

High-Performance HSS-E Taps • **WIDIA-GTD™**

Our family of Exotic Material (EM) taps are specially designed to thread a broad assortment of materials for unrivaled high-performance tapping.

EM-SS available until stock is depleted.

See EM-SS cross reference list to VariTap™ on pages A52–A62.



EM Series

- Enhanced tool geometry.
- Less tapping torque.
- Better chip removal.



Unmatched Performance

The WIDIA-GTD™ EM Series taps are designed and manufactured to successfully thread high- and low-volume applications in aluminum, stainless steel, nickel alloys, titanium alloys, mold steels, irons, brass, bronze, and plastics. The formulation of premium steel tap base material is unique for every application. The combination of a special geometry, tap surface treatment, and premium steep gives these taps the highest level of performance.

Premium Steels

EM Series taps use special HSS-E compositions containing high-vanadium and/or cobalt content depending on the application. The right combination improves tap-life as measured by product finish and/or pitch diameter size.

Broad Offering of Diameter Limits

Pitch diameters from H2–H7 and metric pitch diameters from D3–D7 are stocked as standards in many styles, at no premium in price. With rigid setups, higher pitch diameter limits can be used for longer tool life. The EM Series offers many size options to produce the class of thread desired.

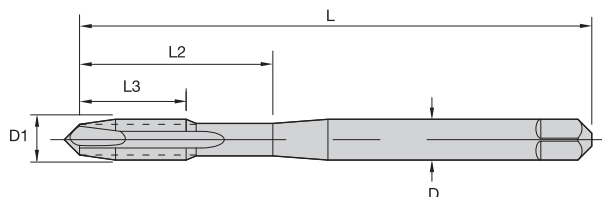


High-Performance Taps

EM-NI™ GUN™ Taps • Through Holes



High-Performance Taps



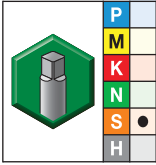
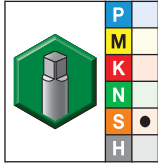
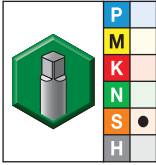
- first choice
- alternate choice

■ Series 8601 • Machine Screw and Fractional • Plug Chamfer • DIN Length ANSI Shank

			inch dimensions					number of flutes	pitch diameter limit
TiCN	oxide/nitride	uncoated	D1 TPI	L	L3	L2	D		
—	85523	—	2 - 56	1.75	.26	—	.141	2	H2
85401	85501	85501B	4 - 40	1.88	.34	.56	.141	2	H2
—	85502	—	4 - 40	1.88	.34	.56	.141	2	H3
—	85504	—	4 - 40	1.88	.34	.56	.141	2	H4
—	85506	—	4 - 48	1.88	.34	.56	.141	2	H2
—	85503	—	5 - 40	1.94	.37	.62	.141	3	H2
—	85508	—	6 - 32	2.00	.41	.69	.141	3	H2
85405	85505	85505B	6 - 32	2.00	.41	.69	.141	3	H3
—	85524	—	6 - 32	2.00	.41	.69	.141	3	H4
—	85535	—	6 - 32	2.00	.41	.69	.141	3	H5
—	85511	—	6 - 32	2.00	.41	.69	.141	3	H7
—	85512	85512B	6 - 40	2.00	.41	.69	.141	3	H2
—	85534	—	8 - 32	2.13	.45	.75	.168	3	H2
85407	85507	85507B	8 - 32	2.13	.45	.75	.168	3	H3
—	85529	—	8 - 32	2.13	.45	.75	.168	3	H4
—	85537	—	8 - 32	2.13	.45	.75	.168	3	H5
—	85560	—	8 - 32	2.13	.45	.75	.168	3	H6
—	85567	—	8 - 32	2.13	.45	.75	.168	3	H7
85409	85509	85509B	10 - 24	2.38	.53	.88	.194	3	H3
—	85536	—	10 - 24	2.38	.53	.88	.194	3	H4
—	85539	—	10 - 24	2.38	.53	.88	.194	3	H5
—	85538	—	10 - 24	2.38	.53	.88	.194	3	H7
—	85541	—	10 - 32	2.38	.53	.88	.194	3	H2
85410	85510	85510B	10 - 32	2.38	.53	.88	.194	3	H3
—	85530	—	10 - 32	2.38	.53	.88	.194	3	H4
—	85540	—	10 - 32	2.38	.53	.88	.194	3	H5
—	85561	—	10 - 32	2.38	.53	.88	.194	3	H6
—	85570	—	10 - 32	2.38	.53	.88	.194	3	H7
85413	85513	85513B	1/4 - 20	2.50	.59	1.00	.255	3	H3
—	85543	—	1/4 - 20	2.50	.59	1.00	.255	3	H5
—	85542	—	1/4 - 20	2.50	.59	1.00	.255	3	H7
85414	85514	85514B	1/4 - 28	2.50	.59	1.00	.255	3	H3

(continued)

(Series 8601 • Machine Screw and Fractional • Plug Chamfer • DIN Length ANSI Shank continued)

 TiCN	 oxide/nitride	 uncoated	inch dimensions					number of flutes	pitch diameter limit
			D1 TPI	L	L3	L2	D		
—	85531	—	1/4 - 28	2.50	.59	1.00	.255	3	H4
—	85544	—	1/4 - 28	2.50	.59	1.00	.255	3	H5
—	85562	—	1/4 - 28	2.50	.59	1.00	.255	3	H6
—	85574	—	1/4 - 28	2.50	.59	1.00	.255	3	H7
85415	85515	85515B	5/16 - 18	2.72	.67	1.13	.318	3	H3
—	85545	—	5/16 - 18	2.72	.67	1.13	.318	3	H5
—	85553	—	5/16 - 18	2.72	.67	1.13	.318	3	H7
85416	85516	85516B	5/16 - 24	2.72	.67	1.13	.318	3	H3
—	85532	—	5/16 - 24	2.72	.67	1.13	.318	3	H4
—	85546	—	5/16 - 24	2.72	.67	1.13	.318	3	H5
—	85563	—	5/16 - 24	2.72	.67	1.13	.318	3	H6
—	85576	—	5/16 - 24	2.72	.67	1.13	.318	3	H7
85417	85517	85517B	3/8 - 16	2.94	.75	1.25	.381	3	H3
—	85547	—	3/8 - 16	2.94	.75	1.25	.381	3	H5
—	85554	—	3/8 - 16	2.94	.75	1.25	.381	3	H7
85418	85518	85518B	3/8 - 24	2.94	.75	1.25	.381	3	H3
—	85533	—	3/8 - 24	2.94	.75	1.25	.381	3	H4
—	85548	—	3/8 - 24	2.94	.75	1.25	.381	3	H5
—	85564	—	3/8 - 24	2.94	.75	1.25	.381	3	H6
—	85578	—	3/8 - 24	2.94	.75	1.25	.381	3	H7
85419	85519	85519B	7/16 - 14	3.16	.87	—	.323	3	H3
—	85549	—	7/16 - 14	3.16	.87	—	.323	3	H5
85420	85520	85520B	7/16 - 20	3.16	.87	—	.323	3	H3
—	85550	—	7/16 - 20	3.16	.87	—	.323	3	H5
85421	85521	85521B	1/2 - 13	3.38	.96	—	.367	3	H3
—	85551	—	1/2 - 13	3.38	.96	—	.367	3	H5
—	85555	—	1/2 - 13	3.38	.96	—	.367	3	H7
85422	85522	85522B	1/2 - 20	3.38	.96	—	.367	3	H3
—	85552	—	1/2 - 20	3.38	.96	—	.367	3	H5
—	85556	—	1/2 - 20	3.38	.96	—	.367	3	H7
—	85525	—	5/8 - 11	3.81	1.08	—	.480	3	H3
—	85565	—	5/8 - 11	3.81	1.08	—	.480	3	H5
—	85526	—	5/8 - 18	3.81	1.08	—	.480	3	H3
—	85566	—	5/8 - 18	3.81	1.08	—	.480	3	H5
—	85527	—	3/4 - 10	4.25	1.20	—	.590	3	H3
—	85557	—	3/4 - 10	4.25	1.20	—	.590	3	H5
—	85528	—	3/4 - 16	4.25	1.20	—	.590	3	H3
—	85558	—	3/4 - 16	4.25	1.20	—	.590	3	H5

NOTE: EM taps for 3B class of fit are suitable for UNJ aerospace internal threading applications.
See pages A274–A275 for the recommended pitch diameter limit for 2B or 3B class of fit.