Thread Whirling Tools



For Perfect Long Threads on Swiss Type Machines

- Single pass working ability reduces machining time and increases productivity
- A high accuracy Holder-Insert system along with special cutting edge geometry leads to a high quality surface finish
- Multi-Insert holders reduce cycle time and increase tool life

- Whirling toolholders consist of 6 to 8 inserts
- Whirling inserts consist of three cutting edges with high indexability
- Whirling inserts can produce single or double start threads in one pass

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Thread Whirling is a fast and an accurate way to thread long, small diameter parts in exotic materials such as titanium, stainless steel and inconel.

Cutting is the result of the whirling ring rotating eccentrically at high speed about the slowly rotating workpiece. The advancement of the workpiece rotationally and the advancement of the tool head longitudinally correspond to the thread pitch required.

Advantages

Thread Whirling offers several advantages over single point threading: Enables production of small diameter long threads when used on Swiss type machines. The thread whirling spindle works close to the guide bushing for increased support and rigidity.

Increased Productivity

Thread Whirling is performed in a single pass, resulting in a shorter machining time. This eliminates multiple passes required for a single point threading. Thread whirling allows working at high feed rates and consequently results in short cycle times.

Very high surface quality and accurate geometry

The use of 6 to 8 cutting edges, higher concentricity, special cutting edge geometry and ideal chip removal, enable top quality surfaces to be produced without burrs.

Long tool life

Whirling inserts have a stronger cutting edge than single point tools, since cutter side clearance is achieved by rotating the whirling spindle, not by relieving material under the cutting edge.

Faster Setup

Thread whirling eliminates special support devices and expensive startup development costs.

Compensation of large helix angles

Large helix angles can be compensated by adjusting the whirling unit.

Short Delivery Time

Up to 3 weeks.



Applications

CPT supports and offers high quality Thread Whirling tools for a wide range of applications, such as: Bone screws, Dental implants, Orthopedic screws, automotive parts, semiconductor small parts, etc.

CPT holds in stock thread whirling holders that are compatible with all **Swiss Type machines** such as STAR, Citizen, Tornos, Hanwha, Tsugami, Nexturn, and **Whirling units** as PCM, WTO, H&F, MADAULA, etc.

Thread Whirling Tools



Machine details and Whirling unit details are needed in order to offer a suitable toolholder.

Туре	Machine Model	Whirling Unit	Whirling Holder Ordering Code	z	D	d1	Insert Size
Star	SR20 / ECAS20	Star	SRW4012 730 - 6	6	10	40	18W
			SRW4012 425 - 8	8	12		11W
	SR20 / ECAS20	WTO	SRW4295 557 - 6	6	9.5	42	18W
		WIO	SRW4212 717 - 8	8	12	42	11W
Citizen	M20 / M32	DOM	SRW4512 719 - 6	6	10	45	18W
		FUN	SRW4512 427 - 8	8	12		11W

* The above table serves as an example.

Product Identification - Ordering Codes

Toolholders

	SR		W	4	0	1	2		730		6
			\checkmark		¥						\checkmark
	Clampin Methoo	g Whi d	rling	Clamp Diam	oing eter	Cut Diar	ting neter	Se	erial No.		No. of Inserts
Ins	erts										
	18W	E	1		1.75	5	SP				BMA
		- ↓			•				•		
		E = External			Pitc	h			Serial no)_	
	Insert size 11W 18W		R = Righ L = Left	nt Hand Hand		St	andard ISO UN SP				Carbide Grade: K20 BMA



Thread Whirling Tools



Case Study						
Machine [.]	STAR SR20					
Whirling unit:	STAR					
Application:	Dental Implant					
Material:	Ti-6AI-4V ELI					
CPT holder:	SRW4012 730-6					
/c [m/min]:	65					
Tooth load [mm/tooth]:	0.03					
No. of parts:	25,000 +					

SPECIALS ARE OUR SPECIALTY

CPT produce special tools in accordance with the customer's requirements



