

## Technical information

Art.-Nr. 1.388 / 1 - example inox



### VHM - INOX-Hochleistungsfräser

Art.-Nr.  
**1.388**

Flutes  
**4**



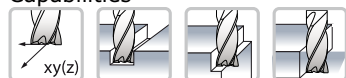
#### Tool data



#### Tool recommendation



#### Capabilities



## Areas of application and special features

Successful in difficult materials like Inox, titanium, Inconel und Nimonic.  
Uneven partition, uneven helix, form flute and polished highend coating.

## Competitive advantages and profitability

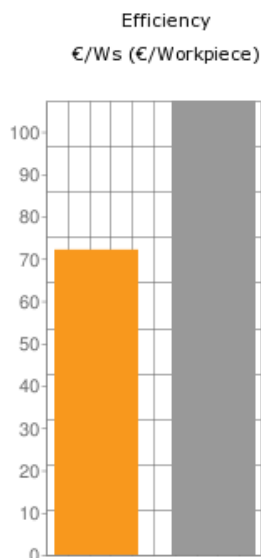
competition to Hoffmann Tisi and WNT Monstermill

## Example application

Art.-Nr.: **1.388.160.10**  
Material: **Rust and acid constant steels <700 N/mm² (<205 HB)**

Competitor: **bekannt**  
Art.-Nr.:

Inovatools – Roughing			
D1	16,00	mm	Diameter
z	4		Flutes
ae	16,000	mm	Row pitch
ap	16,000	mm	Cutting depth
vc	67,18	m/min	Cutting speed
n	1336	U/min	Rotation speed
fz	0,05886	mm	Feed per tooth
vf	314,66	mm/min	Feed rate
Q	80,55254000	cm³/min	Material removal rate
hm	0,03747	mm	Middle chipping thickness
K/M	80	€/std	Machine hourly cost
K/W	62	€	Tool cost
T	32	min	Tool life
V	1792	cm³	Processing volume
Tb	22,25	min	Process time
€/Ws	72,78	€	Cost workpiece



Calculator			
D1	16,00	mm	Diameter
z	4		Flutes
ae	16	mm	Row pitch
ap	16	mm	Cutting depth
vc	100	m/min	Cutting speed
n	1989	U/min	Rotation speed
fz	0,05	mm	Feed per tooth
vf	397,89	mm/min	Feed rate
Q	101,85916358	cm³/min	Material removal rate
hm	0,03183	mm	Middle chipping thickness
K/M	80	€/std	Machine hourly cost
K/W	62	€	Tool cost
T	13	min	Tool life
V	1792	cm³	Processing volume
Tb	17,59	min	Process time
€/Ws	107,34	€	Cost workpiece

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Finishing	Caption:		D1	D1	D1	D1	D1	D1	D1	D1	D1	D1	D1	D1	D1
	Ideal														
	Good		6,00	8,00	10,00	16,00	20,00								
	Applicable				12,00										
ap: 1,00 ae:0,50	Limited applicable														
Material	vc m/min	φ Grad	fz mm	fz mm	fz mm	fz mm	fz mm	fz mm	fz mm	fz mm	fz mm	fz mm	fz mm	fz mm	fz mm
General steels <500 N/mm² (<150 HB)	230	55	0,035	0,045	0,075	0,100	0,120								
General steels <700 N/mm² (<205 HB)	210	50	0,035	0,045	0,075	0,100	0,120								
General steels <850 N/mm² (<25 HRC)	175	48	0,035	0,045	0,075	0,100	0,120								
Tempering steel <850 N/mm² (<25 HRC)	160	50	0,035	0,045	0,075	0,100	0,120								
Tempering steel <1000 N/mm² (<32 HRC)	140	45	0,025	0,032	0,052	0,070	0,084								
Tempering steel <1400 N/mm² (<44 HRC)	90	40	0,025	0,032	0,052	0,070	0,084								
Tempered steels 45-55 HRC (1400-2000 N/mm²)															
Tempered steels 55-60 HRC (>2000 N/mm²)															
Tempered steels 60-65 HRC															
Cast Iron <180HB	190	50	0,035	0,045	0,075	0,100	0,120								
Malleable cast iron	140	40	0,035	0,045	0,075	0,100	0,120								
Cast Iron with nodular graphite	140	40	0,035	0,045	0,075	0,100	0,120								
Aluminium long-chipping															
Aluminium short-chipping															
Aluminium alloyed over >8% S															
Copper, brass, bronze, red brass															
Plastics - thermoplast															
Plastics - duroplast															
GFK/CFK (fibreglass/carbon fibre plastics)															
Graphite															
Rust and acid constant steels <700 N/mm² (<205 HB)	95	50	0,025	0,032	0,052	0,070	0,084								
Rust and acid constant steels >700 N/mm² (>205 HB)	55	30	0,025	0,032	0,052	0,070	0,084								
Inconel, Hastelloy, Nimonic, Monel	35	35	0,015	0,025	0,032	0,052	0,070								
Titanium	50	35	0,015	0,025	0,032	0,052	0,070								