DIXI polytool

TOOLS DEDICATED TO THE WILLEMIN-MACODEL 701S MACHINE

DIXI POLYTOOL S.A.

COMPANY PROFILE
DIXI Polytool S.A. is a company based in Le Locle, Switzerland, that produces tungsten carbide and diamond cutting tools as well as precision reamers. The company was founded in 1946 and has been making investments into its production since then.
DIXI Polytool S.A. has a friendly work environment for its 300 employees and wants to guarantee the quality of its products while preserving the environment by using ISO 9001 and ISO 14001 certified management systems.

AN ENVIRONMENTALLY RESPONSIBLE ATTITUDE
A forerunner in this field too, DIXI Polytool S.A. uses exclusively green energy for all building maintenance and manufacturing operations.
DIXI Polytool is powered 100% green electricity produced exlusively from solar panels and hydrpower station.

KEY FIGURES

60 million CHF sales
35% of special tools

300
employees

140
CNC machines

+ 18'000
standard references in stock

9 subsidiaries in
7 countries

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TOOLS DEDICATED TO THE WM-701S MACHINE

Our WM-701S range, specially designed for the Willemin Macodel 701S machine, represents the pinnacle of precision machining technology. These tools have been carefully adapted to fully exploit the potential of this state-of-the-art machine, offering exceptional performance in the machining of complex components. As a result of close collaboration between our engineers and partners who were pioneering users of this machine concept, our customized solutions meet the specific needs of the most demanding industries.

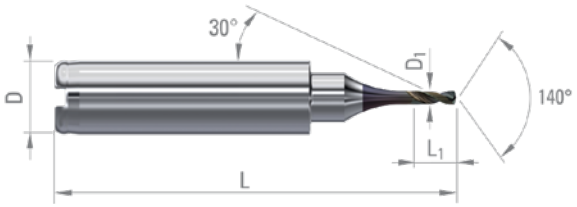
Our cutting tools developed for the 701S are designed to optimize machining speed, precision and quality. They incorporate high-quality materials, special coatings and adapted geometries to ensure extended tool life and maximum productivity. Whether machining lead-free brass or titanium, these cutting tools guarantee an impeccable finish and strict dimensional tolerances.

The combination of the revolutionary concept of the 701S machine and our WM-701S tools opens up new horizons for companies seeking to push back the limits of precision and efficiency in their manufacturing processes.

DIXI 1137-5D WM-701S

Z = 2

TWIST DRILLS
REINFORCED SHANK



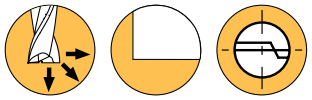
- Self-centering twist drills with reinforced shank, 5xD_1 cutting length, developed for the drilling of lead-free brass and high tech materials.
- DRYCUT coating improves tool life in non-ferrous materials.

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	DRYCUT *
0.32	1.60	6	33	396793
0.35	1.80	6	33	389009
0.40	2.00	6	33	389010
0.42	2.10	6	33	389011
0.48	2.40	6	33	396816
0.55	2.80	6	33	396817
0.64	3.20	6	33	389012
0.70	3.50	6	33	396818
0.80	4.00	6	33	389013
0.90	4.50	6	33	396819
1.10	5.50	6	33	396820

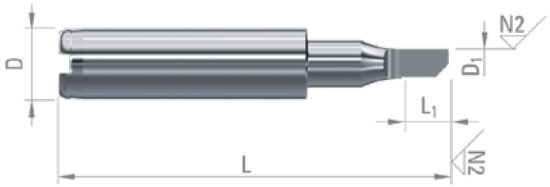
* for non-ferrous material

DIXI 7060 WM-701S

Z = 1



STRAIGHT FLUTE END MILLS



- Straight flute end mills with flat bottom and polished flute and reliefs. Tools dedicated to burr-free and deformation-free machining of materials with good machinability.
- A typical application, the finishing of watch components.

$D_{1 \pm 0.01}$	L_1	D_{h5}	L	CARBIDE
0.60	1.80	6	33	432142
0.80	2.40	6	33	432143
1.00	3.00	6	33	432144
1.60	4.00	6	33	432145
2.00	4.00	6	33	432146
2.50	4.00	6	33	432147

DIXI 7233 WM-701S

Z = 3

STRAIGHT FLUTE END MILLS

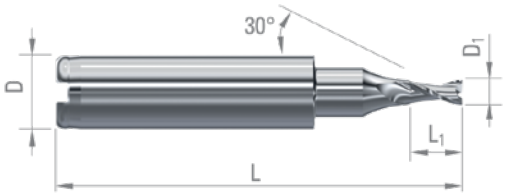
- Straight flute end mills with polished flute and reliefs.
- Tools dedicated to burr-free and deformation-free machining of materials with good machinability. A typical application, the finishing of watch components.

D_1 Ø<2.00 - 0/-0.01 Ø≥2.00 - 0/-0.02	L_1	D_{h5}	L	CARBIDE
0.60	1.80	6	33	432149
0.80	2.40	6	33	432148
1.00	3.00	6	33	432150
1.60	4.00	6	33	432151
2.00	4.00	6	33	432152
2.50	4.00	6	33	432153

DIXI 7242 WM-701S

Z = 2

SLOT DRILLS WITH REINFORCED SHANK

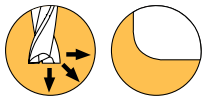


- Slot drills with reinforced shank, for general machining.

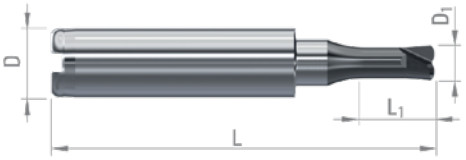
D_1 Ø<2.00 - 0/-0.01 Ø≥2.00 - 0/-0.02	L_1	D_{h5}	L	CARBIDE
0.20	0.40	6	33	305622
0.30	0.60	6	33	309554
0.40	0.80	6	33	307564
0.50	1.00	6	33	307566
0.60	1.20	6	33	307567
0.70	1.40	6	33	307568
0.80	1.60	6	33	305624
1.00	2.00	6	33	307571
1.25	2.50	6	33	305625
2.00	4.00	6	33	311815
3.20	2.00	6	33	305626

DIXI 7702 WM-701S

Z = 2



HIGH SPEED END MILLS

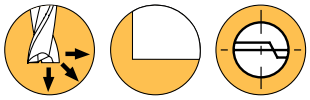


- End mills developed for high feed milling and plunging strategy.
- Can be used in all types of materials, including hardened steels.
- XIDUR coating improves tool life, even at high temperatures, in low machinability materials up to 65 HRC.

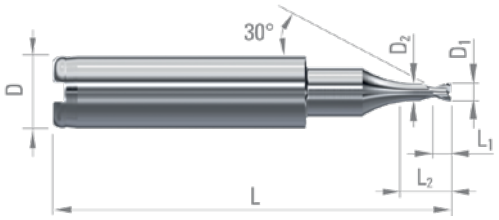
D_1 Ø<1.00 - 0/-0.01 Ø≥1.00 - 0/-0.02	L_1	D_{h5}	L	XIDUR
0.40	1.20	6	33	360725
0.50	1.50	6	33	310166
0.80	2.40	6	33	310167
1.00	3.00	6	33	309143
1.50	4.50	6	33	310168
2.00	6.00	6	33	310170
3.00	6.00	6	33	309144

DIXI 7240-xD WM-701S

Z = 2



SLOT DRILLS, EXTRA SHORT REINFORCED SHANK



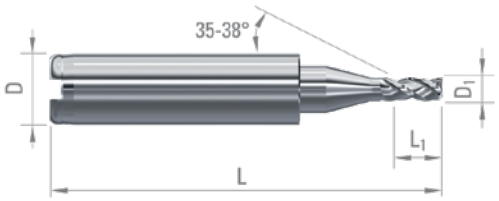
- Extra short slot drills with reinforced shank for general machining.
- For interpolated boring milling

$D_{1\ 0/-0.01}$	L_1	D_2	L_2	D_{h5}	L	CARBIDE
0.32	0.16	0.29	1.28	6	33	345709
0.50	0.25	0.45	2.00	6	33	432132
0.63	0.32	0.55	2.52	6	33	345710
0.80	0.40	0.75	2.40	6	33	310154
1.00	0.50	0.95	3.00	6	33	310155
1.50	0.75	1.45	3.00	6	33	310157

DIXI 7343 WM-701S

Z = 3

END MILLS WITH REINFORCED SHANK AND VARIABLE HELIX, WITHOUT CHAMFER

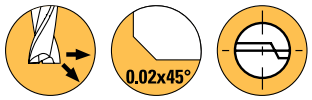


- High performance end mills with reinforced shank and variable helix. Tools developed for the machining of tough materials.
- The extra smooth C-TOP coating improves tool life even at high temperatures in difficult to machine materials.

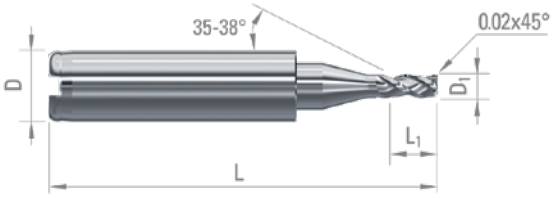
D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	D_{h5}	L	L_1	CARBIDE	C-TOP
0.40	6	33	0.50 1.20	437704 436904	437705 431683
0.50	6	33	0.70 1.20 1.50	437709 438396 437710	437711 438397 431681
0.60	6	33	0.80 1.50	437717 437716	437718 437714
0.80	6	33	1.00 2.00	437726 437725	437727 375655
1.00	6	33	1.30 2.10	437729 436905	437730 375652
1.20	6	33	1.60	437734	437735
1.50	6	33	2.00	436906	437736
2.00	6	33	2.00	437739	437737
3.00	6	33	3.00	436909	437741

DIXI 7343 WM-701S

Z = 3



END MILLS WITH REINFORCED SHANK AND VARIABLE HELIX, WITH CHAMFER

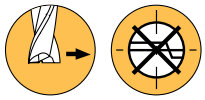


- High performance end mills with reinforced shank and variable helix. Tools developed for the machining of tough materials.
- The extra smooth C-TOP coating improves tool life even at high temperatures in difficult to machine materials.

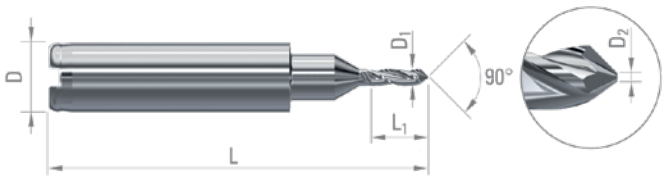
D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	D_{h5}	L	L_1	CARBIDE	C-TOP
0.40	6	33	0.50 1.20	359675 359677	437703 437698
0.50	6	33	0.70 1.20 1.50	359672 359674 345699	437706 438075 437699
0.60	6	33	0.80 1.50	359670 359671	398268 424579
0.80	6	33	1.00 2.00	359668 359669	432156 437724
1.00	6	33	1.30 2.10	359664 359667	398270 424581
1.20	6	33	1.60	359663	424580
1.50	6	33	2.00	359662	419789
2.00	6	33	2.00	359661	343495
3.00	6	33	3.00	359660	437740

DIXI 7623 WM-701S

Z = 3



CHAMFERING TOOLS



- 90° chamfering tools developed for general machining.

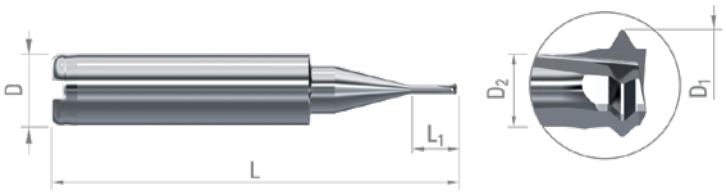
D_1 Ø<1.50 - 0/-0.01 Ø≥1.50 - 0/-0.02	L_1	$D_{2 \pm 0.05}$	D_{h5}	L	CARBIDE
0.50	1.50	0.05	6	33	311818
0.60	2.00	0.06	6	33	345703
0.70	2.00	0.07	6	33	432154
0.80	1.50	0.08	6	33	310172
1.00	2.00	0.10	6	33	310174
1.50	5.00	0.10	6	33	345706

DIXI 1737 WM-701S

Z=3

NIHS 06

WHIRLING TOOLS
FULL PROFILE



- Whirling tools, full profile, developed for the milling of micro threads. No burrs thanks to the full profile.
- Thread according to NIHS 06-10

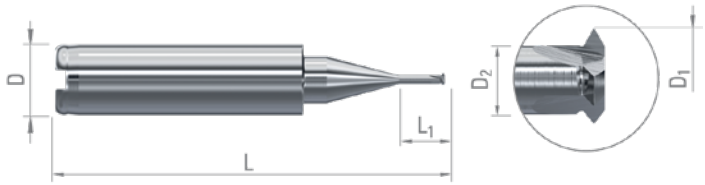
D nom.	Pitch P	Drill Ø	D_1	L_1	D_2	D_{h5}	L	CARBIDE
S 0.50	0.125	0.38 - 0.40	0.37	0.85	0.22	6	33	437742
S 0.60	0.150	0.46 - 0.49	0.44	1.25	0.26	6	33	437743
S 0.70	0.175	0.54 - 0.57	0.52	1.80	0.31	6	33	420327
S 0.80	0.200	0.61 - 0.64	0.59	2.30	0.35	6	33	437744
S 0.90	0.225	0.69 - 0.73	0.67	2.50	0.40	6	33	440607
S 1.00	0.250	0.76 - 0.80	0.74	2.80	0.44	6	33	437745

DIXI 1738 WM-701S

Z = 3

NIHS 06

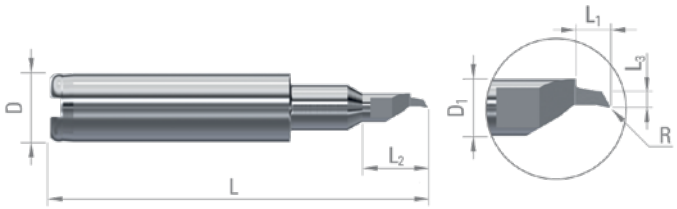
WHIRLING TOOLS
PARTIAL PROFILE



- Whirling tools, partial profile, developed for the milling of micro threads.
- Thread according to NIHS 06-10

D nom.	Pitch P	Drill Ø	D_1	L_1	D_2	D_{h5}	L	CARBIDE
S 0.50	0.125	0.40	0.37	0.85	0.23	6	33	337912
S 0.60	0.150	0.48	0.44	1.25	0.27	6	33	336545
S 0.70	0.175	0.56	0.52	1.80	0.31	6	33	306846
S 0.80	0.200	0.64	0.59	2.30	0.35	6	33	307475
S 1.00	0.250	0.80	0.74	2.80	0.45	6	33	306998

PLANING TOOL



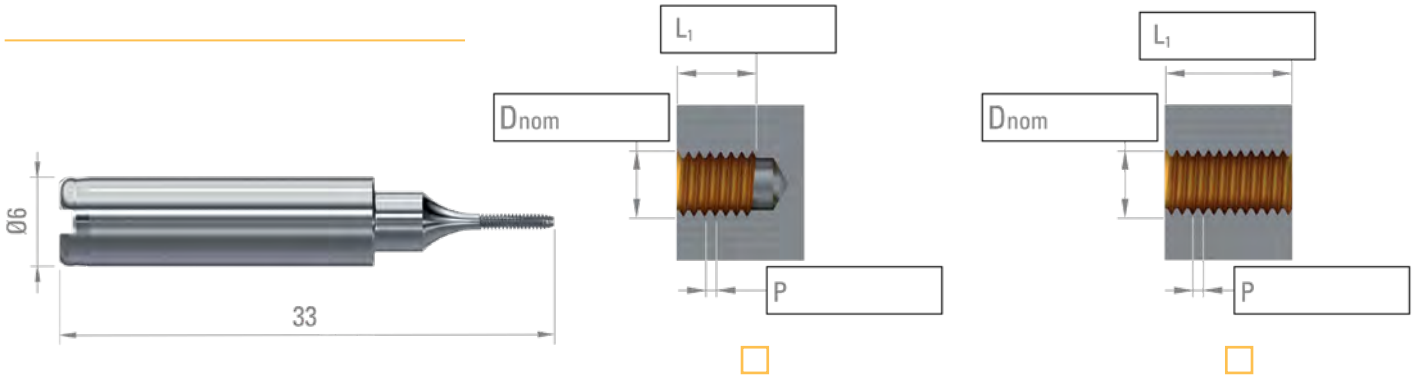
- Planing tool for chamfering and decoration.

R	D_1	L_1	L_2	L_3	D_{h5}	L	CARBIDE
0.05	2.50	1.50	5.70	0.70	6	33	418672

DRAWINGS FOR ORDERS OF STEP DRILL

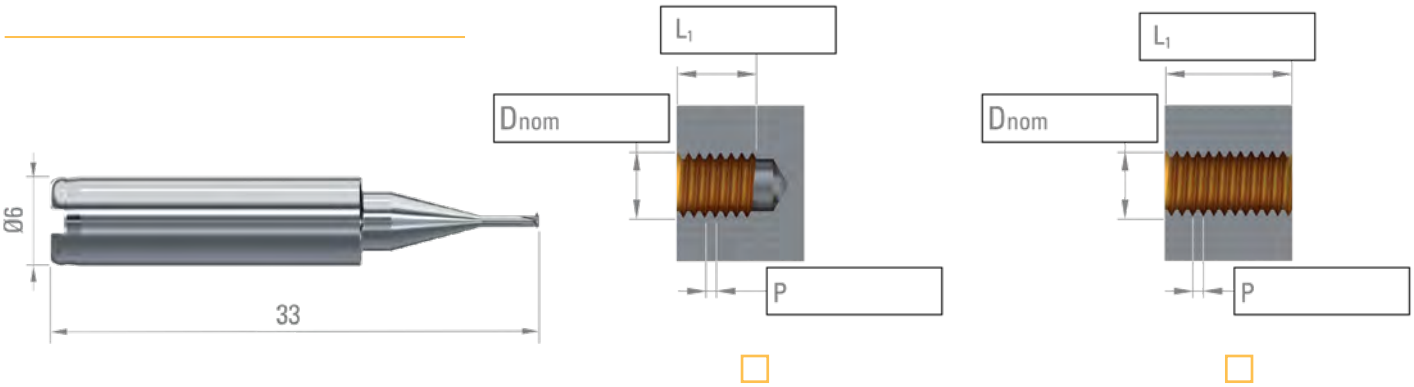
CUTTING TAP

Material to be machined



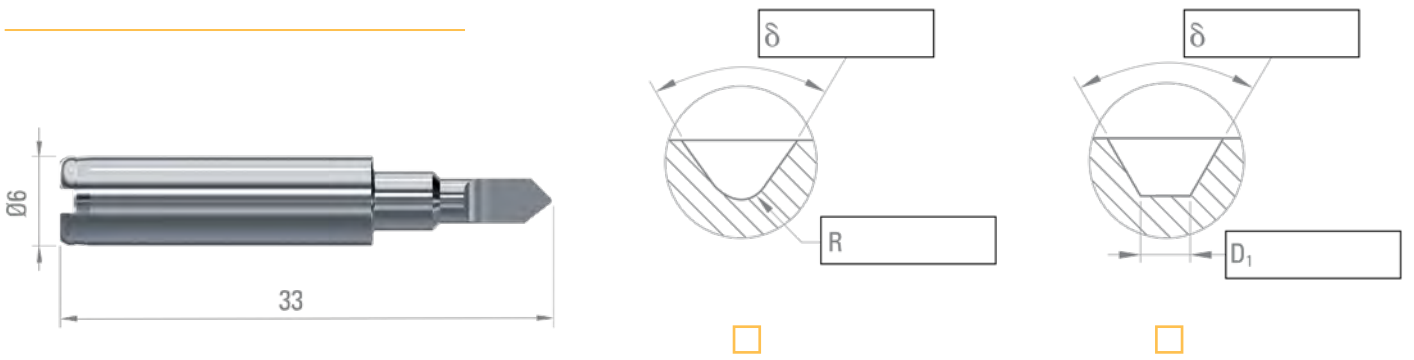
WHIRLING TOOL

Material to be machined



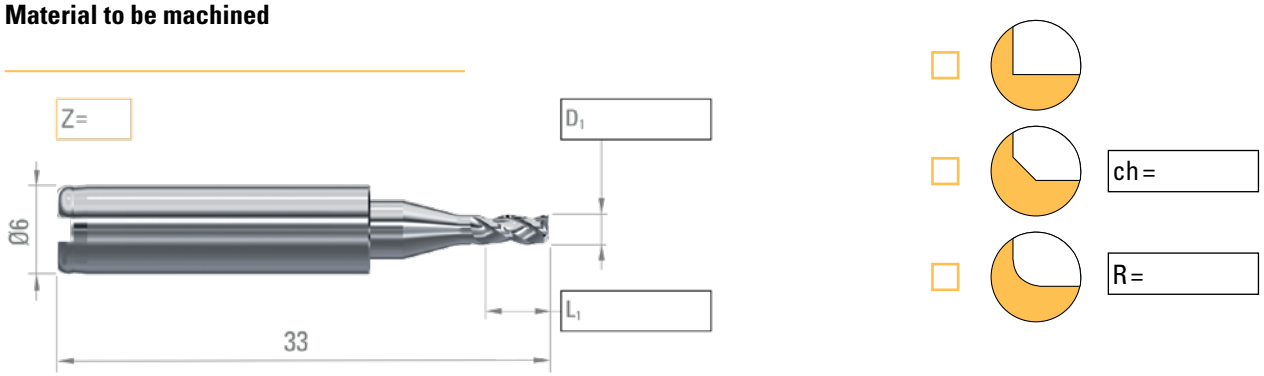
ENGRAVING TOOL

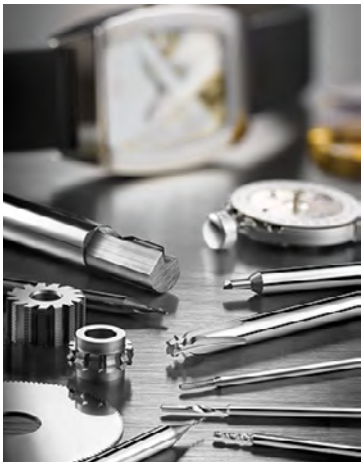
Material to be machined



END MILL

Material to be machined







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