

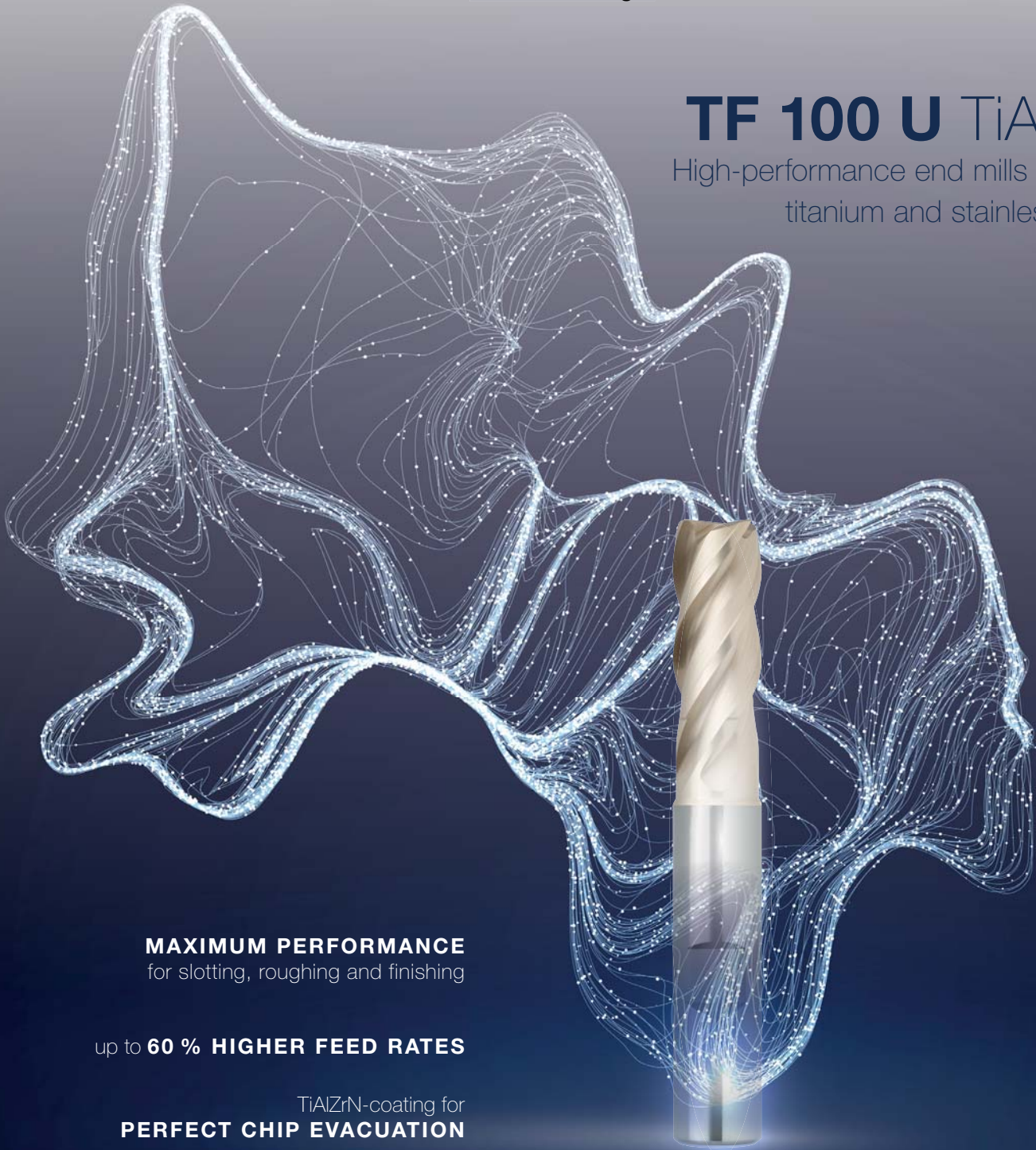


HARTNER

Precision Cutting Tools

TF 100 U TiAlZrN

High-performance end mills for steel,
titanium and stainless steels



MAXIMUM PERFORMANCE
for slotting, roughing and finishing

up to **60 % HIGHER FEED RATES**

TiAlZrN-coating for
PERFECT CHIP EVACUATION



TiAlZrN-COATING

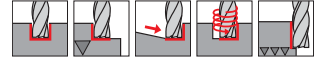
TiAlZrN-coating relies on a proven TiN and TiAlN multi-layer structure combined with a ZrN based cover coating. The multi-layer structure guarantees good values of hardness and toughness and the zirconium-based top layer minimises the chemical reaction between the coating and the material to be machined thereby reducing the development of edge build-up and the adhesion of the material to the cutting edge as much as possible.



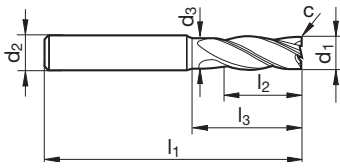
Article no. 84981



P	M	K	N	S	H
•	•			•	



centre cutting • with neck clearance • for materials up to 48 HRC



d1 h10 mm	d2 h6 mm	l1 mm	l2 mm	l3 mm	c mm x 45°	Z	Code no.
6.000	6.000	57.00	13.00	20.00	0.15	4	6.000
8.000	8.000	63.00	19.00	26.00	0.15	4	8.000
10.000	10.000	72.00	22.00	30.00	0.20	4	10.000
12.000	12.000	83.00	26.00	36.00	0.20	4	12.000
16.000	16.000	92.00	32.00	42.00	0.35	4	16.000
20.000	20.000	104.00	38.00	52.00	0.45	4	20.000

	Hardness	Cutting depth a_p	Cutting width a_e	Cutting speed v_c	fz (mm/z) with nom. Ø						
					3	6	8	10	12	16	20
P	≤ 850 N/mm ²	2 x d	0.3 x d	200	0.02	0.04	0.055	0.07	0.085	0.1	0.12
M	≤ 750 N/mm ²	2 x d	0.3 x d	140	0.018	0.035	0.045	0.06	0.07	0.09	0.1
	≥ 750 N/mm ²	2 x d	0.3 x d	120	0.016	0.03	0.04	0.055	0.065	0.08	0.095
S	≤ 1300 N/mm ²	2 x d	0.2 x d	130	0.02	0.03	0.04	0.06	0.07	0.08	0.09

Peripheral cooling recommended for optimal chip evacuation and tool life.