

BALL NOSE SOLUTIONS

- Optimised for exotic materials
- New generation ball design
- Higher precision
- Longer lasting



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🇬🇧 **Ball gash design** ensures positive cutting around entire ball shape.

🇫🇷 Conception d'entaille à billes
🇮🇹 Design a squarcio a sfera
🇪🇸 Diseño de herida de bola

🇬🇧 **New ball grinding technique** improves tool precision resulting in better finish and accuracy in copy milling applications.

🇫🇷 Nouvelle technique de broyage à billes
🇮🇹 Nuova tecnica di macinazione delle sfere
🇪🇸 Nueva técnica de molienda de bolas

🇬🇧 **Optimised geometry** for high temp and high strength materials.

🇫🇷 Géométrie optimisée
🇮🇹 Geometria ottimizzata
🇪🇸 Geometría optimizada

🇬🇧 **New centre geometry** for improved positive cutting forces

🇫🇷 Nouvelle géométrie centrale
🇮🇹 Nuova geometria centrale
🇪🇸 Nueva geometría central

🇬🇧 **Long neck design** for extra clearance and reach.

🇫🇷 Conception à long cou
🇮🇹 Modello a collo lungo
🇪🇸 Diseño de cuello largo

🇬🇧 **Xceed coating** supports resistance to abrasive wear, particularly at centre.

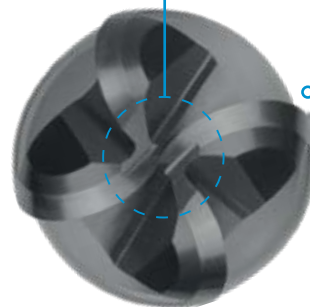
🇫🇷 Revêtement Xceed
🇮🇹 Rivestimento Xceed
🇪🇸 Recubrimiento Xceed

🇬🇧 **New generation design**

🇫🇷 Conception de nouvelle génération
🇮🇹 Design di nuova generazione
🇪🇸 Diseño de nueva generación

🇬🇧 **Conventional design**

🇫🇷 Conception conventionnelle
🇮🇹 Disegno convenzionale
🇪🇸 Diseño convencional





- VHM-ULTRA grade of carbide for high performance
- For profile & contour milling in long reach applications
- Suitable for materials up to 1600 N/mm²
- Xceed for longer tool life



Fraise 4 dents carbure, R30° UNI, Longue

- Grade de carbure VHM-ULTRA pour des performances élevées
- Pour le fraisage de formes et de poches profondes
- Convient aux matériaux jusqu'à 1600 N/mm²
- Xceed et VHM-ULTRA pour une meilleure durée de vie



Frese metallo duro, Sferiche, 4 Taglienti, R30 UNI, Lunga Portata

- VHM-ULTRA, grado di metallo duro per alte prestazioni
- Ideale per lavorazioni di contornatura e profilatura
- Adatta per materiali fino a 1600 N/mm²
- Xceed per Ottimizzare vita utensile



Fresas de MD, Esféricas, 4 ranuras, R30 UNI, Larga

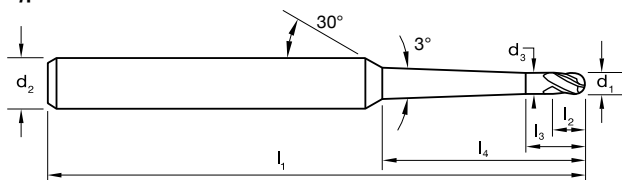
- Grado de MD, VHM-ULTRA para alto rendimiento
- Para fresado de perfiles y contornos en aplicaciones de largo alcance
- Adecuado para materiales hasta 1600 N/mm²
- Xceed para una mayor vida útil de la herramienta



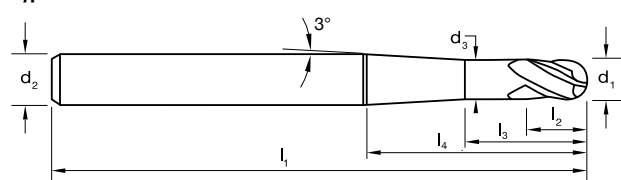
Catalogue Code	E481
Discount Group	B0210
Material	VHM-ULTRA
Surface Finish	<i>Xceed</i>
Sutton Designation	TINIVA
Geometry	R30
Shank Form (DIN 6535)	HA
Shank Tolerance	h5

Size Ref.	d1 (e8)	l1	l2	l3	l4	d2	d3	z	Angle 1	Angle 2	Item #
TYPE 1											
0200	2.0	62	3	7.0	24	6	1.9	4	3°	30°	E481 0200
0300	3.0	62	4	9.5	24.6	6	2.8	4	3°	30°	E481 0300
0400	4.0	62	5	12.0	25.3	6	3.8	4	3°	30°	E481 0400
TYPE 2											
0500	5.0	80	6	14.5	26	6	4.8	4	3°		E481 0500
TYPE 3											
0600	6.0	80	7	17.0		6	5.7	4			E481 0600
0800	8.0	90	9	22.0		8	7.6	4			E481 0800
1000	10.0	100	11	27.0		10	9.5	4			E481 1000
1200	12.0	120	13	32.0		12	11.5	4			E481 1200
1600	16.0	140	17	42.0		16	15.5	4			E481 1600

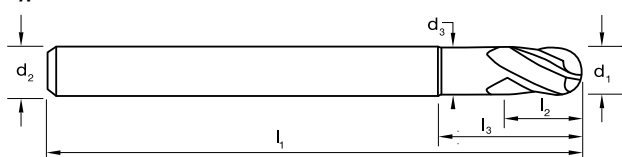
Type 1: 2.0 - 4.0mm



Type 2: 5.0mm



Type 3: 6.0 - 16.0mm

[illegible]

^a VDI 3323 material groups can also be determined by referring to the workpiece material cross reference listing. Refer to main index of this section.

Catalogue Code
Material
Surface Finish
Sutton Designation
Type of Cut: Slotting
Finishing
Universal
Roughing
Profiling
↑↓ ap × Ø
↔ ae × Ø

	
E481	
VHM-ULTRA	
Xceed	
UNI	
	•
	0.1
	0.05



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