

# **Tools – Step Drill Bits**



101701 shown



101701T shown



101701E shown



101702T shown

## Split Point Step Drills

The spiral flutes of RUKO high-performance step drills are CBN-ground from the solid hardened form. Because CBN (cubical boron nitride) is a much harder abrasive than even silicon carbide or corundum, a better and sharper cutting edge is achieved without burrs. Because of this higher dimensional precision, the drills will last considerably longer while maintaining precise process tolerances. Drill bits are available in High Speed Steel, Cobalt 5 alloy High Speed Steel and Titanium Nitride-coated High Speed Steel. HSS-Co5 bits are the best choice for cutting stainless steels. The added titanium nitride coating increases the surface hardness to approximately 2300 HV and the heat resistance to 1100°F (600°C).

- Point Cut: split point DIN 1412 C
- Point angle: 118°
- Step angle: 90°
- Right-hand cutting



CBN-ground flute



Axial relief produced by CBN grinding



CBN-ground relief angle

## Features

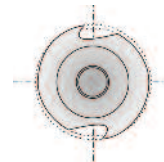
What makes these step drills special?

- CBN-ground flutes without burrs mean a superior cutting edge and longer tool life.
- Each step has a radially adjusted relief produced by CBN grinding, relating directly to the diameter of the step, so the cutting edge is always the highest point of the diameter.
- Each step is axially CBN relief-ground, meaning the cutting edge is also the highest point of the axial cutting axis.
- The cutting edge of each step has relief angle, meaning the cutting edge is also the highest point in advance direction.
- The CBN-ground point ensures centering and spot-drilling, even in thin-walled material.

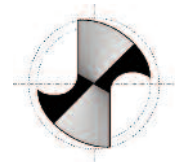
## Application

Use High Speed Steel drills, HSS Cobalt 5 and HSS-TiN coated drills for:

- Sheet metal working in electrical, sanitary engineering, heating technologies, automotive, mechanical engineering, switching systems and aviation
- Non-ferrous metal, steel, stainless steel, thermoplastics, duroplastics, sheet metals up to 0.16" (8 ga.) thick
- Center, spot-drill, bore and debur - all in one operation



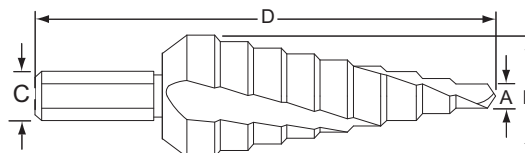
Radially adjusted relief produced by CBN grinding



CBN-ground bit with split point DIN 1412C

## Self-Starting Step Drill Bits

Fractional	Part #	Pcs	Price	Part #	Pcs	Price	Part #	Pcs	Price	Drill	Steps	Min Drill	Max Drill	Shank	Overall
	High Speed Steel	/Pkg		Titanium Coated	/Pkg		Cobalt 5	/Pkg		Size		Size A (in.)	Size B (in.)	Diameter C (in.)	Length D (in.)
	101701	1	<--->	101701T	1	<--->	101701E	1	<--->	1	3/16" to 1/2" in 1/16" increments	3/16	1/2	1/4	3-1/8
	101702	1	<--->	101702T	1	<--->	101702E	1	<--->	2	1/8" to 1/2" in 1/32" increments	1/8	1/2	1/4	2-7/8
	101703	1	<--->	101703T	1	<--->	101703E	1	<--->	3	1/4" to 3/4" in 1/16" increments	1/4	3/4	3/8	2-7/8
	101704	1	<--->	101704T	1	<--->	101704E	1	<--->	4	3/16" to 7/8" in 1/16" increments	3/16	7/8	3/8	3-1/4
	101705	1	<--->	101705T	1	<--->	101705E	1	<--->	5	13/32", 9/16" to 1" in 1/16" increments	1/4	1	3/8	3-1/16
	101706	1	<--->	101706T	1	<--->	101706E	1	<--->	6	7/8", 1-1/8", 1-7/32", 1-1/4", 1-3/8"	1/4	1-3/8	3/8	3
	101707	1	<--->	101707T	1	<--->	101707E	1	<--->	7	3/8", 1/2"	3/16	1/2	1/4	1-7/8
	101708	1	<--->	101708T	1	<--->	not available	-	-	8	7/8"	11/64	7/8	3/8	2
	101709	1	<--->	101709T	1	<--->	101709E	1	<--->	9	7/8", 1-1/8"	1/4	1-1/8	3/8	2-7/16



Spiral flute step drill bit



# Tools – Jobber Length Drill Bits

Jobber Length Drill Bits - Metric Sizes Continued									
Metric	Part # High Speed Steel	Pcs/Pkg	Price	Part # Cobalt 5	Pcs/Pkg	Price	Drill Size A (mm)	Flute Length B (in.)	Overall Length C (in.)
	214075	10	<--->	215075	10	<--->	7.5	69.0	109.0
	214080	10	<--->	215080	10	<--->	8.0	75.0	117.0
	214085	10	<--->	215085	10	<--->	8.5	75.0	117.0
	214090	10	<--->	215090	10	<--->	9.0	81.0	125.0
	214095	10	<--->	215095	10	<--->	9.5	81.0	125.0
	214100	10	<--->	215100	10	<--->	10.0	87.0	133.0
	214102	10	<--->	215102	10	<--->	10.2	87.0	133.0
	214105	5	<--->	215105	5	<--->	10.5	87.0	133.0
	214110	5	<--->	215110	5	<--->	11.0	94.0	142.0
	214115	5	<--->	215115	5	<--->	11.5	94.0	142.0
	214120	5	<--->	215120	5	<--->	12.0	101.0	151.0
	214125	5	<--->	215125	5	<--->	12.5	101.0	151.0
	214130	5	<--->	215130	5	<--->	13.0	101.0	151.0



# Tools – Drill Bit Sets



Jobber length drill set  
214214R0 shown

Drill Bit Sets		
Part #	Price	Description
101026USR0	<--->	<b>Three-piece Step Drill Bit Set</b> High Speed Steel, bright finish, spiral fluted with split point. Drill size 1: 6 steps from 3/16" to 1/2" with 1/16" increments. Shank size 1/4" Drill size 2: 13 steps from 1/8 to 1/2" with 1/32" increments. Shank size 1/4" Drill size 3: 9 steps from 1/4" to 3/4" with 1/16" increments. Shank size 3/8"
101026USER0	<--->	<b>Three-piece Step Drill Bit Set</b> HSS-Co5 spiral fluted with split point. Drill size 1: 6 steps from 3/16" to 1/2" with 1/16" increments. Shank size 1/4" Drill size 2: 13 steps from 1/8 to 1/2" with 1/32" increments. Shank size 1/4" Drill size 3: 9 steps from 1/4" to 3/4" with 1/16" increments. Shank size 3/8"
101026USTRO	<--->	<b>Three-piece Step Drill Bit Set</b> HSS-TiN coated spiral fluted with split point. Drill size 1: 6 steps from 3/16" to 1/2" with 1/16" increments. Shank size 1/4" Drill size 2: 13 steps from 1/8 to 1/2" with 1/32" increments. Shank size 1/4" Drill size 3: 9 steps from 1/4" to 3/4" with 1/16" increments. Shank size 3/8"
214214R0	<--->	<b>19-piece jobber Length Drill Set</b> Metric sizes 1.0 to 10.0 mm in increments of 0.5 mm High-speed steel, 118 degrees point
214215R0	<--->	<b>25-piece jobber Length Drill Set</b> Metric sizes 1.0 to 13.0 mm in increments of 0.5 mm High-speed steel, 118 degrees point
215214R0	<--->	<b>19-piece jobber Length Drill Set</b> Metric sizes 1.0 to 10.0 mm in increments of 0.5 mm High-speed steel Cobalt 5 alloy, 135 degrees point
215215R0	<--->	<b>25-piece jobber Length Drill Set</b> Metric sizes 1.0 to 13.0 mm in increments of 0.5 mm High-speed steel Cobalt 5 alloy, 135 degrees point
214850R0	<--->	<b>21-piece jobber Length Drill Set</b> Fractional sizes 1/16" to 3/8" in increments of 1/64" High-speed steel, 118 degrees point
214851R0	<--->	<b>29-piece jobber Length Drill Set</b> Fractional sizes 1/16" to 1/2" in increments of 1/64" High-speed steel, 118 degrees point.
215850R0	<--->	<b>21-piece jobber Length Drill Set</b> Fractional sizes 1/16" to 3/8" in increments of 1/64" High-speed steel Cobalt 5 alloy, 135 degrees point
215851R0	<--->	<b>29-piece jobber Length Drill Set</b> Fractional sizes 1/16" to 1/2" in increments of 1/64" High-speed steel Cobalt 5 alloy, 135 degrees point.
250850TRO	<--->	<b>21-piece jobber Length Drill Set</b> Fractional sizes 1/16" to 3/8" in increments of 1/64" TiN-coated high-speed steel, 118 degrees point
250851TRO	<--->	<b>29-piece jobber Length Drill Set</b> Fractional sizes 1/16" to 1/2" in increments of 1/64" TiN-coated high-speed steel, 118 degrees point