,25-20	71	2 25/32	7	5×9	2×7	35°	–	1	1	0,4
39	1 17/32	90510647	177-5039-27,39-20	71	2 25/32	7	5×9	2×7	35°	–	1	1	0,4
41	1 5/8	90514693	177-5041-34-67,39-20	71	2 25/32	8	6×7	2×7	35°	–	1	2	0,4
BUTTON BIT - For 25 mm (1") hex. rod. 7° taper angle. Long skirt.													
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
BUTTON BIT - For 25 mm (1") hex. rod. 12° taper. Long skirt.													
38	1 1/2	90512064	180-5038-27-67,39-20	71	2 25/32	7	5×9	2×7	40°	–	1	1	0,4
41	1 5/8	90512486	180-5041-27-67,39-20	71	2 25/32	7	5×9	2×7	40°	–	1	1	0,4
CROSS-TYPE BIT - For 22 mm (7/8") hex. rod. 7° taper angle. Long skirt.													
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
32	1 1/4	90514526	173-7032-10,01-17	71	2 25/32	–	–	–	–	–	2	1	0,3
35	1 3/8	90509643	173-7035-28,01-17	71	2 25/32	–	–	–	–	–	2	–	0,3
CROSS-TYPE BIT - For 22 mm (7/8") hex. rod. 12° taper angle. Long skirt.													
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
45	1 3/4	90503069	177-7045,01-17	71	2 25/32	–	–	–	–	–	2	1	0,6

–67 = Ballistic buttons.

Tapered equipment

Drill rod



Shank hex. 22 mm ($\frac{7}{8}$ ") x 108 mm ($4\frac{1}{4}$ "). Rod hex. 22 mm ($\frac{7}{8}$ ").

Length (L)		Product No.	Product code	Weight approx. kg
mm	foot/inch			
4°46' taper				
800	2'7½"	90510626	578-0108,11	2,9
1600	5'3"	90510627	578-0116,11	5,4
2000	6'6¾"	90510628	578-0120,11	6,6
2200	7'2⅝"	90505240	578-0122,11	7,2
2400	7'10½"	90510629	578-0124,11	7,8
3200	10'6"	90510630	578-0132,11	10,2
3500	11'5¾"	90513835	578-0135,11	11,1
4000	13'1½"	90510631	578-0140,11	12,7
4800	15'9"	90515489	578-0148,11	15,1
5600	18'4½"	90515425	578-0156,11	17,7
6400	21'	90515490	578-0164,11	20,1
7° taper				
400	1'3¾"	90513772	573-0104,11	1,7
800	2'7½"	90505067	573-0108,11	2,7
1830	6'	90504827	573-0118,11	6,0
2000	6'6¾"	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
3660	12'	90514346	573-0136,11	11,4
4000	13'1½"	90513773	573-0140,11	12,7
4800	15'9"	90515495	573-0148,11	15,1
5600	18'4½"	90514493	573-0156,11	17,1
6400	21'	90514494	573-0164,11	19,5
7200	23'7½"	90514495	573-0172,11	22,0
8000	26'3"	90514496	573-0180,11	24,2
11° taper				
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	6'6¾"	90504869	579-0120,11	6,6
2435	8'	90504871	579-0124,11	7,7
2600	8'6⅝"	90504872	579-0126,11	8,2
3200	10'6"	90510202	579-0132,11	10,3
3655	11'11⅞"	90510203	579-0137,11	11,7
4000	13'1½"	90510245	579-0140,11	12,8
4800	15'9"	90510817	579-0148,11	15,2
5600	18'4½"	90510894	579-0156,11	17,6
6400	21'	90510895	579-0164,11	20,0
7200	23'7½"	90510896	579-0172,11	22,4
8000	26'3"	90510897	579-0180,11	24,9

Length (L)		Product No.	Product code	Weight approx. kg
mm	foot/inch			
12° taper				
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	6'6¾"	90504839	577-0120,11	6,8
2435	8'	90504841	577-0124,11	7,6
2435	8'	90505436	577-0124-C,02	7,8
3050	10'	90504843	577-0131,11	9,9
3200	10'6"	90504844	577-0132,11	9,9
3655	11'11⅞"	90504845	577-0137,11	11,3
3655	11'11⅞"	90505438	577-0137-C,02	11,7
3965	13'	90504846	577-0140,11	12,2
4800	15'9"	90504847	577-0148,11	14,7
5600	18'4½"	90504848	577-0156,11	17,1
6400	21'	90504849	577-0164,11	19,5
7200	23'7½"	90504850	577-0172,11	22,0
8000	26'3"	90504851	577-0180,11	24,2

Shank hex. 25 mm (1") x 108 mm ($4\frac{1}{4}$ ").
Rod hex. 25 mm (1").

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

Length (L)		Product No.	Product code	Weight approx. kg
mm	foot/inch			
7° taper				
1500	4'11"	90514427	594-1115,11	6,5
1600	5'3"	90515264	594-1116,11	6,9
1800	5'10⅞"	90509502	594-1118,11	8,0
2200	7'2⅝"	90514319	594-1122,11	9,3
2400	7'10½"	90514718	594-1124,11	10,1
2600	8'6⅝"	90514756	594-1126,11	10,9
3900	12'9½"	90515304	594-1139,11	16,1
12° taper				
3660	12'	90515426	580-1137,11	15,3

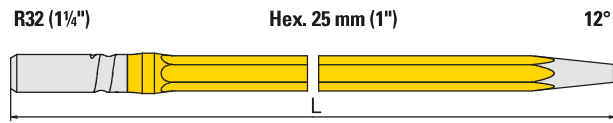
Shank hex. 25 mm (1") x 159 mm ($6\frac{1}{4}$ ").
Rod hex. 25 mm (1").

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

Length (L)		Product No.	Product code	Weight approx. kg
mm	foot/inch			
12° taper				
2400	7'10½"	90510520	580-1524,11	10,4
3965	13'	90504876	580-1540,11	15,3

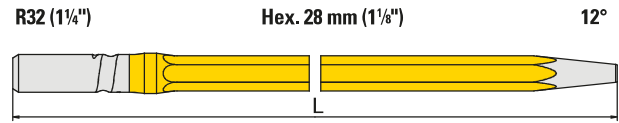
Tapered equipment

Drill rod with threaded shank end



Fully carburized. Rod section 28,5 mm.

Length		Product No.	Product code	Weight approx. kg
mm	foot/inch			
2780	9' 1 1/2"	90505274	277-0328-03-91-C,02	10,7



Fully carburized. Rod section 32 mm.

Length		Product No.	Product code	Weight approx. kg
mm	foot/inch			
2600	8' 6 3/8"	90510248	280-0426-03-C,02	13,5

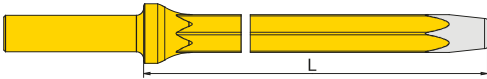
Directional drilling for dimension stone splitting

Directional indicator drill rod

22 mm (7/8") hex. rod.

108 mm (4 1/4") round shank. No rotation.

No reaming for flushing tube.



Length		Product No.	Product code	Weight approx. kg
mm	foot/inch			
11° taper				
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
4000	13'1½"	90514192	579-4540-07,11	12,7
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 indicator 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	
DIRECTIONAL BIT - For 22 mm (7/8") hex. rod. 11° taper angle. Short skirt.													
38	1½	90512917	179-9038-31,22-03	70	2¾	Pilot hole Ø 32 mm				–	1	0,2	
40	1⅞	90512918	179-9040-31,22-03	70	2¾	Pilot hole Ø 33/34 mm				–	1	0,2	