

UD ULTRA PARABOLIC TWIST DRILL SELECTION GUIDE

MATERIAL TYPES		HARDNESS HB	TENSILE STRENGTH N/mm ²	NORMAL CHIP FORM	DRILL TYPE	SURFACE TREATMENT
Steel	Free cutting steels	≤ 120	≤ 400	extra long	UDL	TiN
	Structural steel, Case carburizing steel	≤ 200	≤ 700	middle/long	UDL	TiN
	Plain Carbon steel	≤ 250	≤ 850	long	UDL	TiN TiAlN
	Alloy steel	> 250	≤ 850	long	UDL	TiN TiAlN
	Alloy steel, Hardened and tempered steel	> 250 ≤ 350	> 850 ≤ 1200	long	UDL	TiN TiAlN
	Alloy steel, Hardened and tempered steel	> 350	> 1200	long	UDL	TiN TiAlN
Stainless Steel	Free machining stainless steel	≤ 250	≤ 850	middle	UDL	TiN TiAlN
	Austenitic	≤ 250	≤ 850	long	UDL	TiN TiAlN
	Ferritic + Austenitic, Ferritic, Martensitic	≤ 300	≤ 1000	long	UDL	TiN TiAlN
Cast Iron	Lamellar Graphite	≤ 150	≤ 500	extra short	UDC	TiAlN
	Lamellar Graphite	> 150 ≤ 300	> 500 ≤ 1000	extra short	UDC	TiAlN
	Nodular graphite, Malleable Cast Iron	≤ 200	≤ 700	middle/short	UDC	TiAlN
	Nodular graphite, Malleable Cast Iron	> 200 ≤ 300	> 700 ≤ 1000	middle/short	UDC	TiAlN
Titanium	Titanium, unalloyed	≤ 200	≤ 700	extra long	UDL	TiAlN
	Titanium, alloyed	≤ 270	≤ 900	middle/short	UDS	TiAlN
	Titanium, alloyed	> 270 ≤ 350	> 900 ≤ 1200	middle/short	UDS	TiAlN
Nickel	Nickel, unalloyed	≤ 150	≤ 500	extra long	UDL	TiAlN
	Nickel, alloyed	≤ 270	≤ 900	long	UDL	TiAlN
	Nickel, alloyed	> 270 ≤ 350	> 900 ≤ 1200	long	UDL	TiAlN
Copper	Copper	≤ 100	≤ 350	extra long	UDL	TiN
	Beta Brass, Bronze	≤ 200	≤ 700	middle/short	UDS	TiN
	Alpha Brass	≤ 200	≤ 700	long	UDL	TiN
	High strength Bronze	≤ 470	≤ 1500	short	UDS	TiN
Aluminium Magnesium	Al, Mg, unalloyed	≤ 100	≤ 350	extra long	UDL	TiN
	Al alloyed, Si < 0.5%	≤ 150	≤ 500	middle	UDL	TiN
	Al alloyed, Si > 0.5% < 10%	≤ 120	≤ 400	middle/short	UDS	TiN
	Al alloyed, Si > 10% Al-alloys, Mg-alloys	≤ 120	≤ 400	short	UDS	TiN
Synthetic Materials	Thermoplastics	-	-	extra long	UDL	TiN
	Thermosetting plastics	-	-	short	UDS	TiN

Refer to catalogue for speeds and feeds

UD ULTRA PARABOLIC TWIST DRILLS



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Head Office and Surface Coating Division
Somta House, 290-294 Moses Mabhida (Edendale) Road,
Pietermaritzburg, 3201
Private Bag X401, Pietermaritzburg, 3200
South Africa

Tel: Factory: +27 33 355 6600
Fax: Factory: +27 33 394 0564
Tel: Sales: +27 11 390 8700 (Local)
Fax: Sales: +27 11 397 6720 (Local)
Email: jhbsales@somta.co.za (Local)
Tel: Sales: +27 33 355 6600 (Exports)
Fax: Sales: +27 33 394 7509 (Exports)
Email: exports@somta.co.za (Exports)

Gauteng Sales Office
43 Bisset Road, Hughes Ext. 7, Boksburg, 1459
P.O.Box 14212, Witfield, 1467
South Africa

Tel: +27 11 390 8700
Fax: +27 11 397 6720
Sharecall: 086 010 4367
Email: jhbsales@somta.co.za

Technical Information:
Email: tech@somta.co.za
Toll Free Number: 0800 331 399

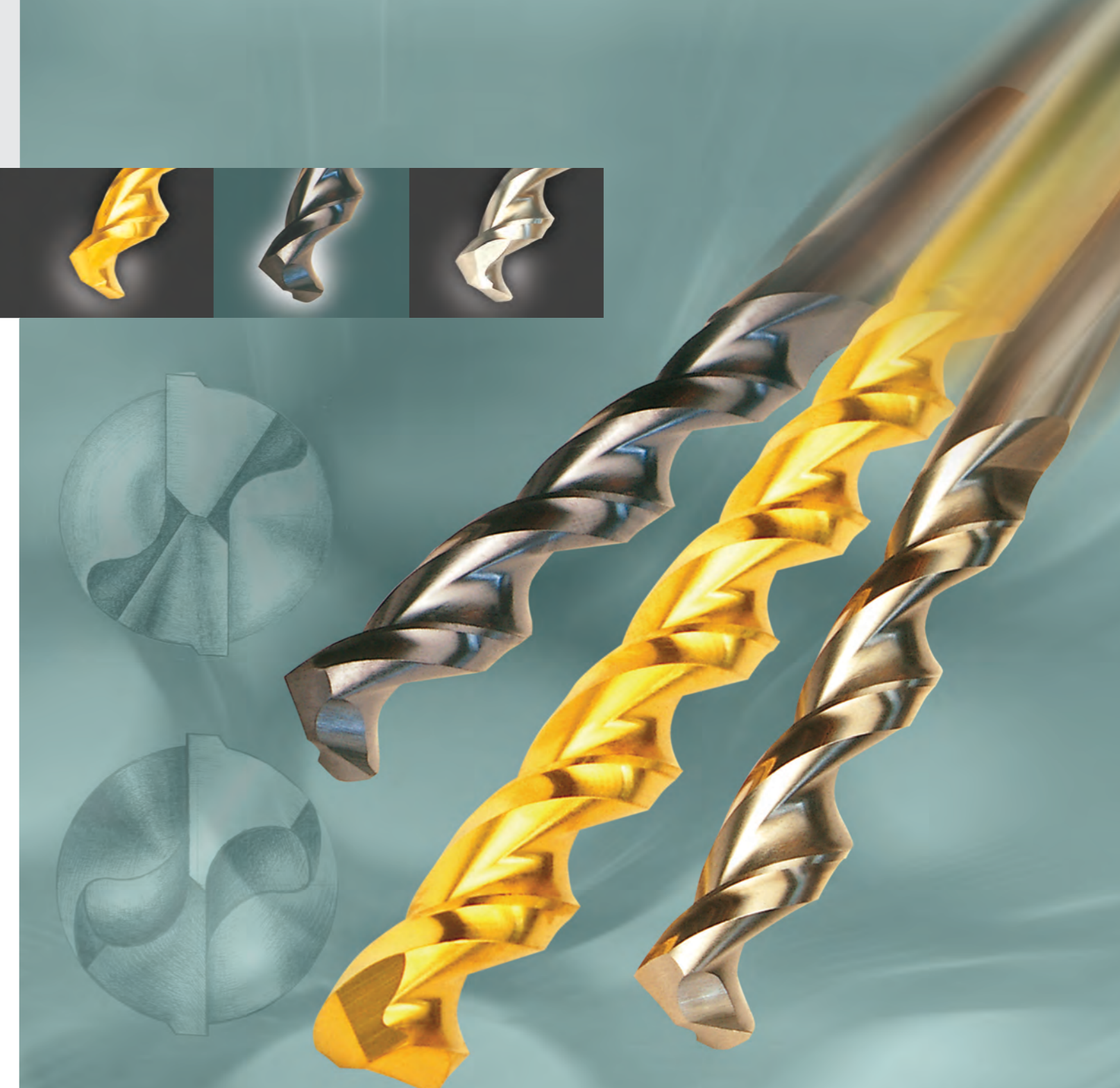


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YEAR OF PRINT: 2021



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UD ULTRA PARABOLIC TWIST DRILLS

Heavy Duty

UD ULTRA PARABOLIC FORM TWIST DRILL RANGE

This range of drills is specifically designed to meet the challenges of a broad spectrum of difficult drilling applications.

Available in Fractional and Metric, sizes in Stub, Jobber, Long Series and Extra Length.

Refer to catalogue for details

PRODUCT TYPES

UDL Designed for LONG CHIP FORMING MATERIALS, such as Aluminium, Copper and Stainless Steels, with special UX Notch point or Split point.

UDS Designed for SHORT CHIP FORMING MATERIALS, such as Titanium and Nickel Chrome Alloys, with special UX Notch point or Split point.

UDC Designed for CAST IRON and ABRASIVE MATERIALS, with double angled DX point.

BENEFITS OF THE HEAVY DUTY UD DRILL RANGE

- Easier penetration and reduced time per hole
- Increased hole depth and accuracy
- Increased number of holes per sharpening
- Reduced drilling cost
- Coatings - these drills can be supplied with either TiN, TiCN or TiAlN coatings to further enhance their performance. Suggested coatings are indicated in the drill selection guide.

DRILL CHARACTERISTICS

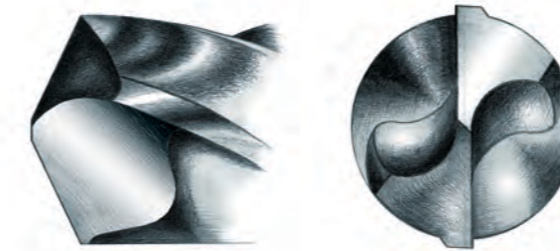
Flutes Wide, polished, "PARABOLIC FORM" flutes with 40° helix on UDL and 30° helix on UDS and UDC drills provide fast chip removal and reduced heat generation at the point. The increased web thickness allows increased feed rates.

Materials Manufactured from HSS-Co (5% Cobalt) to ensure increased wear and heat resistance during drilling operations.

POINT STYLES

UX NOTCHED POINT - TO DIN 1412 FORM D

The 130° special notched "UX" point style provides self centering, easier penetration, improved hole accuracy and improved load distribution. This special notch geometry gives a corrected rake angle of 15° which provides a strong point for harder materials, as well as preventing snatching with materials such as Aluminium, Brass, Bronze and Plastics.



UX NOTCH POINT GEOMETRY

SPLIT POINT - TO DIN 1412 FORM C

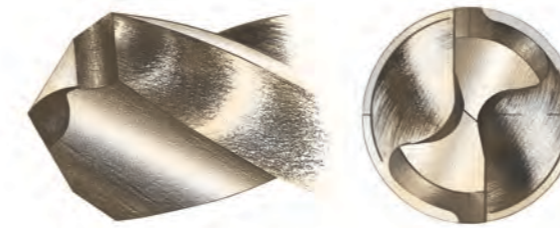
The 130° SPLIT POINT is a conventional point providing self centering and easier penetration.



SPLIT POINT GEOMETRY

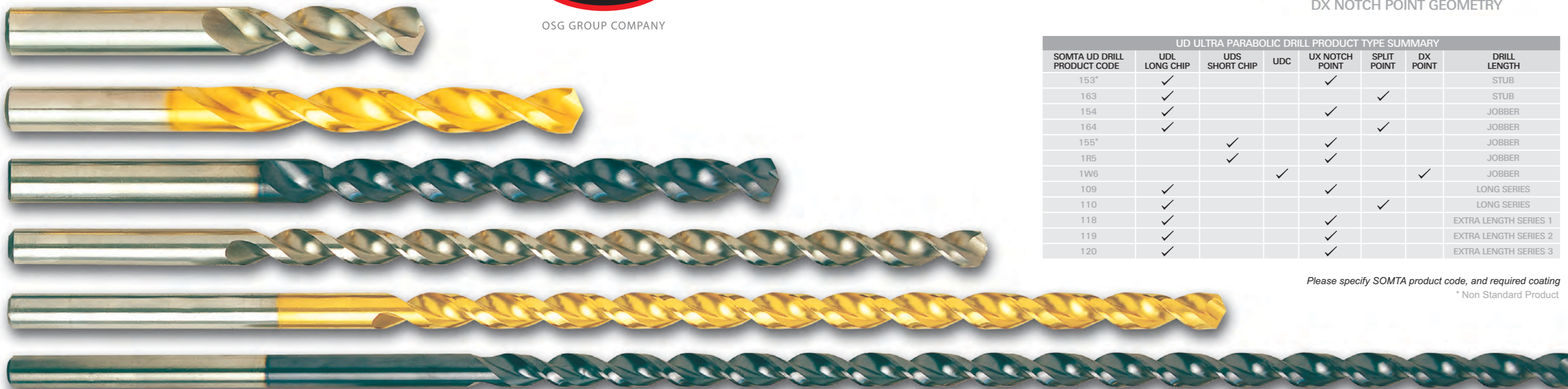
DX NOTCHED POINT

The double angled "DX" point, 118° / 70° minimizes wear on the outer corners of the drill point in highly abrasive materials such as Cast Iron and Reinforced Plastics. The point is web thinned for easier penetration.



DX NOTCH POINT GEOMETRY

ACTUAL SIZE



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UD ULTRA PARABOLIC DRILL PRODUCT TYPE SUMMARY							
SOMTA UD DRILL PRODUCT CODE	UDL LONG CHIP	UDS SHORT CHIP	UDC	UX NOTCH POINT	SPLIT POINT	DX POINT	DRILL LENGTH
153*	✓			✓			STUB
163	✓				✓		STUB
154	✓			✓			JOBBER
164	✓				✓		JOBBER
155*		✓		✓			JOBBER
1R5		✓		✓			JOBBER
1W6			✓			✓	JOBBER
109	✓			✓			LONG SERIES
110	✓				✓		LONG SERIES
118	✓			✓			EXTRA LENGTH SERIES 1
119	✓			✓			EXTRA LENGTH SERIES 2
120	✓			✓			EXTRA LENGTH SERIES 3

Please specify SOMTA product code, and required coating
* Non Standard Product

