CORE DRILLING TECHNOLOGY

CORE DRILLS

08

Type and applications overview

	Material	Surface	Drilling depth	Shank	Ejector pin	RUKO Magnetic drilling machine	Ø mm	Item no.	Page/s
	HSS	Blank	30 mm		–	A10 RU25 RU40	10,0 – 15,0	108 121x	192
	HSS	Blank	55 mm		108 305		12,0 – 60,0	108 51xx	193
	HSSE Co5	Blank	55 mm					108 5xx E	
	HSS	TiAlN	55 mm					108 5xx F	
	HSS	Blank	30 mm		108 304		12,0 – 60,0	108 2xx	194 – 195
	HSSE Co5	Blank	30 mm					108 2xx E	
	HSS	TiAlN	30 mm					108 2xx F	
	HSS	Blank	110 mm		108 2000		20,0 – 32,0	108 20xx	196
	HSS	TiAlN	110 mm					108 20xx F	
	HSSE Co5	Blank	55 mm		108 306		12,0 – 60,0	108 9xx E	197
	TC HM	Blank	50 mm		108 305		12,0 – 50,0	108 7xx	198
	TC HM	Blank	50 mm		108 305		12,0 – 32,0	108 11xx	199
	TC HM	Blank	50 mm		108 305		33,0 – 80,0	108 11xx	200
	TC HM	Blank	50 mm		108 110		12,0 – 80,0	108 0xx	201
	TC HM	Blank	30 mm		108 1510		19,0 – 36,0	108 15xx	202

Structural steel < 900 N/mm²	Inox <1100 N/mm²	High strength steel <1300 N/mm²	Brass	Bronze	Cast iron	Aluminium	Plastics
●			●	○	○	●	○
●			●	○	○	●	○
●	●	○	●	○	○	●	○
●	●	○	●	○	○	●	○
●			●	○	○	●	○
●	●	○	●	○	○	●	○
●	●	○	●	○	○	●	○
●			●	○	○	●	○
●	●	○	●	○	○	●	○
●	●	○	●	○	○	●	○
●	●	●	●	●	○	●	○
●	●	●	●	●	○	●	○
●	●	●	●	●	○	●	○
●	●	●	●	●		●	○
●	●	●	●	●	○	●	○

● Main application ○ Other application

Solid drills with Weldon shank (3/4")

Can be used in all pillar and magnetic drilling machines with Morse taper in conjunction with RUKO holders no. 108 302-1, 108 303-1, 108 315, 108 316, RUKO EasyLock no. 108 312-1, 108 313-1, 108 314 or with direct Weldon shank holders such as RUKO magnetic drilling machine A10.

Handling of solid drills with Weldon shank

- Slide the solid drill bit into the holder and tighten the hexagon socket screws.
- Ensure that the "Solid 3S" solid drill bit is seated properly in the holder.
- With the EasyLock quick-release holder, the solid drill bit is automatically locked in place.
- Drill to size immediately, no need for centre punching and pre-drilling.
- The cutting geometry of the solid drill bit enables fast chip removal upwards.
- Observe the speed table and use coolant.

Core drills with Weldon shank (3/4")

Can be used in all pillar and magnetic drilling machines with Morse taper in conjunction with RUKO holders no. 108 302-1, 108 303-1, 108 315, 108 316, RUKO EasyLock no. 108 312-1, 108 313-1, 108 314 or with direct Weldon shank holders such as RUKO magnetic drilling machine A10.

Handling core drills with Weldon shank

- Insert the ejector pin into the core drill.
- Push the core drill into the holder and tighten the hexagon socket screws.
- Ensure that the core drill is seated properly in the holder.
- The core drill is automatically locked in place with the EasyLock quick-release holder.
- Drill to size immediately, no need for centre punching and pre-drilling.
- The cutting geometry of the core drill enables fast chip removal upwards.
- The spring-loaded ejector pin helps to release the cut-out pieces.
- Observe the speed table and use coolant.

Core drills HSS with Quick IN shank

Can be used in all pillar and magnetic drilling machines in conjunction with the Quick IN system holder, e.g. Fein KBM 32 Q.

Handling core drills with Quick IN shank

- Insert the ejector pin into the core drill.
- Clamp the core drill into the Quick IN holder.
- Drill to size immediately, no need for centre punching and pre-drilling.
- The cutting edge geometry of the core drill enables rapid chip removal upwards.
- The spring-loaded ejector pin helps to release the cut-out pieces.
- Observe the speed table and use coolant.

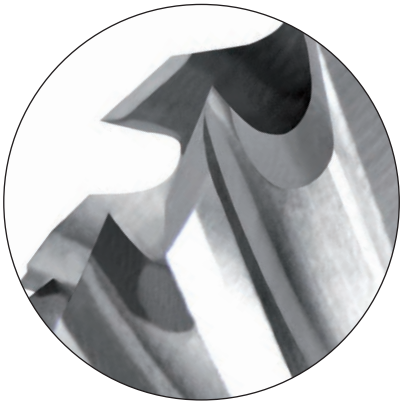
Core drills with threaded retainer

Can be used in all pillar and magnetic drilling machines with Morse taper in conjunction with RUKO holder no. 108 102-1, 108 103-1, 108 104, 108 105 or with direct threaded holder such as Fein KBM 542 / KBM 65.

Handling of core drills with thread holder

- Screw the core drill onto the holder.
- Drill to size immediately, no need for centre punching and pre-drilling.
- The cutting edge geometry of the core drill enables fast chip removal upwards.
- The spring-loaded ejector pin helps to release the cut-out pieces.
- Observe the speed table and use coolant.

Further development of the cutting edge geometry



Further development of the cutting edge geometry has resulted in significantly improved cutting behaviour, which has a positive effect on cutting performance and tool life.

1. Optimised cutting edge geometry for increased cutting performance and reduced cutting forces.
2. The rake angles are designed for universal use in various types of steel.
3. Improved chip evacuation thanks to U-shaped relief. The special geometry of the chip evacuation reduces the thermal load on the HSS core drill, as the heat generated during machining is largely dissipated with the chip.
4. Reduction of friction between the HSS core drill and the workpiece thanks to optimised, spiral-shaped guide chamfers.

Smaller cutting volume – This is why core drills are the better alternative for large diameters

RUKO core drills will save costs and time. As core drills only cut the width of the teeth and as twist drills cut the entire diameter of the hole, core drills are many times faster (see diagram). Centering and pilot drilling are not necessary anymore.

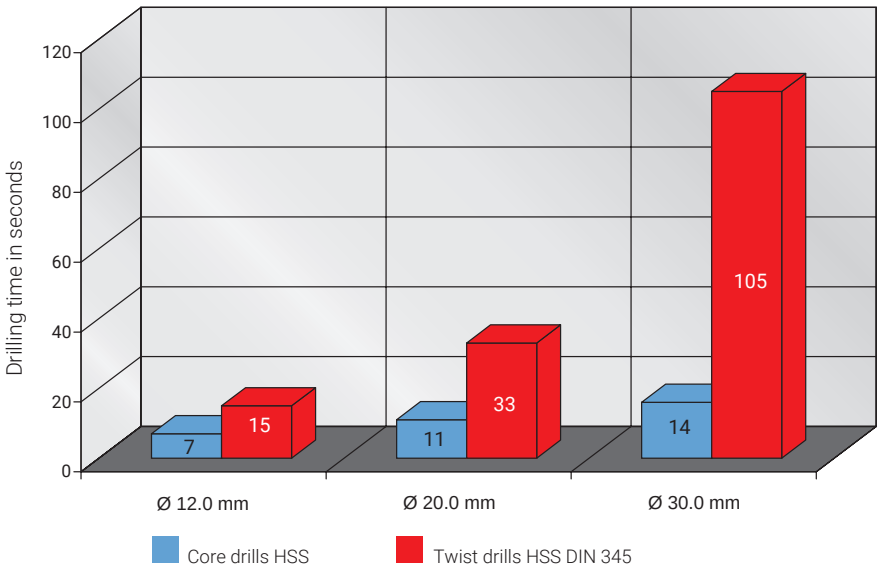
Unlike twist drills, core drills only cut the tooth width and the drill core is ejected:

Cutting volume
core drill

Cutting volume
twist drill

In addition to the lower energy requirement, the core drills work with less wear and tear, resulting in a longer service life.

Comparison of cutting times core drills HSS vs. twist drills HSS DIN 345



Work piece: steel girder
Material: construction steel S235JR
Cutting depth: 12,0 mm

Machine: RUKO Magnetic drilling machine Cutting with twist drills has been made without pilot drilling directly into the material. No cooling or lubrication has been used.

Solid drill "Solid 3S" with Weldon shank (3/4"), CBN ground and 3 cutting edges, 30.0 mm

The spiral-fluted 3-flute geometry ensures extremely high stability of the solid drill bit "Solid 3S" and thus prevents the risk of breakage of the cutting edges due to overstressing or jamming of the chips. The high stability significantly increases the service life of the "Solid 3S". This reduces operating costs. The "Solid 3S" enables precise spot drilling without centre punching and scribing. The solid drill bit is easier to regrind than core drills of the same diameter.

Packaging: plastic tube

Ø1 mm	Ø2 mm	L1 mm	Cutting depth mm	HSS	
10.0	19.0	64.0	30.0	108 1210	1
11.0	19.0	64.0	30.0	108 1211	1
12.0	19.0	64.0	30.0	108 1212	1
13.0	19.0	64.0	30.0	108 1213	1
14.0	19.0	64.0	30.0	108 1214	1
15.0	19.0	64.0	30.0	108 1215	1

		HSS
6 tlg./pcs.	Core drill set "Solid 3S" HSS Ø 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 mm	108 830

Application tip

The risk of breakage of the solid drill bit up to Ø 15.0 mm is significantly compared to core drills of the same diameter. Cooling required.

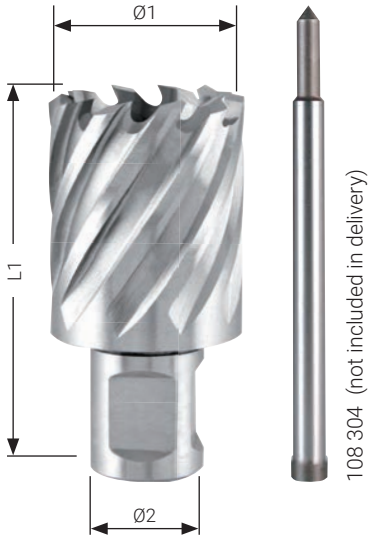
Core drill HSS and HSSE-Co 5 with Weldon shank (3/4"), 55.0 mm

Ejector pin: Item no. 108 305 (Ø 6.35 x 102.0 mm)

Packaging: plastic tube

Ø1 mm	Ø2 mm	L1 mm	Cutting depth mm	HSSE-Co 5	HSS TiAlN	HSS	
12.0	19.0	88.0	55.0	108 512 E	108 512 F	108 512	1
13.0	19.0	88.0	55.0	108 513 E	108 513 F	108 513	1
14.0	19.0	88.0	55.0	108 514 E	108 514 F	108 514	1
15.0	19.0	88.0	55.0	108 515 E	108 515 F	108 515	1
16.0	19.0	88.0	55.0	108 516 E	108 516 F	108 516	1
17.0	19.0	88.0	55.0	108 517 E	108 517 F	108 517	1
18.0	19.0	88.0	55.0	108 518 E	108 518 F	108 518	1
19.0	19.0	88.0	55.0	108 519 E	108 519 F	108 519	1
20.0	19.0	88.0	55.0	108 520 E	108 520 F	108 520	1
21.0	19.0	88.0	55.0	108 521 E	108 521 F	108 521	1
22.0	19.0	88.0	55.0	108 522 E	108 522 F	108 522	1
23.0	19.0	88.0	55.0	108 523 E	108 523 F	108 523	1
24.0	19.0	88.0	55.0	108 524 E	108 524 F	108 524	1
25.0	19.0	88.0	55.0	108 525 E	108 525 F	108 525	1
26.0	19.0	88.0	55.0	108 526 E	108 526 F	108 526	1
27.0	19.0	88.0	55.0	108 527 E	108 527 F	108 527	1
28.0	19.0	88.0	55.0	108 528 E	108 528 F	108 528	1
29.0	19.0	88.0	55.0	108 529 E	108 529 F	108 529	1
30.0	19.0	88.0	55.0	108 555 E	108 555 F	108 555	1
31.0	19.0	88.0	55.0	108 531 E	108 531 F	108 531	1
32.0	19.0	88.0	55.0	108 532 E	108 532 F	108 532	1
33.0	19.0	88.0	55.0	108 533 E	108 533 F	108 533	1
34.0	19.0	88.0	55.0	108 534 E	108 534 F	108 534	1
35.0	19.0	88.0	55.0	108 535 E	108 535 F	108 535	1
36.0	19.0	88.0	55.0	108 536 E	108 536 F	108 536	1
37.0	19.0	88.0	55.0	108 537 E	108 537 F	108 537	1
38.0	19.0	88.0	55.0	108 538 E	108 538 F	108 538	1
39.0	19.0	88.0	55.0	108 539 E	108 539 F	108 539	1
40.0	19.0	88.0	55.0	108 540 E	108 540 F	108 540	1
41.0	19.0	88.0	55.0	108 541 E	108 541 F	108 541	1
42.0	19.0	88.0	55.0	108 542 E	108 542 F	108 542	1
43.0	19.0	88.0	55.0	108 543 E	108 543 F	108 543	1
44.0	19.0	88.0	55.0	108 544 E	108 544 F	108 544	1
45.0	19.0	88.0	55.0	108 545 E	108 545 F	108 545	1
46.0	19.0	88.0	55.0	108 546 E	108 546 F	108 546	1
47.0	19.0	88.0	55.0	108 547 E	108 547 F	108 547	1
48.0	19.0	88.0	55.0	108 548 E	108 548 F	108 548	1
49.0	19.0	88.0	55.0	108 549 E	108 549 F	108 549	1
50.0	19.0	88.0	55.0	108 550 E	108 550 F	108 550	1
51.0	19.0	88.0	55.0	108 551 E	108 551 F	108 551	1
52.0	19.0	88.0	55.0	108 552 E	108 552 F	108 552	1
53.0	19.0	88.0	55.0	108 553 E	108 553 F	108 553	1
54.0	19.0	88.0	55.0	108 554 E	108 554 F	108 554	1
55.0	19.0	88.0	55.0	108 555 E	108 555 F	108 555	1
56.0	19.0	88.0	55.0	108 556 E	108 556 F	108 556	1
57.0	19.0	88.0	55.0	108 557 E	108 557 F	108 557	1
58.0	19.0	88.0	55.0	108 558 E	108 558 F	108 558	1
59.0	19.0	88.0	55.0	108 559 E	108 559 F	108 559	1
60.0	19.0	88.0	55.0	108 560 E	108 560 F	108 560	1

Core drills HSS and HSSE-Co 5 with Weldon shank (3/4"), 30.0 mm



Ejector pin: Item no. 108 304 (Ø 6.35 x 77.0 mm)

Packaging: plastic tube

Ø1 mm	Ø2 mm	L1 mm	Cutting depth mm	HSSE-Co 5	HSS TiAlN	HSS	
12.0	19.0	63.0	30.0	108 212 E	108 212 F	108 212	1
13.0	19.0	63.0	30.0	108 213 E	108 213 F	108 213	1
14.0	19.0	63.0	30.0	108 214 E	108 214 F	108 214	1
15.0	19.0	63.0	30.0	108 215 E	108 215 F	108 215	1
16.0	19.0	63.0	30.0	108 216 E	108 216 F	108 216	1
17.0	19.0	63.0	30.0	108 217 E	108 217 F	108 217	1
18.0	19.0	63.0	30.0	108 218 E	108 218 F	108 218	1
19.0	19.0	63.0	30.0	108 219 E	108 219 F	108 219	1
20.0	19.0	63.0	30.0	108 220 E	108 220 F	108 220	1
21.0	19.0	63.0	30.0	108 221 E	108 221 F	108 221	1
22.0	19.0	63.0	30.0	108 222 E	108 222 F	108 222	1
23.0	19.0	63.0	30.0	108 223 E	108 223 F	108 223	1
24.0	19.0	63.0	30.0	108 224 E	108 224 F	108 224	1
25.0	19.0	63.0	30.0	108 225 E	108 225 F	108 225	1
26.0	19.0	63.0	30.0	108 226 E	108 226 F	108 226	1
27.0	19.0	63.0	30.0	108 227 E	108 227 F	108 227	1
28.0	19.0	63.0	30.0	108 228 E	108 228 F	108 228	1
29.0	19.0	63.0	30.0	108 229 E	108 229 F	108 229	1
30.0	19.0	63.0	30.0	108 230 E	108 230 F	108 230	1
31.0	19.0	63.0	30.0	108 231 E	108 231 F	108 231	1
32.0	19.0	63.0	30.0	108 232 E	108 232 F	108 232	1
33.0	19.0	63.0	30.0	108 233 E	108 233 F	108 233	1
34.0	19.0	63.0	30.0	108 234 E	108 234 F	108 234	1
35.0	19.0	63.0	30.0	108 235 E	108 235 F	108 235	1
36.0	19.0	63.0	30.0	108 236 E	108 236 F	108 236	1
37.0	19.0	63.0	30.0	108 237 E	108 237 F	108 237	1
38.0	19.0	63.0	30.0	108 238 E	108 238 F	108 238	1
39.0	19.0	63.0	30.0	108 239 E	108 239 F	108 239	1
40.0	19.0	63.0	30.0	108 240 E	108 240 F	108 240	1
41.0	19.0	63.0	30.0	108 241 E	108 241 F	108 241	1
42.0	19.0	63.0	30.0	108 242 E	108 242 F	108 242	1
43.0	19.0	63.0	30.0	108 243 E	108 243 F	108 243	1
44.0	19.0	63.0	30.0	108 244 E	108 244 F	108 244	1
45.0	19.0	63.0	30.0	108 245 E	108 245 F	108 245	1
46.0	19.0	63.0	30.0	108 246 E	108 246 F	108 246	1
47.0	19.0	63.0	30.0	108 247 E	108 247 F	108 247	1
48.0	19.0	63.0	30.0	108 248 E	108 248 F	108 248	1
49.0	19.0	63.0	30.0	108 249 E	108 249 F	108 249	1
50.0	19.0	63.0	30.0	108 250 E	108 250 F	108 250	1
51.0	19.0	63.0	30.0	108 251 E	108 251 F	108 251	1
52.0	19.0	63.0	30.0	108 252 E	108 252 F	108 252	1
53.0	19.0	63.0	30.0	108 253 E	108 253 F	108 253	1
54.0	19.0	63.0	30.0	108 254 E	108 254 F	108 254	1
55.0	19.0	63.0	30.0	108 255 E	108 255 F	108 255	1
56.0	19.0	63.0	30.0	108 256 E	108 256 F	108 256	1
57.0	19.0	63.0	30.0	108 257 E	108 257 F	108 257	1
58.0	19.0	63.0	30.0	108 258 E	108 258 F	108 258	1
59.0	19.0	63.0	30.0	108 259 E	108 259 F	108 259	1
60.0	19.0	63.0	30.0	108 260 E	108 260 F	108 260	1

		HSSE-Co 5	HSS
10 tlg./pcs.	Core drill set Ø 12.0 | 14.0 | 16.0 | 18.0 | 20.0 | 22.0 | 24.0 | 26.0 mm + 1 cutting paste 40 ml | Item no. 101 021 + 1 ejector pin Ø 6.35 x 77.0 mm | Item no. 108 304	108 810 E	108 810

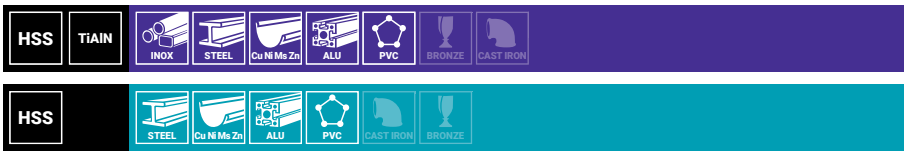
108 810 E

		HSS TiAlN	HSS
7 tlg./pcs.	Core drill set Ø 12.0 | 14.0 | 16.0 | 18.0 | 20.0 | 22.0 mm + 1 jector pin Ø 6.35 x 77.0 mm | Item no. 108 304	108 820 F	108 820
7 tlg./pcs.	Core drill set 2x Ø 14.0 mm | 2x Ø 18.0 mm | 2x Ø 22.0 mm + 1 jector pin Ø 6.35 x 77.0 mm | Item no. 108 304	108 840 F	108 840

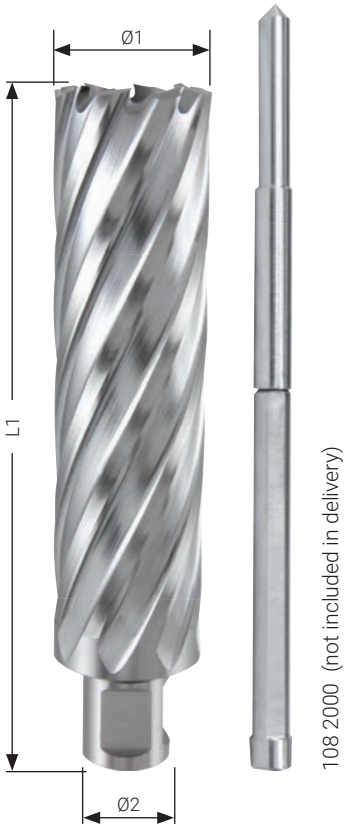
108 840 F

108 840

HSS core drill with Weldon shank (3/4"), 110.0 mm *– extra long*



Ejector pin: Item no. 108 2000 (Ø 8.0 x 155.0 mm)



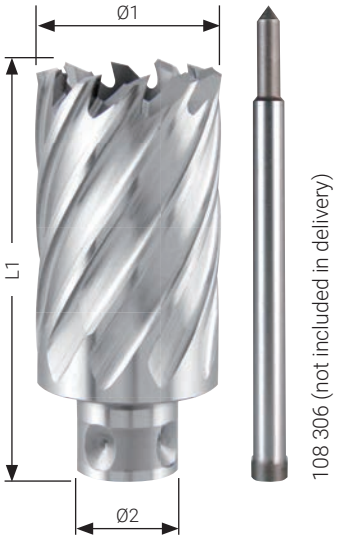
Packaging: plastic tube

Ø1 mm	Ø2 mm	L1 mm	Cutting depth mm	HSS TiAlN	HSS	
20.0	19.0	145.0	110.0	108 2020 F	108 2020	1
21.0	19.0	145.0	110.0	108 2021 F	108 2021	1
22.0	19.0	145.0	110.0	108 2022 F	108 2022	1
24.0	19.0	145.0	110.0	108 2024 F	108 2024	1
25.0	19.0	145.0	110.0	108 2025 F	108 2025	1
26.0	19.0	145.0	110.0	108 2026 F	108 2026	1
28.0	19.0	145.0	110.0	108 2028 F	108 2028	1
30.0	19.0	145.0	110.0	108 2030 F	108 2030	1
32.0	19.0	145.0	110.0	108 2032 F	108 2032	1

Application tip

Move core drill out of the hole, remove the chips in the borehole.
Repeat this procedure several times.
Reduces the risk of breakage and increases the service life of the core drill.

Core drill HSSE-Co 5 with Quick IN shank, 35.0 mm



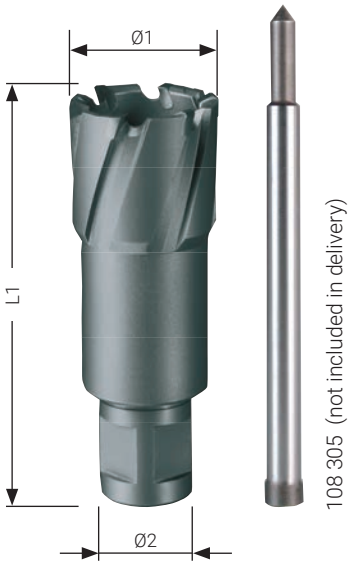
Ejector pin: Item no. 108 306 (Ø 6.35 x 87.0 mm)
Machine no.: with Quick IN-adapter

Packaging: plastic tube

Ø1 mm	Ø2 mm	L1 mm	Cutting depth mm	HSSE-Co 5	
12.0	18.0	77.0	35.0	108 912 E	1
13.0	18.0	77.0	35.0	108 913 E	1
14.0	18.0	77.0	35.0	108 914 E	1
15.0	18.0	77.0	35.0	108 915 E	1
16.0	18.0	77.0	35.0	108 916 E	1
17.0	18.0	77.0	35.0	108 917 E	1
18.0	18.0	77.0	35.0	108 918 E	1
19.0	18.0	77.0	35.0	108 919 E	1
20.0	18.0	77.0	35.0	108 920 E	1
21.0	18.0	77.0	35.0	108 921 E	1
22.0	18.0	77.0	35.0	108 922 E	1
23.0	18.0	77.0	35.0	108 923 E	1
24.0	18.0	77.0	35.0	108 924 E	1
25.0	18.0	77.0	35.0	108 925 E	1
26.0	18.0	77.0	35.0	108 926 E	1
27.0	18.0	77.0	35.0	108 927 E	1
28.0	18.0	77.0	35.0	108 928 E	1
29.0	18.0	77.0	35.0	108 929 E	1
30.0	18.0	77.0	35.0	108 930 E	1
32.0	18.0	77.0	35.0	108 932 E	1
35.0	18.0	77.0	35.0	108 935 E	1
36.0	18.0	77.0	35.0	108 936 E	1
40.0	18.0	77.0	35.0	108 940 E	1
45.0	18.0	77.0	35.0	108 945 E	1
50.0	18.0	77.0	35.0	108 950 E	1
55.0	18.0	77.0	35.0	108 955 E	1
60.0	18.0	77.0	35.0	108 960 E	1

		HSSE-Co 5
10 tlg./pcs.	Core drill set Ø 12.0 | 14.0 | 16.0 | 18.0 | 20.0 | 22.0 | 24.0 | 26.0 mm + 1 cutting paste 40 ml | Item no. 101 021 + 1 ejector pin Ø 6.35 x 87.0 mm | Item no. 108 306	108 811 E

Core drill with tungsten carbide cutting edges and Weldon shank (3/4"), 50.0 mm



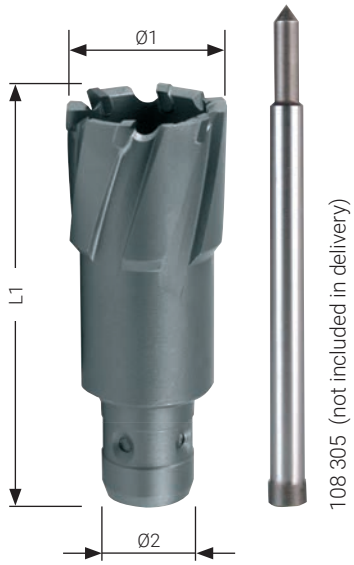
Suitable for Hardox / Weldox 400 steel

Ejector pin: Ø 12.0 up to Ø 17.0 mm | Item no. 108 305 (Ø 6.35 x 102.0 mm)
Ø 18.0 up to Ø 50.0 mm | Item no. 108 701 (Ø 8.0 x 112.0 mm)

Packaging: plastic tube

Ø1 mm	Ø2 mm	L1 mm	Cutting depth mm	TC / HM	
12.0	19.0	84.0	50.0	108 712	1
13.0	19.0	84.0	50.0	108 713	1
14.0	19.0	84.0	50.0	108 714	1
15.0	19.0	84.0	50.0	108 715	1
16.0	19.0	84.0	50.0	108 716	1
17.0	19.0	84.0	50.0	108 717	1
18.0	19.0	84.0	50.0	108 718	1
19.0	19.0	84.0	50.0	108 719	1
20.0	19.0	84.0	50.0	108 720	1
21.0	19.0	84.0	50.0	108 721	1
22.0	19.0	84.0	50.0	108 722	1
23.0	19.0	84.0	50.0	108 723	1
24.0	19.0	84.0	50.0	108 724	1
25.0	19.0	84.0	50.0	108 725	1
26.0	19.0	84.0	50.0	108 726	1
27.0	19.0	84.0	50.0	108 727	1
28.0	19.0	84.0	50.0	108 728	1
29.0	19.0	84.0	50.0	108 729	1
30.0	19.0	84.0	50.0	108 730	1
31.0	19.0	84.0	50.0	108 731	1
32.0	19.0	84.0	50.0	108 732	1
33.0	19.0	84.0	50.0	108 733	1
34.0	19.0	84.0	50.0	108 734	1
35.0	19.0	84.0	50.0	108 735	1
36.0	19.0	84.0	50.0	108 736	1
37.0	19.0	84.0	50.0	108 737	1
38.0	19.0	84.0	50.0	108 738	1
39.0	19.0	84.0	50.0	108 739	1
40.0	19.0	84.0	50.0	108 740	1
41.0	19.0	84.0	50.0	108 741	1
42.0	19.0	84.0	50.0	108 742	1
43.0	19.0	84.0	50.0	108 743	1
44.0	19.0	84.0	50.0	108 744	1
45.0	19.0	84.0	50.0	108 745	1
46.0	19.0	84.0	50.0	108 746	1
47.0	19.0	84.0	50.0	108 747	1
48.0	19.0	84.0	50.0	108 748	1
49.0	19.0	84.0	50.0	108 749	1
50.0	19.0	84.0	50.0	108 750	1

Core drill with tungsten carbide cutting edges and Quick IN shank, 50.0 mm



With fixed shaft.
Machine no.: with Quick IN-adapter
Ejector pin: Item no. 108 305 (Ø 6.35 x 102.0 mm)

Packaging: plastic tube

Ø1 mm	Ø2 mm	L1 mm	Cutting depth mm	TC / HM	
12.0	18.0	83.0	50.0	108 1112	1
13.0	18.0	83.0	50.0	108 1113	1
14.0	18.0	83.0	50.0	108 1114	1
15.0	18.0	83.0	50.0	108 1115	1
16.0	18.0	83.0	50.0	108 1116	1
17.0	18.0	83.0	50.0	108 1117	1
18.0	18.0	83.0	50.0	108 1118	1
18.0	18.0	83.0	50.0	108 1118	1
20.0	18.0	83.0	50.0	108 1120	1
21.0	18.0	83.0	50.0	108 1121	1
22.0	18.0	83.0	50.0	108 1122	1
23.0	18.0	83.0	50.0	108 1123	1
24.0	18.0	83.0	50.0	108 1124	1
25.0	18.0	83.0	50.0	108 1125	1
26.0	18.0	83.0	50.0	108 1126	1
27.0	18.0	83.0	50.0	108 1127	1
28.0	18.0	83.0	50.0	108 1128	1
29.0	18.0	83.0	50.0	108 1129	1
30.0	18.0	83.0	50.0	108 1130	1
31.0	18.0	83.0	50.0	108 1131	1
32.0	18.0	83.0	50.0	108 1132	1

High performance cutting oil spray

RUKO coolants and lubricants have an excellent release and cooling effect. They produce a high surface quality and increase tool life even with hard and brittle materials. hard and brittle materials.

1 tlg./pcs.	High-performance cutting oil spray, 300 ml 100% pure active ingredient - without propellant gas	101 012

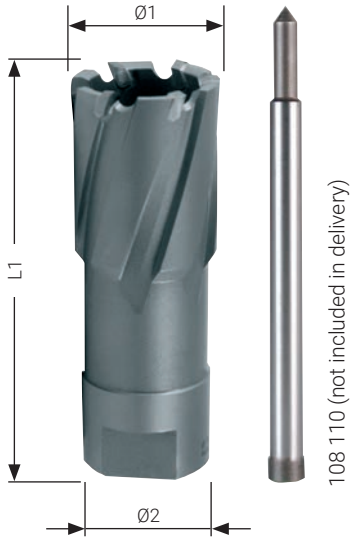
Core drill with carbide cutting edges and Quick IN shank, 50.0 mm

Including Quick IN shank adapter, item no. 108 111
Machine: with Quick IN system holder
Ejector pin: Ø 33.0 to Ø 80.0 mm | Item no. 108 110 (Ø 6.35 x 123.0 mm)

Packaging: plastic tube

Ø1 mm	Ø2 mm	L1 mm	Cutting depth mm	TC / HM	
33.0	18.0	112.0	50.0	108 1133	1
34.0	18.0	112.0	50.0	108 1134	1
35.0	18.0	112.0	50.0	108 1135	1
36.0	18.0	112.0	50.0	108 1136	1
37.0	18.0	112.0	50.0	108 1137	1
38.0	18.0	112.0	50.0	108 1138	1
39.0	18.0	112.0	50.0	108 1139	1
40.0	18.0	112.0	50.0	108 1140	1
41.0	18.0	112.0	50.0	108 1141	1
42.0	18.0	112.0	50.0	108 1142	1
43.0	18.0	112.0	50.0	108 1143	1
44.0	18.0	112.0	50.0	108 1144	1
45.0	18.0	112.0	50.0	108 1145	1
46.0	18.0	112.0	50.0	108 1146	1
47.0	18.0	112.0	50.0	108 1147	1
48.0	18.0	112.0	50.0	108 1148	1
49.0	18.0	112.0	50.0	108 1149	1
50.0	18.0	112.0	50.0	108 1150	1
51.0	18.0	112.0	50.0	108 1151	1
52.0	18.0	112.0	50.0	108 1152	1
53.0	18.0	112.0	50.0	108 1153	1
54.0	18.0	112.0	50.0	108 1154	1
55.0	18.0	112.0	50.0	108 1155	1
60.0	18.0	112.0	50.0	108 1160	1
61.0	18.0	112.0	50.0	108 1161	1
63.0	18.0	112.0	50.0	108 1163	1
65.0	18.0	112.0	50.0	108 1165	1
68.0	18.0	112.0	50.0	108 1168	1
70.0	18.0	112.0	50.0	108 1170	1
71.0	18.0	112.0	50.0	108 1171	1
75.0	18.0	112.0	50.0	108 1175	1
80.0	18.0	112.0	50.0	108 1180	1

Core drill with carbide cutting edges and threaded retainer, 50.0 mm

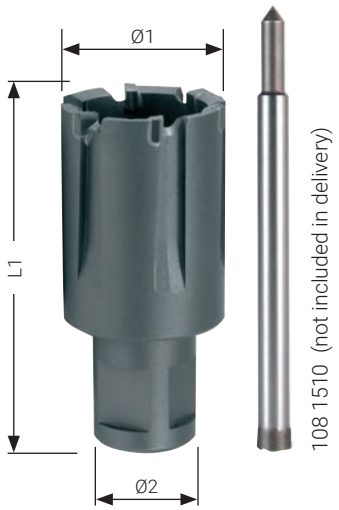


Ejector pin: Item no. 108 110 (Ø 6,35 x 123,0 mm)
Adapter: thread M18 x 6 P1,5

Packaging: plastic tube

Ø1 mm	Ø2 mm	L1 mm	Cutting depth mm	TC / HM	
12.0	MT 2 / 3	84.0	50.0	108 012	1
13.0	MT 2 / 3	84.0	50.0	108 013	1
14.0	MT 2 / 3	84.0	50.0	108 014	1
15.0	MT 2 / 3	84.0	50.0	108 015	1
16.0	MT 2 / 3	84.0	50.0	108 016	1
17.0	MT 2 / 3	84.0	50.0	108 017	1
18.0	MT 2 / 3	84.0	50.0	108 018	1
19.0	MT 2 / 3	84.0	50.0	108 019	1
20.0	MT 2 / 3	84.0	50.0	108 020	1
21.0	MT 2 / 3	84.0	50.0	108 021	1
22.0	MT 2 / 3	84.0	50.0	108 022	1
23.0	MT 2 / 3	84.0	50.0	108 023	1
24.0	MT 2 / 3	84.0	50.0	108 024	1
25.0	MT 2 / 3	84.0	50.0	108 025	1
26.0	MT 2 / 3	84.0	50.0	108 026	1
27.0	MT 2 / 3	84.0	50.0	108 027	1
28.0	MT 2 / 3	84.0	50.0	108 028	1
29.0	MT 2 / 3	84.0	50.0	108 029	1
30.0	MT 2 / 3	84.0	50.0	108 030	1
31.0	MT 2 / 3	84.0	50.0	108 031	1
32.0	MT 2 / 3	84.0	50.0	108 032	1
33.0	MT 2 / 3	84.0	50.0	108 033	1
34.0	MT 2 / 3	84.0	50.0	108 034	1
35.0	MT 2 / 3	84.0	50.0	108 035	1
36.0	MT 2 / 3	84.0	50.0	108 036	1
37.0	MT 2 / 3	84.0	50.0	108 037	1
38.0	MT 2 / 3	84.0	50.0	108 038	1
39.0	MT 2 / 3	84.0	50.0	108 039	1
40.0	MT 2 / 3	84.0	50.0	108 040	1
41.0	MT 2 / 3	84.0	50.0	108 041	1
42.0	MT 2 / 3	84.0	50.0	108 042	1
43.0	MT 2 / 3	84.0	50.0	108 043	1
44.0	MT 2 / 3	84.0	50.0	108 044	1
45.0	MT 2 / 3	84.0	50.0	108 045	1
46.0	MT 2 / 3	84.0	50.0	108 046	1
47.0	MT 2 / 3	84.0	50.0	108 047	1
48.0	MT 2 / 3	84.0	50.0	108 048	1
49.0	MT 2 / 3	84.0	50.0	108 049	1
50.0	MT 2 / 3	84.0	50.0	108 050	1
51.0	MT 2 / 3	84.0	50.0	108 051	1
52.0	MT 2 / 3	84.0	50.0	108 052	1
53.0	MT 2 / 3	84.0	50.0	108 053	1
54.0	MT 2 / 3	84.0	50.0	108 054	1
55.0	MT 2 / 3	84.0	50.0	108 055	1
60.0	MT 2 / 3	84.0	50.0	108 060	1
61.0	MT 2 / 3	84.0	50.0	108 061	1
63.0	MT 2 / 3	84.0	50.0	108 063	1
65.0	MT 2 / 3	84.0	50.0	108 065	1
68.0	MT 2 / 3	84.0	50.0	108 068	1
70.0	MT 2 / 3	84.0	50.0	108 070	1
71.0	MT 2 / 3	84.0	50.0	108 071	1
75.0	MT 2 / 3	84.0	50.0	108 075	1
80.0	MT 2 / 3	84.0	50.0	108 080	1

Core drill with carbide cutting edges and Weldon shank (3/4") for railway tracks, 30.0 mm



Can be used on all track drilling machines. The cutting geometry has been specially optimized for heavy duty chip removal from railway tracks, thus makes efficient use possible.

Ejector pin: Item no. 108 1510 (Ø 8.0 x 81.0 mm)

Packaging: plastic tube

Ø1 mm	Ø2 mm	L1 mm	Cutting depth mm	TC / HM	
19.0	19.0	63.0	30.0	108 1519	1
20.0	19.0	63.0	30.0	108 1520	1
21.0	19.0	63.0	30.0	108 1521	1
22.0	19.0	63.0	30.0	108 1522	1
23.0	19.0	63.0	30.0	108 1523	1
24.0	19.0	63.0	30.0	108 1524	1
25.0	19.0	63.0	30.0	108 1525	1
26.0	19.0	63.0	30.0	108 1526	1
26.5	19.0	63.0	30.0	108 15265	1
27.0	19.0	63.0	30.0	108 1527	1
27.5	19.0	63.0	30.0	108 15275	1
28.0	19.0	63.0	30.0	108 1528	1
29.0	19.0	63.0	30.0	108 1529	1
30.0	19.0	63.0	30.0	108 1530	1
31.0	19.0	63.0	30.0	108 1531	1
32.0	19.0	63.0	30.0	108 1532	1
33.0	19.0	63.0	30.0	108 1533	1
34.0	19.0	63.0	30.0	108 1534	1
36.0	19.0	63.0	30.0	108 1536	1

Ejector pin for HSS core drills

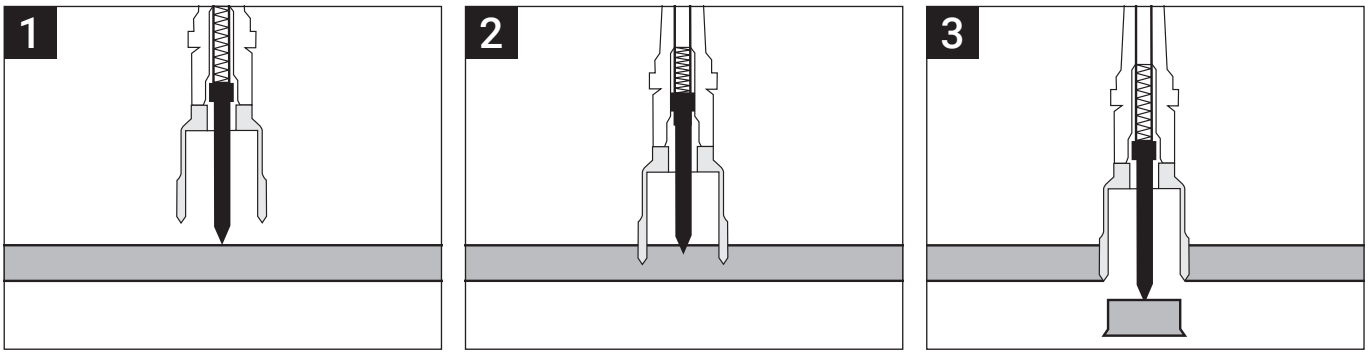
Packaging: plastic tube

	Core drills cutting depth mm	HSS	
Ejector pin Ø 6.35 x 77.0 mm for core drill HSS with Weldon shank	30.0	108 304	1
Ejector pin Ø 6.35 x 87.0 mm for HSS / carbide core drills with Quick IN shank	35.0 / 50.0	108 306	1
Ejector pin Ø 6.35 x 102.0 mm for core drill HSS / HM with Weldon shank	55.0	108 305	1
Ejector pin Ø 8.0 x 155.0 mm for core drill HSS with Weldon shank	110.0	108 2000	1

Ejector pin for HM core drills

Packaging: plastic tube

	Core drills cutting depth mm	HSS	
Ejector pin Ø 8,0 x 81,0 mm for core drills TC with Weldon shank for railway tracks	30.0	108 1510	1
Ejector pin Ø 6,35 x 87,0 mm for core drills HSS / TC with Quick IN shank	35.0 / 50.0	108 306	1
Ejector pin Ø 8,0 x 112,0 mm for core drills TC with Weldon shank	50.0	108 701	1
Ejector pin Ø 6,35 x 123,0 mm for core drills TC with Weldon- and Quick IN shank	50.0 + adapter	108 110	1
Ejector pin Ø 6,35 x 102,0 mm for core drills HSS / TC with Weldon shank	55.0	108 305	1



1 **Centring:**
Position the ejector pin in the centre of the centre punch. The machine is now in the correct drilling position.
Please switch on the magnet now.

2 **Coolant supply:**
The cutting oil is discharged via the ejector pin by means of the automatic internal lubrication system and delivered to the cutting edges in optimum doses.

3 **Ejecting:**
In the final phase of drilling, the drill core is pressed out of the drill hole by the spring-loaded ejector pin.

Speed guide values for HSS core drills

Material:		High carbon struc. steel up to 700 N/mm²	Alloyed steel up to 1000 N/mm²	Cast iron over 250 N/mm²	CuZn-alloy brittle	CuZn-alloy tough	Aluminium alloy up to 11% Si	Thermo-plastics	Duro-plastics
Vc = m/min		30	20	10	60	35	30	20	15
Coolant:		Cutting spray	Cutting spray	Compressed air	Compressed air	Compressed air	Cutting spray	Water	Compressed air
Ø mm	Ø inch	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.
12.0	15/32	796	531	265	1592	929	796	531	398
13.0	33/64	735	490	245	1470	857	735	490	367
14.0	35/64	682	455	227	1365	796	682	455	341
15.0	19/32	637	425	212	1274	743	637	425	318
16.0	5/8	597	398	199	1194	697	597	398	299
17.0	43/64	562	375	187	1124	656	562	375	281
18.0	45/64	531	354	177	1062	619	531	354	265
19.0	3/4	503	335	168	1006	587	503	335	251
20.0	25/32	478	318	159	955	557	478	318	239
21.0	53/64	455	303	152	910	531	455	303	227
22.0	7/8	434	290	145	869	507	434	290	217
23.0	29/32	415	277	138	831	485	415	277	208
24.0	15/16	398	265	133	796	464	398	265	199
25.0	63/64	382	255	127	764	446	382	255	191
26.0	1 1/32	367	245	122	735	429	367	245	184
27.0	1 1/16	354	236	118	708	413	354	236	177
28.0	1 3/32	341	227	114	682	398	341	227	171
29.0	1 9/64	329	220	110	659	384	329	220	165
30.0	1 3/16	318	212	106	637	372	318	212	159
31.0	1 7/32	308	205	103	616	360	308	205	154
32.0	1 17/64	299	199	100	597	348	299	199	149
33.0	1 19/64	290	193	97	579	338	290	193	145
34.0	1 11/32	281	187	94	562	328	281	187	141
35.0	1 3/8	273	182	91	546	318	273	182	136
36.0	1 27/64	265	177	88	531	310	265	177	133
37.0	1 29/64	258	172	86	516	301	258	172	129
38.0	1 1/2	251	168	84	503	293	251	168	126
39.0	1 17/32	245	163	82	490	286	245	163	122
40.0	1 37/64	239	159	80	478	279	239	159	119
41.0	1 39/64	233	155	78	466	272	233	155	117
42.0	1 21/32	227	152	76	455	265	227	152	114
43.0	1 11/16	222	148	74	444	259	222	148	111
44.0	1 47/64	217	145	72	434	253	217	145	109
45.0	1 25/32	212	142	71	425	248	212	142	106
46.0	1 13/16	208	138	69	415	242	208	138	104
47.0	1 55/64	203	136	68	407	237	203	136	102
48.0	1 57/64	199	133	66	398	232	199	133	100
49.0	1 15/16	195	130	65	390	227	195	130	97
50.0	1 31/32	191	127	64	382	223	191	127	96
51.0	2	187	125	62	375	219	187	125	94
52.0	2 3/64	184	122	61	367	214	184	122	92
53.0	2 3/32	180	120	60	361	210	180	120	90
54.0	2 1/8	177	118	59	354	206	177	118	88
55.0	2 5/32	174	116	58	347	203	174	116	87
60.0	2 3/8	159	106	53	318	186	159	106	80

Speed guide values for core drills with tungsten carbide cutting edges

Material:		High carbon struc. steel up to 700 N/mm²	Alloyed steel up to 1000 N/mm²	Cast iron over 250 N/mm²	CuZn-alloy brittle	CuZn-alloy tough	Aluminium alloy up to 11% Si	Thermo-plastics	Duro-plastics
Vc = m/min		50	35	40	60	40	60	45	40
Coolant:		Cutting spray	Cutting spray	Compressed air	Compressed air	Compressed air	Cutting spray	Water	Compressed air
Ø mm	Ø inch	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.
12.0	15/32	1327	929	1062	1592	265	1592	1194	1062
13.0	33/64	1225	857	980	1470	245	1470	1102	980
14.0	35/64	1137	796	910	1365	227	1365	1024	910
15.0	19/32	1062	743	849	1274	212	1274	955	849
16.0	5/8	995	697	796	1194	199	1194	896	796
17.0	34/64	937	656	749	1124	187	1124	843	749
18.0	45/64	885	619	708	1062	177	1062	796	708
19.0	3/4	838	587	670	1006	168	1006	754	670
20.0	25/32	796	557	637	955	159	955	717	637
21.0	3/4	758	531	607	910	152	910	682	607
22.0	7/8	724	507	579	869	145	869	651	579
23.0	13/16	692	485	554	831	138	831	623	554
24.0	15/16	663	464	531	796	133	796	597	531
25.0	63/64	637	446	510	764	127	764	573	510
26.0	1 1/32	612	429	490	735	122	735	551	490
27.0	1 1/16	590	413	472	708	118	708	531	472
28.0	1 3/32	569	398	455	682	114	682	512	455
29.0	1 9/64	549	384	439	659	110	659	494	439
30.0	1 3/16	531	372	425	637	106	637	478	425
31.0	1 7/32	514	360	411	616	103	616	462	411
32.0	1 17/64	498	348	398	597	100	597	448	398
33.0	1 19/64	483	338	386	579	97	579	434	386
34.0	1 11/32	468	328	375	562	94	562	422	375
35.0	1 3/8	455	318	364	546	91	546	409	364
36.0	1 27/64	442	310	354	531	88	531	398	354
37.0	1 29/64	430	301	344	516	86	516	387	344
38.0	1 1/2	419	293	335	503	84	503	377	335
39.0	1 17/32	408	286	327	490	82	490	367	327
40.0	1 37/64	398	279	318	478	80	478	358	318
41.0	1 39/64	388	272	311	466	78	466	350	311
42.0	1 21/32	379	265	303	455	76	455	341	303
43.0	1 11/16	370	259	296	444	74	444	333	296
44.0	1 47/64	362	253	290	434	72	434	326	290
45.0	1 25/32	354	248	283	425	71	425	318	283
46.0	1 13/16	346	242	277	415	69	415	312	277
47.0	1 55/64	339	237	271	407	68	407	305	271
48.0	1 57/64	332	232	265	398	66	398	299	265
49.0	1 15/16	325	227	260	390	65	390	292	260
50.0	1 31/32	318	223	255	382	64	382	287	255
51.0	2	312	219	250	375	62	375	281	250
52.0	2 3/64	306	214	245	367	61	367	276	245
53.0	2 3/32	300	210	240	361	60	361	270	240
54.0	2 1/8	295	206	236	354	59	354	265	236
55.0	2 5/32	290	203	232	347	58	347	261	232
60.0	2 3/8	265	186	212	318	53	318	239	212
61.0	2 13/32	261	183	209	313	52	313	235	209
65.0	2 9/16	245	171	196	294	49	294	220	196
68.0	2 43/64	234	164	187	281	47	281	211	187
70.0	2 3/4	227	159	182	273	45	273	205	182
71.0	2 51/64	224	157	179	269	45	269	202	179
75.0	2 61/64	212	149	170	255	42	255	191	170
80.0	3 5/32	199	139	159	239	40	239	179	159
85.0	3 11/32	187	131	150	225	37	225	169	150
90.0	3 35/64	177	124	142	212	35	212	159	142
95.0	3 47/64	168	117	134	201	34	201	151	134
100.0	3 15/16	159	111	127	191	32	191	143	127