INNOTOOL
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HFD MINI Tips & Parameters

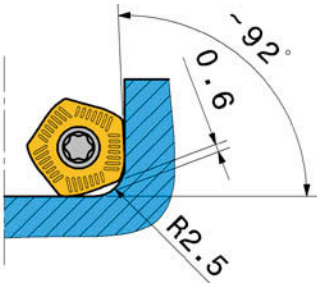
High Feed Insert PEMT0502ZCTR-HR

For tightening the insert screws please always use a torque driver (1.1 Nm).
We recommend our driver DTN011S with TX8-Bit DS-T08TB.

The insert enables a max. cutting depth of ap = 1 mm and a feed rate up to fz = 1.5 mm.
The PEMT0502ZCTR-HR has a durable cutting edge and can also be used for ramping.

Programming Tip:

Please use a corner radius of 2.5 mm in your NC-program when machining 3D-contours. The maximum allowance will then be up to 0.6 mm



Recommended Cutting Data for PEMT0502ZCTR-HR:

ISO	material	cutting parameters	IN2505	IN2035
P	unalloyed steel <900 N/mm²	cutting speed Vc [m/min]	180 - 300	-
		feed rate per tooth fz [mm]	0.5 - 1.5	-
	alloyed steel 900-1100 N/mm²	cutting speed Vc [m/min]	160 - 250	-
		feed rate per tooth fz [mm]	0.5 - 1.0	-
	alloyed steel 1100-1400 N/mm²	cutting speed Vc [m/min]	120 - 160	-
		feed rate per tooth fz [mm]	0.5 - 0.8	-
M	stainless steel	cutting speed Vc [m/min]	120 - 180	120 - 180
		feed rate per tooth fz [mm]	0.5 - 1.2	0.5 - 1.2
K	cast iron	cutting speed Vc [m/min]	180 - 300	-
		feed rate per tooth fz [mm]	0.5 - 1.5	-
S	titanium	cutting speed Vc [m/min]	35 - 50	-
		feed rate per tooth fz [mm]	0.5 - 1.0	-

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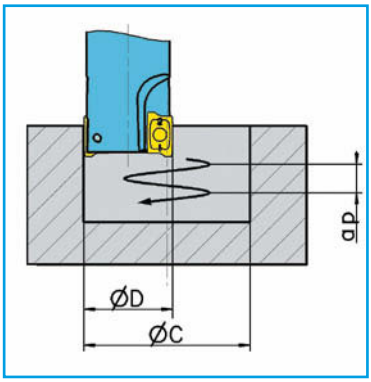
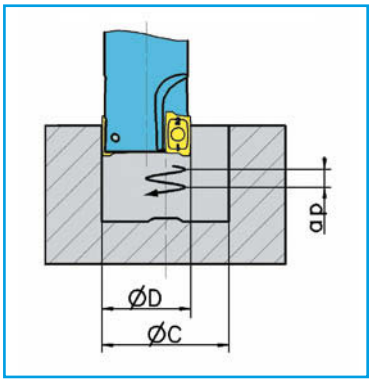
Ramping & Circular Interpolation

High Feed Insert PEMT0502ZCTR-HR



Hole with flat ground



Hole with uneven ground
resp. through hole

cutter dia. [mm]	ramping angle	ap_{max} [mm]	$C_{min\sim}$ [mm]	$C_{min\_}$ [mm]	$C_{max\_}$ [mm]	$C_{max\sim}$ [mm]
20	9.6°	1	27.3	30	30.5	39
25	5.2°	1	37.3	40	40.5	49
32	3.4°	1	51.3	54	54.5	63
35	3.0°	1	57.3	60	60.5	69
40	2.5°	1	67.3	70	70.5	79
42	2.3°	1	71.3	74	74.5	83
50	1.8°	1	87.3	90	90.5	99
52	1.7°	1	91.3	94	94.5	103
63	1.4°	1	113.3	116	116.5	125
66	1.4°	1	119.3	122	122.5	131

Order-No.: 7850856