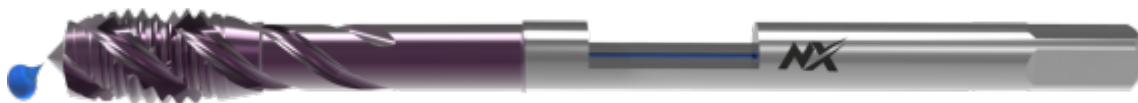


Machine tap with right-hand spiral flutes 50°

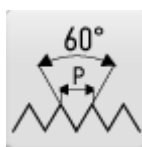


CATALOGUE NUMBER: 4220NXIKZ

High performance machine tap with 50° spiral flutes and axial cooling, metric, DIN 376, Balinit Hardlube coated, suitable for universal use.



THREAD M
ISO Metric coarse thread



PROFILE SKETCH
60°



THREAD STANDARD
DIN13



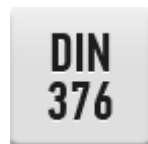
TYPE UNI
Tap for universal applications



TAP MATERIAL
Powder high speed steel



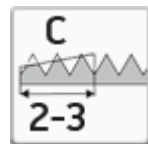
COATING
Balinit® Hardlube coating (titanium aluminiumnitride + tungsten carbide)



TAP STANDARD
DIN 376



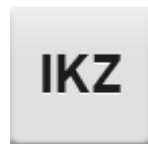
THREAD TOLERANCE
ISO 2 - 6HX



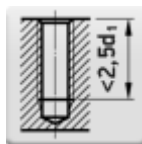
CHAMFER C
Length 2-3 pitch



SPIRAL FLUTE ANGLE
50°



COOLING METHOD
Internal axial coolant supply



HOLE TYPE
Blind hole (thread length $< 2,5 d_1$)

Select product model

ID	D1	P	Tolerance	I1	I2	d2	a	Price excl. VAT	Price incl. VAT
043036324120000	M12	1,75	6HX	110	18	9	7	141.00 EUR	170.61 EUR
043036324160000	M16	2	6HX	110	20	12	9	198.85 EUR	240.61 EUR
043036324200000	M20	2,5	6HX	140	25	16	12	300.00 EUR	363.00 EUR

Use

MACHINED MATERIAL	HOLE TYPE	CUTTING SPEED	LUBRICATION	USE
Aluminium alloys si content < 10%	through hole (thread length L > 1,5xd1)	15-20	Cutting Oil/Emulsion	Recommended use
Aluminium alloys si content < 10%	blind hole (thread length L < 1,5xd1)	15-20	Cutting Oil/Emulsion	Recommended use
Aluminium alloys si content < 10%	blind hole (thread length L < 2xd1)	15-20	Cutting Oil/Emulsion	Recommended use
Aluminium alloys si content < 10%	blind hole (thread length L < 2,5xd1)	15-20	Cutting Oil/Emulsion	Recommended use
Aluminium alloys si content < 10%	blind hole (thread length < 1,5 d1, pilot drilling depth ≥ L+d1)	15-20	Cutting Oil/Emulsion	Recommended use
Aluminium alloys si content > 10%	through hole (thread length L > 1,5xd1)	15-25	Cutting Oil/Emulsion	Recommended use
Aluminium alloys si content > 10%	blind hole (thread length < 1,5 d1, pilot drilling depth ≥ L+d1)	15-25	Cutting Oil/Emulsion	Recommended use
Aluminium alloys si content > 10%	blind hole (thread length L < 1,5xd1)	15-25	Cutting Oil/Emulsion	Recommended use
Aluminium alloys si content > 10%	blind hole (thread length L < 2xd1)	15-25	Cutting Oil/Emulsion	Recommended use
Aluminium alloys si content > 10%	blind hole (thread length L < 2,5xd1)	15-25	Cutting Oil/Emulsion	Recommended use

MACHINED MATERIAL	HOLE TYPE	CUTTING SPEED	LUBRICATION	USE
Case hardened steels and nitriding steels up to 1100 N/mm ²	blind hole (thread length < 1,5 d1, pilot drilling depth ≥ L+d1)	10-12	Cutting Oil/Emulsion	Recommended use
Case hardened steels and nitriding steels up to 1100 N/mm ²	through hole (thread length L > 1,5xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Case hardened steels and nitriding steels up to 1100 N/mm ²	blind hole (thread length L < 1,5xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Case hardened steels and nitriding steels up to 1100 N/mm ²	blind hole (thread length L < 2xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Case hardened steels and nitriding steels up to 1100 N/mm ²	blind hole (thread length L < 2,5xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Copper alloys (long chipping)	through hole (thread length L > 1,5xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Copper alloys (long chipping)	blind hole (thread length < 1,5 d1, pilot drilling depth ≥ L+d1)	10-12	Cutting Oil/Emulsion	Recommended use
Copper alloys (long chipping)	blind hole (thread length L < 1,5xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Copper alloys (long chipping)	blind hole (thread length L < 2xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Copper alloys (long chipping)	blind hole (thread length L < 2,5xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Copper alloys (short chipping)	blind hole (thread length < 1,5 d1, pilot drilling depth ≥ L+d1)	10-12	Cutting Oil/Emulsion	Recommended use
Copper alloys (short chipping)	blind hole (thread length L < 1,5xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Copper alloys (short chipping)	blind hole (thread length L < 2xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Copper alloys (short chipping)	blind hole (thread length L < 2,5xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Copper alloys (short chipping)	through hole (thread length L > 1,5xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Free cutting steels up to 800 N/mm ²	blind hole (thread length L < 1,5xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Free cutting steels up to 800 N/mm ²	blind hole (thread length L < 2,5xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Free cutting steels up to 800 N/mm ²	through hole (thread length L > 1,5xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Free cutting steels up to 800 N/mm ²	blind hole (thread length L < 2xd1)	10-12	Cutting Oil/Emulsion	Recommended use
Free cutting steels up to 800 N/mm ²	blind hole (thread length < 1,5 d1, pilot drilling depth ≥ L+d1)	10-12	Cutting Oil/Emulsion	Recommended use

MACHINED MATERIAL	HOLE TYPE	CUTTING SPEED	LUBRICATION	USE
Grey cast iron	through hole (thread length $L > 1,5d_1$)	15-20	Cutting Oil/Emulsion	Recommended use
Grey cast iron	blind hole (thread length $< 1,5d_1$, pilot drilling depth $\geq L+d_1$)	15-20	Cutting Oil/Emulsion	Recommended use
Grey cast iron	blind hole (thread length $L < 1,5d_1$)	15-20	Cutting Oil/Emulsion	Recommended use
Grey cast iron	blind hole (thread length $L < 2d_1$)	15-20	Cutting Oil/Emulsion	Recommended use
Grey cast iron	blind hole (thread length $L < 2,5d_1$)	15-20	Cutting Oil/Emulsion	Recommended use
Heat-treated steels up to 1100 N/mm ²	through hole (thread length $L > 1,5d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Heat-treated steels up to 1100 N/mm ²	blind hole (thread length $< 1,5d_1$, pilot drilling depth $\geq L+d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Heat-treated steels up to 1100 N/mm ²	blind hole (thread length $L < 1,5d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Heat-treated steels up to 1100 N/mm ²	blind hole (thread length $L < 2d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Heat-treated steels up to 1100 N/mm ²	blind hole (thread length $L < 2,5d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Heat-treated steels up to 1400 N/mm ²	blind hole (thread length $L < 2d_1$)	10-12	Cutting oil for high resistance steels	Recommended use
Heat-treated steels up to 1400 N/mm ²	blind hole (thread length $L < 2,5d_1$)	10-12	Cutting oil for high resistance steels	Recommended use
Heat-treated steels up to 1400 N/mm ²	through hole (thread length $L > 1,5d_1$)	10-12	Cutting oil for high resistance steels	Recommended use
Heat-treated steels up to 1400 N/mm ²	blind hole (thread length $< 1,5d_1$, pilot drilling depth $\geq L+d_1$)	10-12	Cutting oil for high resistance steels	Recommended use
Heat-treated steels up to 1400 N/mm ²	blind hole (thread length $L < 1,5d_1$)	10-12	Cutting oil for high resistance steels	Recommended use
High-alloyed steels up to 1400 N/mm ²	blind hole (thread length $L < 2d_1$)	10-12	Cutting oil for high resistance steels	Recommended use
High-alloyed steels up to 1400 N/mm ²	blind hole (thread length $L < 2,5d_1$)	10-12	Cutting oil for high resistance steels	Recommended use
High-alloyed steels up to 1400 N/mm ²	through hole (thread length $L > 1,5d_1$)	10-12	Cutting oil for high resistance steels	Recommended use
High-alloyed steels up to 1400 N/mm ²	blind hole (thread length $< 1,5d_1$, pilot drilling depth $\geq L+d_1$)	10-12	Cutting oil for high resistance steels	Recommended use
High-alloyed steels up to 1400 N/mm ²	blind hole (thread length $L < 1,5d_1$)	10-12	Cutting oil for high resistance steels	Recommended use

MACHINED MATERIAL	HOLE TYPE	CUTTING SPEED	LUBRICATION	USE
Plain cast steels up to 500 N/mm2	blind hole (thread length $L < 1,5d1$)	15-20	Cutting Oil/Emulsion	Recommended use
Plain cast steels up to 500 N/mm2	blind hole (thread length $L < 2d1$)	15-20	Cutting Oil/Emulsion	Recommended use
Plain cast steels up to 500 N/mm2	through hole (thread length $L > 1,5d1$)	15-20	Cutting Oil/Emulsion	Recommended use
Plain cast steels up to 500 N/mm2	blind hole (thread length $< 1,5 d1$, pilot drilling depth $\geq L+d1$)	15-20	Cutting Oil/Emulsion	Recommended use
Plain cast steels up to 500 N/mm2	blind hole (thread length $L < 2,5d1$)	15-20	Cutting Oil/Emulsion	Recommended use
Plain cast steels up to 800 N/mm2	blind hole (thread length $< 1,5 d1$, pilot drilling depth $\geq L+d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Plain cast steels up to 800 N/mm2	blind hole (thread length $L < 1,5d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Plain cast steels up to 800 N/mm2	blind hole (thread length $L < 2xd1$)	10-12	Cutting Oil/Emulsion	Recommended use
Plain cast steels up to 800 N/mm2	blind hole (thread length $L < 2,5xd1$)	10-12	Cutting Oil/Emulsion	Recommended use
Plain cast steels up to 800 N/mm2	through hole (thread length $L > 1,5xd1$)	10-12	Cutting Oil/Emulsion	Recommended use
Spheroidal graphite cast iron and malleable cast iron	blind hole (thread length $< 1,5 d1$, pilot drilling depth $\geq L+d1$)	12-15	Cutting Oil/Emulsion	Recommended use
Spheroidal graphite cast iron and malleable cast iron	blind hole (thread length $L < 1,5xd1$)	12-15	Cutting Oil/Emulsion	Recommended use
Spheroidal graphite cast iron and malleable cast iron	blind hole (thread length $L < 2xd1$)	12-15	Cutting Oil/Emulsion	Recommended use
Spheroidal graphite cast iron and malleable cast iron	blind hole (thread length $L < 2,5xd1$)	12-15	Cutting Oil/Emulsion	Recommended use
Spheroidal graphite cast iron and malleable cast iron	through hole (thread length $L > 1,5xd1$)	12-15	Cutting Oil/Emulsion	Recommended use
Stainless steels and heat resisting steels with strength 450 - 800 N/mm2	blind hole (thread length $L < 2,5xd1$)	10-12	Cutting Oil/Emulsion	Recommended use
Stainless steels and heat resisting steels with strength 450 - 800 N/mm2	blind hole (thread length $< 1,5 d1$, pilot drilling depth $\geq L+d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Stainless steels and heat resisting steels with strength 450 - 800 N/mm2	through hole (thread length $L > 1,5xd1$)	10-12	Cutting Oil/Emulsion	Recommended use
Stainless steels and heat resisting steels with strength 450 - 800 N/mm2	blind hole (thread length $L < 1,5xd1$)	10-12	Cutting Oil/Emulsion	Recommended use

MACHINED MATERIAL	HOLE TYPE	CUTTING SPEED	LUBRICATION	USE
Stainless steels and heat resisting steels with strength 450 - 800 N/mm2	blind hole (thread length $L < 2 \times d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Stainless steels and heat resisting steels with strength 600 - 1000 N/mm2	blind hole (thread length $L < 2,5 \times d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Stainless steels and heat resisting steels with strength 600 - 1000 N/mm2	blind hole (thread length $< 1,5 d1$, pilot drilling depth $\geq L + d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Stainless steels and heat resisting steels with strength 600 - 1000 N/mm2	through hole (thread length $L > 1,5 \times d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Stainless steels and heat resisting steels with strength 600 - 1000 N/mm2	blind hole (thread length $L < 1,5 \times d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Stainless steels and heat resisting steels with strength 600 - 1000 N/mm2	blind hole (thread length $L < 2 \times d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Structural steels and heat-treated steels up to 800 N/mm2	blind hole (thread length $L < 1,5 \times d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Structural steels and heat-treated steels up to 800 N/mm2	through hole (thread length $L > 1,5 \times d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Structural steels and heat-treated steels up to 800 N/mm2	blind hole (thread length $< 1,5 d1$, pilot drilling depth $\geq L + d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Structural steels and heat-treated steels up to 800 N/mm2	blind hole (thread length $L < 2 \times d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Structural steels and heat-treated steels up to 800 N/mm2	blind hole (thread length $L < 2,5 \times d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Structural steels up to 500 N/mm2	blind hole (thread length $< 1,5 d1$, pilot drilling depth $\geq L + d1$)	15-20	Cutting Oil/Emulsion	Recommended use
Structural steels up to 500 N/mm2	blind hole (thread length $L < 2 \times d1$)	15-20	Cutting Oil/Emulsion	Recommended use
Structural steels up to 500 N/mm2	blind hole (thread length $L < 2,5 \times d1$)	15-20	Cutting Oil/Emulsion	Recommended use
Structural steels up to 500 N/mm2	blind hole (thread length $L < 1,5 \times d1$)	15-20	Cutting Oil/Emulsion	Recommended use
Tool steels up to 1100 N/mm2	blind hole (thread length $L < 2,5 \times d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Tool steels up to 1100 N/mm2	through hole (thread length $L > 1,5 \times d1$)	10-12	Cutting Oil/Emulsion	Recommended use
Tool steels up to 1100 N/mm2	blind hole (thread length $< 1,5 d1$, pilot drilling depth $\geq L + d1$)	10-12	Cutting Oil/Emulsion	Recommended use

MACHINED MATERIAL	HOLE TYPE	CUTTING SPEED	LUBRICATION	USE
Tool steels up to 1100 N/mm ²	blind hole (thread length $L < 1,5d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Tool steels up to 1100 N/mm ²	blind hole (thread length $L < 2d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Unalloyed aluminium	blind hole (thread length $< 1,5 d_1$, pilot drilling depth $\geq L+d_1$)	15-30	Cutting Oil/Emulsion	Recommended use
Unalloyed aluminium	blind hole (thread length $L < 1,5d_1$)	15-30	Cutting Oil/Emulsion	Recommended use
Unalloyed aluminium	blind hole (thread length $L < 2d_1$)	15-30	Cutting Oil/Emulsion	Recommended use
Unalloyed aluminium	blind hole (thread length $L < 2,5d_1$)	15-30	Cutting Oil/Emulsion	Recommended use
Unalloyed aluminium	through hole (thread length $L > 1,5d_1$)	15-30	Cutting Oil/Emulsion	Recommended use
Unalloyed copper	blind hole (thread length $L < 2,5d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Unalloyed copper	through hole (thread length $L > 1,5d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Unalloyed copper	blind hole (thread length $< 1,5 d_1$, pilot drilling depth $\geq L+d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Unalloyed copper	blind hole (thread length $L < 1,5d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Unalloyed copper	blind hole (thread length $L < 2d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Zinc and zinc alloys	blind hole (thread length $L < 2d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Zinc and zinc alloys	through hole (thread length $L > 1,5d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Zinc and zinc alloys	blind hole (thread length $L < 1,5d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Zinc and zinc alloys	blind hole (thread length $< 1,5 d_1$, pilot drilling depth $\geq L+d_1$)	10-12	Cutting Oil/Emulsion	Recommended use
Zinc and zinc alloys	blind hole (thread length $L < 2,5d_1$)	10-12	Cutting Oil/Emulsion	Recommended use