



Vol 2

Taps Designed for Titanium Alloys

EXOPRO[®] Ti



EXOPRO[®] Ti Performance Highlights

The EXOPRO[®] Ti is OSG's ultra premium tooling series, featuring supreme performance in difficult threading applications.

The cutting edge has been optimized for maximum sharpness and strength, while the reverse-helix flutes push chips ahead of the tap, eliminating chip evacuation problems. With the addition of OSG's proprietary V coating, tool life is also extended, providing users with maximum cost-efficiency.

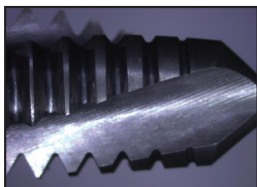
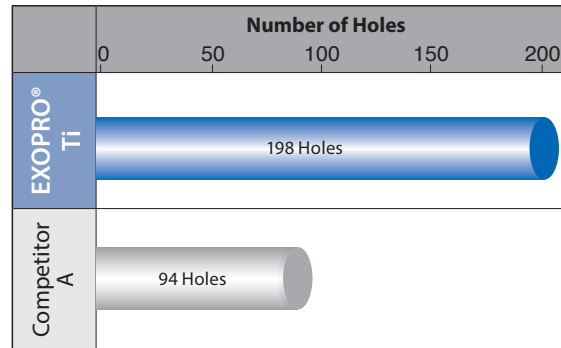


Cutting Data

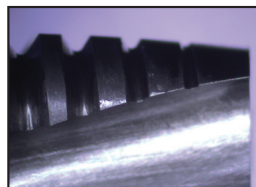
Titanium (33 HRC)

When machining titanium with a hardness of 33 HRC, the competitor showed chipping after just 94 holes while the EXOPRO[®] Ti tapped 198 holes showing little wear. The EXOPRO[®] Ti is capable of **more than double the tool life!**

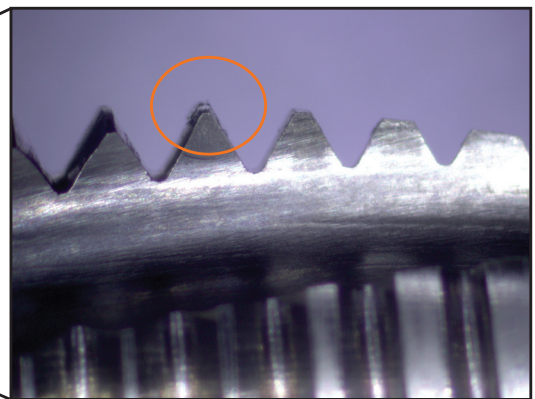
Tool	EXOPRO [®] Ti	Competitor A
Drill Size	Ø1/4 - 28 H3	
Work Material	Titanium (33 HRC)	
Hole Size	Ø7/32	
Tapping Length	0.950" (24.18mm)	
Tapping Speed	47 SFM (720 RPM)	
Coolant	10%	
Machine	OKK VM5 III	



OSG's EXOPRO[®] Ti
Still good after 198 holes



Competitor A
Tap wear after 94 holes



Competitor A
Chipping on complete thread after 94 holes

List 13063

RHC/LHS for Through Hole, Plug (4P - 4.5P)



Tap Size	Thread Limit	No. of Flutes	EDP Number
			Plug (4P - 4.5P)
			V
2 - 56 UNC	H2	3	1306300108
4 - 40 UNC	H2		1306300208
6 - 32 UNC	H3		1306300308
8 - 32 UNC	H3		1306300408
10 - 24 UNC	H3		1306300508
10 - 32 UNF	H3		1306300608
1/4 - 20 UNC	H3		1306300708
1/4 - 28 UNF	H5		1306300808
1/4 - 28 UNF	H3		1306300908
5/16 - 18 UNC	H3		1306301008

Packed: 1 pc.
Available V coating only.



Tap Size	Thread Limit	No. of Flutes	EDP Number
			Plug (4P - 4.5P)
			V
5/16 - 18 UNC	H5	3	1306301108
5/16 - 24 UNC	H3		1306301208
3/8 - 16 UNC	H3		1306301308
	H5		1306301408
3/8 - 24 UNF	H3		1306301508
7/16 - 14 UNC	H3		1306301608
7/16 - 20 UNF	H3		1306301708
1/2 - 13 UNC	H3		1306301808
	H5		1306301908
1/2 - 20 UNF	H3		1306302008

Packed: 1 pc.
Available V coating only.



List 13163

RHC/LHS for Through Hole, Plug (4P - 4.5P)



Tap Size	Thread Limit	No. of Flutes	EDP Number
			Plug (4P - 4.5P)
			V
M2.5 x 0.45	D3	3	1316300108
M3 x 0.5	D3		1316300208
M4 x 0.7	D4		1316300308
M5 x 0.8	D4		1316300408
M6 x 1.0	D4		1316300508
	D5		1316300508

Packed: 1 pc.
Available V coating only.



Tap Size	Thread Limit	No. of Flutes	EDP Number
			Plug (4P - 4.5P)
			V
M8 x 1.25	D5	3	1316300808
M10 x 1.5	D6		1316301008
M10 x 1.25	D5		1316300908
M12 x 1.75	D6		1316301308
M12 x 1.25	D5		1316301108
	D5		1316301108

Packed: 1 pc.
Available V coating only.



List No.	Work Material															
	P					M			K	N		S		H		
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels		
	Low	Med.	High			300	400	17-4 PH		6061 7075	Casting			Inconel	6Al4V (30 HRC)	~35 HRC
13063				<input type="checkbox"/>				<input type="checkbox"/>				<input checked="" type="checkbox"/>	<input type="checkbox"/>			
13163				<input type="checkbox"/>				<input type="checkbox"/>				<input checked="" type="checkbox"/>	<input type="checkbox"/>			
SFM				15-50			8-20					8-20	15-35			

good best



 **Safe use of cutting tools**

- Use safety cover, safety glasses and safety shoes during operation.
- Do not touch cutting edges with bare hands.
- Do not touch cutting chips with bare hands. Chips will be hot after cutting.
- Stop cutting when the tool becomes dull.
- Stop cutting operation immediately if you hear any abnormal cutting sounds.
- Do not modify tools.
- Please use appropriate tools for the operation. Check dimensions to ensure proper selection.

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