

## 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.





(Series 8304 • Machine Screw and Fractional • Chamfer 2-1/2-3-1/2 Pitches continued)

								inch dimensions		number of flutes	pitch diameter limit			
TiCN		TiN		oxide		uncoated		D1 TPI	L			L3	L2	D
84354		84954		84654		84654B		9/16 - 18	3.59	.51	—	.429	3	H3
—		—		84698		84698B		9/16 - 18	3.59	.51	—	.429	3	H5
84325		84925		84625		84625B		5/8 - 11	3.81	.75	—	.480	3	H3
—		—		84655		84655B		5/8 - 11	3.81	.75	—	.480	3	H5
—		—		84661		—		5/8 - 11	3.81	.75	—	.480	3	H7
84326		84926		84626		84626B		5/8 - 18	3.81	.51	—	.480	3	H3
—		—		84656		84656B		5/8 - 18	3.81	.51	—	.480	3	H5
—		—		84666		—		5/8 - 18	3.81	.51	—	.480	3	H7
84327		84927		84627		84627B		3/4 - 10	4.25	.83	—	.590	4	H3
—		—		84693		—		3/4 - 10	4.25	.83	—	.590	4	H5
84328		84928		84628		84628B		3/4 - 16	4.25	.59	—	.590	4	H3
—		—		84694		—		3/4 - 16	4.25	.59	—	.590	4	H5
—		—		84686		—		3/4 - 16	4.25	.59	—	.590	4	H7
84395		84995		84695		84695B		7/8 - 9	4.69	.83	—	.697	4	H4
84396		84996		84696		84696B		7/8 - 14	4.69	.71	—	.697	4	H4
84397		84997		84697		—		1 - 8	5.13	.98	—	.800	4	H4
—		—		84668		—		1 - 12	5.13	.71	—	.800	4	H4
—		—		—		84701B		1 1/8 - 7	5.44	2.56	—	.896	4	H6
—		—		—		84702B		1 1/8 - 12	5.44	2.56	—	.896	4	H5
—		—		—		84703B		1 1/4 - 7	5.75	2.56	—	1.021	4	H6
—		—		—		84705B		1 1/4 - 12	5.75	2.56	—	1.021	4	H5
—		—		—		84706B		1 3/8 - 6	6.06	3.00	—	1.108	4	H6
—		—		—		84707B		1 3/8 - 12	6.06	3.00	—	1.108	4	H5
—		—		—		84709B		1 1/2 - 6	6.38	3.00	—	1.233	4	H6
—		—		—		84711B		1 1/2 - 12	6.38	3.00	—	1.233	4	H5
—		—		—		84714B		1 3/4 - 5	7.00	3.19	—	1.430	4	H7
—		—		—		84715B		2 - 4 1/2	7.63	3.56	—	1.644	4	H3
—		—		—		84697B		1 - 8	5.13	.98	—	.800	4	H4

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.