



Vol 4

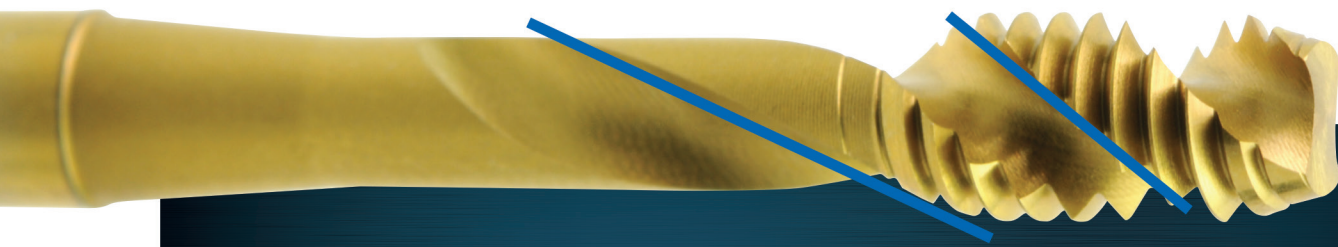
Premium High Performance Spiral Flute Taps for Stainless Steels

# EXOPRO<sup>®</sup> CC-SUS

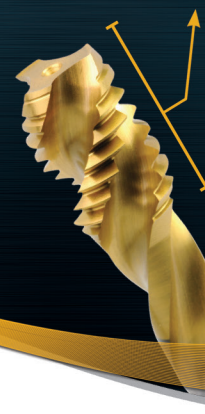
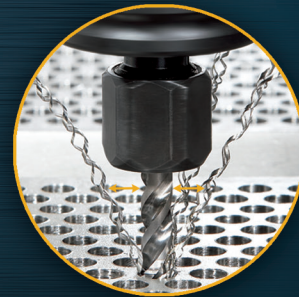


**Total Chip Control**  
in stainless steel

## Revolutionary Technology

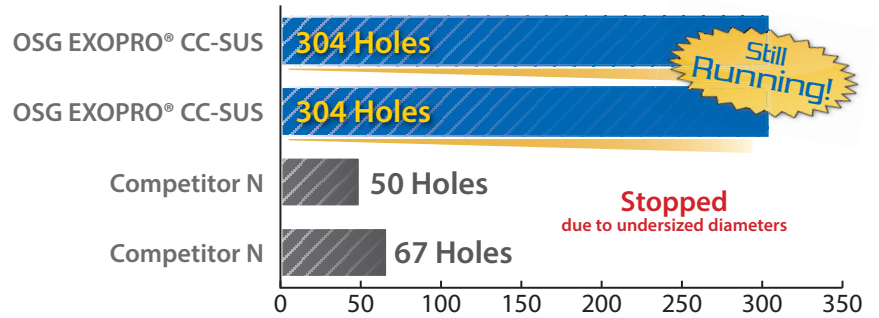


- **Variable Helix** —————>  
Encourages stable chip evacuation and reduces cutting forces.
- **Advanced Chip Control (CC)**  
Proprietary flute design produces tightly compacted chips for easy ejection from the hole.
- **Vanadium HSS with TiN Coating**  
Increased heat and wear resistance coupled with sharp cutting action ideal for stainless steels.
- **Available in a Wide Range of Sizes**  
Inch sizes (No.2 to 1") and metric (M2 to M24).
- **Short Thread Length Design**  
Enhances chip separation to ensure no bird nesting occurs.



## Great Consistency, Reliability and Long Tool Life

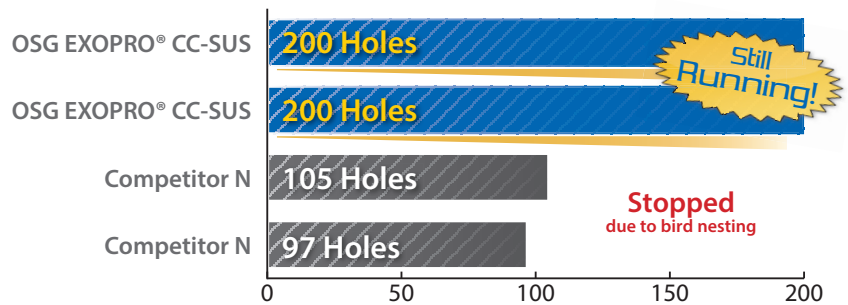
Tool	M6 x 1.0
Work Material	304 Stainless Steel
Tapping Speed	33 SFM (534 RPM)
Hole Size	φ5.1mm
Tapping Length	0.67" (17mm)
Coolant	Water Soluble (7%)
Machine	Vertical Machining Center



Tapping in 304 stainless, the competitor tap failed due to undersized diameters whereas the EXOPRO<sup>®</sup> CC-SUS was able to continue running even after 304 holes on both test runs!

## Stable Chip Evacuation in 304 Stainless Steel

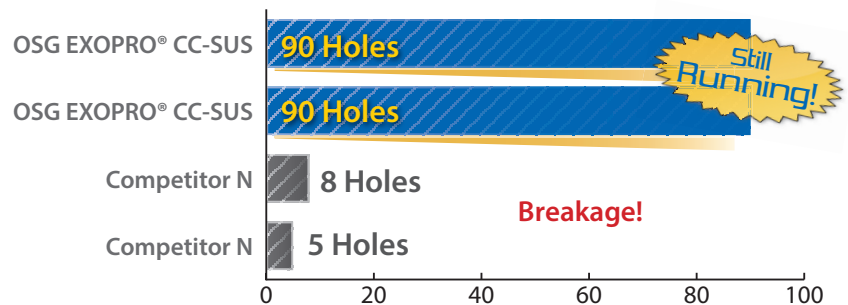
Tool	M3 x 0.5
Work Material	304 Stainless Steel
Tapping Speed	26 SFM (841 RPM)
Hole Size	φ2.5mm
Tapping Length	0.24" (6mm)
Coolant	Non-Water Soluble
Machine	Vertical Machining Center



OSG's EXOPRO<sup>®</sup> CC-SUS was still in great condition after tapping 200 holes, while the competitor tap failed after roughly 100 holes due to bird nesting.

## Superior Performance in 17-4PH Stainless Steel

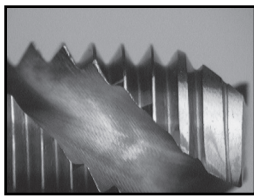
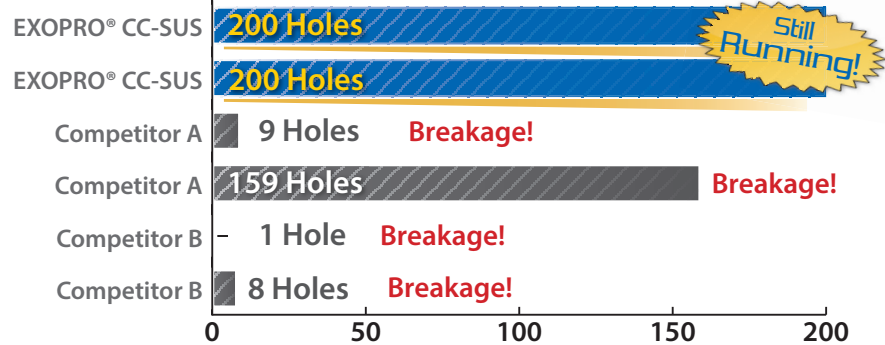
Tool	M5 x 0.8
Work Material	17-4PH
Tapping Speed	20 SFM (388 RPM)
Hole Size	φ4.2mm
Tapping Length	0.4" (10mm)
Coolant	Water Soluble (10%)
Machine	Vertical Machining Center



Although 10 to 16 SFM was the recommended machining speed, OSG's EXOPRO<sup>®</sup> CC-SUS was able to achieve stable performance in 17-4PH stainless steel, running at a speed of 20 SFM. The competitor tap, on the other hand, failed after just a few holes.

## Great Tool Life and Efficiency in Alloy Steel

Tool	M3 x 0.5
Work Material	4140 (30 HRC)
Tapping Speed	56 SFM (1812 RPM)
Hole Size	φ2.5mm
Tapping Length	0.24" (6mm)
Coolant	Water Soluble (10%)
Machine	Vertical Machining Center

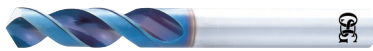


EXOPRO® CC-SUS with normal wear after 200 holes

OSG's EXOPRO® CC-SUS demonstrated superior performance in 4140 alloy steel (30 HRC), even at a high tapping speed of 56 SFM, as recommended by Competitor A. When the ability to synchronize feed is available, EXOPRO® CC-SUS can machine alloy steel with water soluble coolant.

### Recommended Tap Drills for EXOPRO® CC-SUS in Stainless Steel

Be it stub or x-long, coolant-through or solid, carbide or HSS, OSG has a drilling solution for you!



List 1150 NEXUS



List 5200 EXOCARB® WDO-SUS 3D



List 1100 EX-SUS-GOLD



List 1650 NEXUS



List 5210 EXOCARB® WDO-SUS 5D



List 1600 EX-SUS-GOLD



## List 16450

DIN Overall Length, Modified Bottom (2.5P-3P)



Tap Size	Thread Limit	No. of Flutes	Overall Length	EDP Number		
				Modified Bottom (2.5P-3P)	Tap Drill EDP Number*	
				TiN	Stub	Jobber
2 - 56 UNC	H2	2	45	1645002562	8595176	-
3 - 48 UNC	H2		50	1645003482	8595204	8597204
4 - 40 UNC	H2		56	1645004402	8595227	8597227
4 - 48 UNF	H2		56	1645004482	8595236	8597236
5 - 40 UNC	H2		56	1645005402	8595259	8597259
6 - 32 UNC	H2		56	1645006322	8595278	8597278
6 - 40 UNF	H3		56	1645006323	8595278	8597278
6 - 40 UNF	H2		56	1645006402	8595292	8597292
8 - 32 UNC	H2		63	1645008322	8595344	8597344
8 - 36 UNF	H3		63	1645008323	8595344	8597344
8 - 36 UNF	H2		63	1645008362	8595352	8597352
10 - 24 UNC	H2		70	1645010242	8595386	8597386
10 - 24 UNC	H3		70	1645010243	8595386	8597386
10 - 32 UNF	H2		70	1645010322	61541	62541
10 - 32 UNF	H3		70	1645010323	61541	62541
12 - 24 UNC	H3		80	1645012243	8595452	8597452
12 - 28 UNF	H3	80	1645012283	8595466	8597466	
1/4 - 20 UNC	H3	3	80	1645014203	8595519	8597519
1/4 - 20 UNC	H5		80	1645014205	8595519	8597519
1/4 - 28 UNF	H3		80	1645014283	8595552	8597552
1/4 - 28 UNF	H4		80	1645014284	8595552	8597552
5/16 - 18 UNC	H3		90	1645056183	8595665	8597665
5/16 - 18 UNC	H5		90	1645056185	8565665	8567665
5/16 - 24 UNF	H3		90	1645056243	8595695	8597695
5/16 - 24 UNF	H4		90	1645056244	8595695	8597695
3/8 - 16 UNC	H3		100	1645038163	8595805	8597805
3/8 - 16 UNC	H5		100	1645038165	8595805	8597805
3/8 - 24 UNF	H3		90	1645038243	61586	62586
3/8 - 24 UNF	H4		90	1645038244	61586	62586
7/16 - 14 UNC	H3		100	1645076143	8595945	8597945
7/16 - 14 UNC	H5		100	1645076145	8595945	8597945
7/16 - 20 UNF	H3		100	1645076203	8595995	8597995
7/16 - 20 UNF	H5		100	1645076205	8595995	8597995
1/2 - 13 UNC	H3	110	1645012133	61609	62609	
1/2 - 13 UNC	H5	110	1645012135	61609	62609	
1/2 - 20 UNF	H3	100	1645012203	61615	62615	
1/2 - 20 UNF	H5	100	1645012205	61615	62615	
9/16 - 12 UNC	H3	110	1645096123	61623	62623	
9/16 - 12 UNC	H5	110	1645096125	61623	62623	
9/16 - 20 UNF	H3	100	1645096183	61630	62630	
9/16 - 20 UNF	H5	100	1645096185	61630	62630	
5/8 - 11 UNC	H3	110	1645058113	61638	62638	
5/8 - 11 UNC	H5	110	1645058115	61638	62638	
5/8 - 18 UNF	H3	100	1645058183	61646	62646	
5/8 - 18 UNF	H5	100	1645058185	61646	62646	

Packed: 1 pc.

Available TiN coating only.

\*Tap drill size is 65%-70% of thread.

\*Recommended drill is EX-SUS-GOLD drills for stainless steel.

continued on next page



List No.	Work Material															
	P					M			K	N		S		H		
	Carbon Steels			Alloy Steels		Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels		
	Low 1010 1018	Med. 1035 1045	High 1065	4140 4340	Die Steels	300	400	17-4 PH		6061 7075	Casting	Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC	45-50 HRC
16450	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
SFM	50-80	50-80	30-80	50-100		20-35	20-35	15-25								

good  best



## List 16450

DIN Overall Length, Modified Bottom (2.5P-3P)



Tap Size	Thread Limit	No. of Flutes	Overall Length	EDP Number		Tap Drill EDP Number*	
				Modified Bottom (2.5P-3P)		Stub	Jobber
				TiN			
3/4 - 10 UNC	H3	4	125	1645034103	61667	62667	
	H5			1645034105	61667	62667	
3/4 - 16 UNF	H3		110	1645034163	61676	62676	
	H5			1645034165	61676	62676	
7/8 - 9 UNC	H4		140	1645078094	61696	62696	
	H6			1645078096	61696	62696	
7/8 - 14 UNF	H4		125	1645078144	61705	62705	
	H6			1645078146	61705	62705	
1" - 8 UNC	H4		160	1645010084	61725	62725	
	H6			1645010086	61725	62725	
1" - 12 UNF	H4		140	1645010124	61735	62735	
	H6			1645010126	61735	62735	

Packed: 1 pc.

Available TiN coating only.

\*Tap drill size is 65%-70% of thread.

\*Recommended drill is EX-SUS-GOLD drills for stainless steel.



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	35-45 HRC	45-50 HRC	50-70 HRC
16450	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
SFM	50-80	50-80	30-80	50-100		20-35	20-35	15-25									

good  best





## List 16455

DIN Overall Length, Modified Bottom (2.5P-3P)



Tap Size	Thread Limit	No. of Flutes	Overall Length	EDP Number		Tap Drill EDP Number*	
				Modified Bottom (2.5P-3P)	Stub	Jobber	
				TiN			
M2 x 0.4	D3	2	45	1645502043	8595164	-	
M2.5 x 0.45	D3		50	1645525453	8595209	8597209	
M2.6 x 0.45	D3		50	1645526453	8595219	8597219	
M3 x 0.5	D4		56	1645503054	8595255	8597255	
M4 x 0.7	D4		63	1645504074	8595336	8597336	
M5 x 0.8	D4		70	1645505084	8595427	8597427	
M6 x 1	D3	3	80	1645506103	8595509	8597509	
	D5			1645506105	8595509	8597509	
M8 X 1.25	D4		90	1645508124	8595686	8597686	
	D6			1645508126	8595686	8597686	
M10 x 1.5	D4		100	1645510154	8595864	8597864	
	D6			1645510156	8595864	8597864	
M12 x 1.75	D4			110	1645512174	61604	62604
	D6				1645512176	61604	62604
M14 x 2	D5			110	1645514205	61622	62622
	D7				1645514207	61622	62622
M16 x 2	D5		110	1645516205	61642	62642	
	D7			1645516207	61642	62642	
M18 x 2.5	D7	4	125	1645518257	61657	62657	
M20 x 2.5	D8		140	1645520258	61677	62677	
M24 x 3	D9		160	1645524309	61710	62710	

Packed: 1 pc.

Available TiN coating only.

\*Tap drill size is 65%-70% of thread.

\*Recommended drill is Ex-SUS-Gold drills for stainless steel.



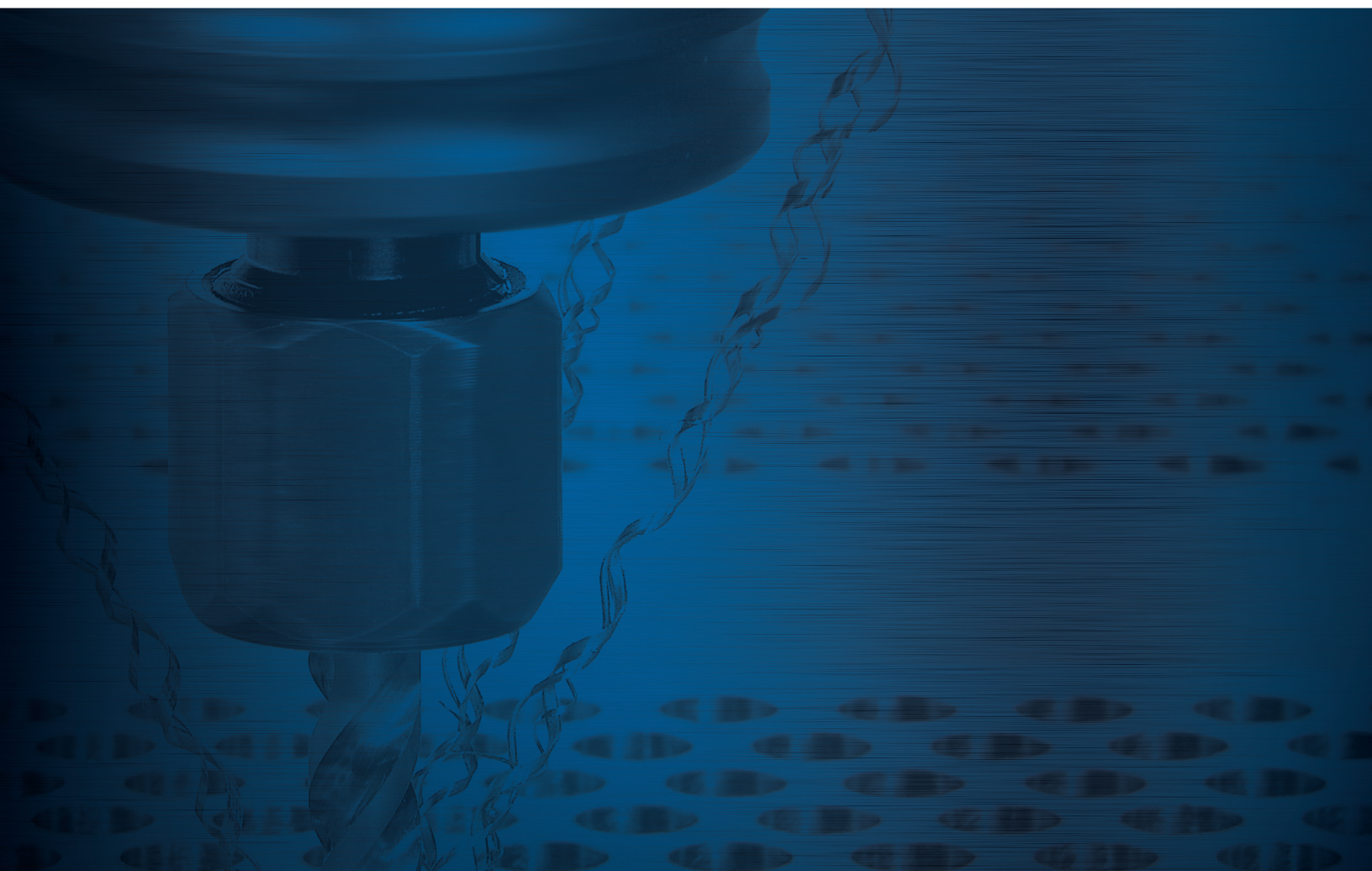
List No.	Work Material																
	P					M			K	N		S		H			
	Carbon Steels			Alloy Steels	Die Steels	Stainless Steels			Cast Iron	Aluminum		Nickel Alloy	Titanium	Hardened Steels			
	Low	Med.	High			300	400	17-4 PH		6061 7075	Casting			Inconel	6Al4V (30 HRC)	~35 HRC	35-45 HRC
16455	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
SFM	50-80	50-80	30-80	50-100		20-35	20-35	15-25									


good  best





*shaping your dreams*



 **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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