






















## TTD2090150





















**Type:** Lange Hochleistungs-Spiralbohrer mit Kühlmittelloch

d1	d2	l1	l2
1,50	3,00	48	16,90

Coolant holes	Cut	Point angle	Spiral angle	Cutting edges Z
Yes	Right	140°	30°	2

Coated	Coating type	Material	Material type	Norm
Yes	TiAlN	MD	SMG SP	TUSA

Machinable Materials				
Cod.	Material type	Machinability	Cutting speed Vc	Advancement per revolution fn
		<b>Recommended</b> Part. <b>recommended</b> Not <b>recommended</b>	(m/min)	(mm/rev)
<b>P01</b>	Unalloyed steels up to 800 N/mm2		45 : 75	0.135
<b>P02</b>	Low alloy steels from 800 N/mm2 to 1100 N/mm2		40 : 70	0.125
<b>P03</b>	Highly alloyed steels from 1100 N/mm2 to 1400 N/mm2		35 : 70	0.115
<b>M01</b>	Ferritic stainless steels		30 : 50	0.045
<b>M02</b>	Martensitic stainless steels		30 : 50	0.07
<b>M03</b>	Martensitic stainless steels - PH		30 : 50	0.025
<b>M04</b>	Austenitic stainless steels		20 : 40	0.025
<b>K01</b>	Gray/lamellar cast iron		20 : 60	0.225
<b>K02</b>	Nodular/nodular cast iron		15 : 40	0.225
<b>N01</b>	Drawn aluminum alloys		100 : 300	0.08
<b>N02</b>	Die-cast aluminum alloys		80 : 250	0.1
<b>N03</b>	Copper		60 : 120	0.08
<b>N04</b>	Brass - Bronze		80 : 140	0.1
<b>N05</b>	Lead-free brass		80 : 140	0.115
<b>S01</b>	Super alloys (Inconel - Hastelloy - Nimonic)		15 : 25	0.015
<b>S02</b>	Pure titanium (Grade 2 - Grade 4)		15 : 25	0.055
<b>S03</b>	Titanium alloys (Grade 5)		15 : 30	0.055
<b>S04</b>	Cobalt Chrome Alloys		15 : 30	0.02
<b>H01</b>	Hardened steels up to 55 HRC		20 : 40	0.015

Machinable Materials				
Cod.	Material type	Machinability	Cutting speed Vc	Advancement per revolution fn
		<b>Recommended</b> Part. <b>recommended</b> Not <b>recommended</b>	(m/min)	(mm/rev)
<b>P01</b>	Unalloyed steels up to 800 N/mm2		45 : 75	0.135
<b>P02</b>	Low alloy steels from 800 N/mm2 to 1100 N/mm2		40 : 70	0.125
<b>P03</b>	Highly alloyed steels from 1100 N/mm2 to 1400 N/mm2		35 : 70	0.115
<b>M01</b>	Ferritic stainless steels		30 : 50	0.045
<b>M02</b>	Martensitic stainless steels		30 : 50	0.07
<b>M03</b>	Martensitic stainless steels - PH		30 : 50	0.025
<b>M04</b>	Austenitic stainless steels		20 : 40	0.025
<b>K01</b>	Gray/lamellar cast iron		20 : 60	0.225
<b>K02</b>	Nodular/nodular cast iron		15 : 40	0.225
<b>N01</b>	Drawn aluminum alloys		100 : 300	0.08
<b>N02</b>	Die-cast aluminum alloys		80 : 250	0.1
<b>N03</b>	Copper		60 : 120	0.08
<b>N04</b>	Brass - Bronze		80 : 140	0.1
<b>N05</b>	Lead-free brass		80 : 140	0.115
<b>S01</b>	Super alloys (Inconel - Hastelloy - Nimonic)		15 : 25	0.015
<b>S02</b>	Pure titanium (Grade 2 - Grade 4)		15 : 25	0.055
<b>S03</b>	Titanium alloys (Grade 5)		15 : 30	0.055
<b>S04</b>	Cobalt Chrome Alloys		15 : 30	0.02
<b>H01</b>	Hardened steels up to 55 HRC		20 : 40	0.015
<b>H02</b>	Hardened steels from 55 HRC		15 : 30	-



SWISS HIGH PRECISION TOOLS

---

