

High-Performance Solution for Multipurpose Tapping

VariTap™ ISO Pipe Taps



2017 Advances
METRIC

WIDIA 

High-Performance Solution for Multipurpose Tapping

VariTap™ is the high-performance multipurpose tapping solution from WIDIA™. VariTap has an optimised geometry capable of working in a wide variety of ductile materials — including carbon and alloy steels, stainless steels, ductile iron, and cast aluminium. VariTap reduces inventory costs without losing the benefit of high-quality threads and consistent

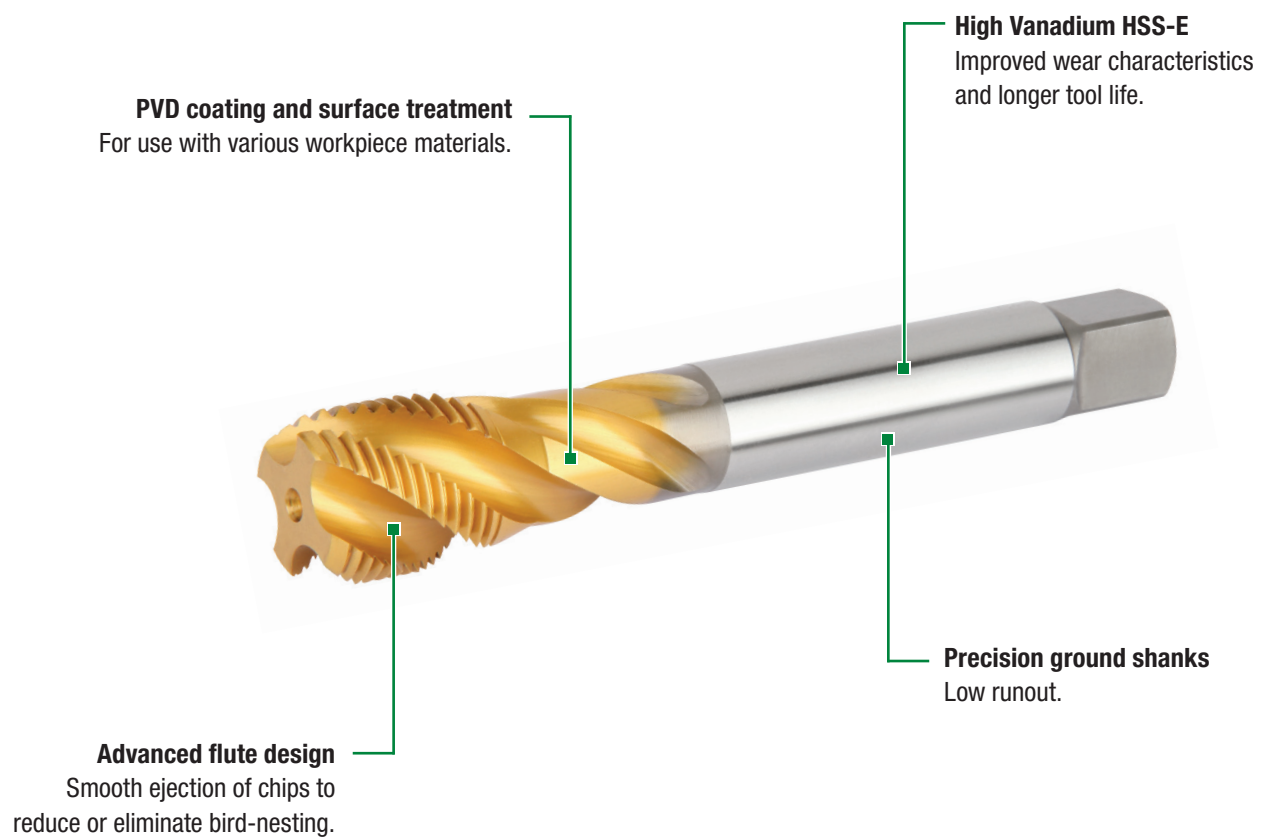
VariTap



VariTap Line Expansion

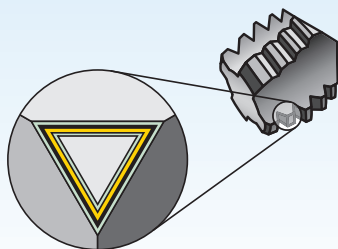
With a wide range of inch and metric standard sizes, pitch diameter limits, classes of fit, chamfer styles, and coatings, VariTap offers the most expansive portfolio of multipurpose taps available on the market. VariTap now includes ISO pipe taps for through and blind hole applications.

High-Performance HSS-E ISO Pipe Taps



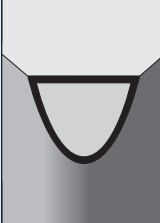
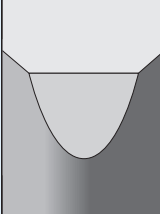
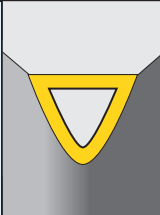
★ Good ★★ Better ★★★ Best	hole		thread		coolant		size range		material				chamfer			
	through	blind	cutting	forming	flood	through			carbide	HSS-E-PM	HSS-E	HSS	type	form		
																
series							min-max	grade/ coating							helix angle	dimension
VariTap™ High-Performance Multi-application Taps																
VTSP086 	X		X		X		1/8-1"	WP49EG WU41EG			X		Form B	–	0°	DIN 5156
VTSFT86 		X	X		X		1/8-1"	WP49EG WU41EG			X		Form C	–	42°	DIN 5156
VTSTR83 	X	X	X		X		1/16-1"	WU40EG			X		Form C	–	0°	DIN 5156
VTSTR88 	X	X	X		X		1/16-1"	WU40EG			X		Form C	–	0°	DIN 5156

	P				M	K		N			S				H			
	1, 2, 3, 4, 6, 7	5, 9, 10, 11	12, 13.1	13.2	14.1, 14.2, 14.3, 14.4	15, 16	17, 18, 19, 20	21	22, 23, 24, 25	26, 27, 28	31, 32	33, 34, 35	36	37	38.1, 38.2, 40.1, 40.2, 41.1	39.1, 41.2		
	Steel <35 HRC	Steel > 36–48 HRC	PH and Ferritic Stainless Steel <35 HRC	PH and Ferritic Stainless Steel >35 HRC	Stainless Steel	Grey Cast Iron	Ductile Cast Iron	Wrought Aluminium	Cast Aluminium	Copper, Copper Alloys	Iron Based	Cobalt Based	Nickel Based	Titanium Alloys	Hardened Steels 49–55 HRC	Hardened Steels 56–68 HRC	page(s)	recommended cutting parameters
VariTap™ High-Performance Multi-application Taps (continued)																		
	★★	★	★		★★	★	★★	★	★★	★★	★						7	10
	★★	★	★		★★	★	★★	★	★★	★★	★						8	10
	★★	★	★		★★	★	★★	★	★★	★★	★						9	10
	★★	★	★		★★	★	★★	★	★★	★★	★						9	10

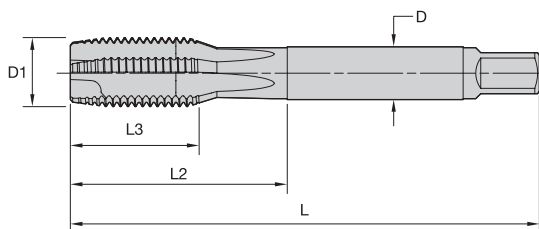


Coatings are designed for optimised tapping performance in specific materials.

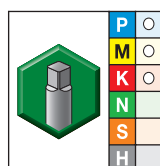
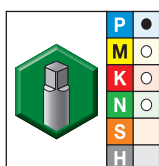
P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

		wear resistance ← → toughness											
Coating		Grade Description		05	10	15	20	25	30	35	40	45	
WP49EG		HSS-E substrate with black oxide surface treatment. Use in a variety of materials, including steel, stainless steel, and ductile iron. Not recommended for non-ferrous materials.	P										
			M										
			K										
WU40EG		Uncoated HSS-E grade with bright surface. Use in easy-to-machine, general-purpose applications.	P										
			M										
			K										
			N										
WU41EG		Coated HSS-E substrate with TiN PVD layer. Use in multiple applications, including steel, stainless steel, ductile cast iron, and cast aluminium.	P										
			M										
			K										
			N										

- WU41EG TiN
- WP49EG Oxide



■ VTSP0 • (G) Whitworth Pipe Thread • DIN EN ISO 228 • Form B



- first choice
- alternate choice

grade WU41EG TiN		grade WP49EG Oxide		D1 TPI	L	L2	L3	D	number of flutes	thread type
order #	catalogue #	order #	catalogue #							
6058785	VTSP08605	6058784	VTSP08605	1/8 - 28	90	35	15	7	3	G
6058787	VTSP08606	6058786	VTSP08606	1/4 - 19	100	44	22	11	3	G
6058790	VTSP08607	6058788	VTSP08607	3/8 - 19	100	47	22	12	4	G
6058792	VTSP08608	6058791	VTSP08608	1/2 - 14	125	55	25	16	4	G
6058794	VTSP08609	6058793	VTSP08609	5/8 - 14	125	61	25	18	4	G
6058797	VTSP08610	6058796	VTSP08610	3/4 - 14	140	60	25	20	4	G
6058799	VTSP08611	6058798	VTSP08611	7/8 - 14	150	68	28	22	4	G
6058811	VTSP08612	6058800	VTSP08612	1 - 11	160	68	30	25	5	G

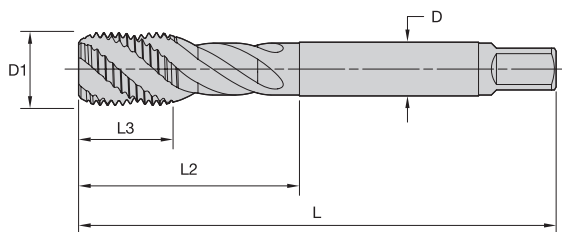
NOTE: Suitable for tension/compression holders.

Multipurpose Taps

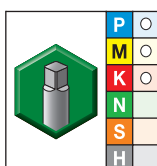
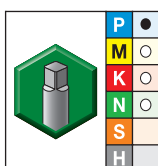
VariTap™ Spiral-Flute HSS-E ISO Pipe Taps • Blind Holes



- WU41EG TiN
- WP49EG Oxide



■ VTSFT • (G) Whitworth Pipe Thread • DIN EN ISO 228 • Form C

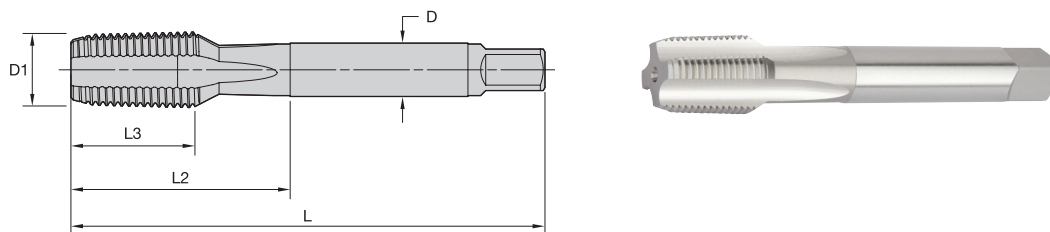


- first choice
- alternate choice

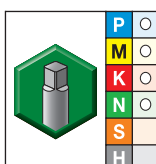
grade WU41EG TiN		grade WP49EG Oxide		D1 TPI	L	L2	L3	D	number of flutes	thread type
order #	catalogue #	order #	catalogue #							
6058815	VTSFT8605	6058814	VTSFT8605	1/8 - 28	90	35	15	7	3	G
6058817	VTSFT8606	6058816	VTSFT8606	1/4 - 19	100	44	15	11	3	G
6058819	VTSFT8607	6058818	VTSFT8607	3/8 - 19	100	47	15	12	4	G
6058871	VTSFT8608	6058820	VTSFT8608	1/2 - 14	125	55	18	16	4	G
6058873	VTSFT8609	6058872	VTSFT8609	5/8 - 14	125	61	18	18	4	G
6058875	VTSFT8610	6058874	VTSFT8610	3/4 - 14	140	65	20	20	4	G
6058877	VTSFT8611	6058876	VTSFT8611	7/8 - 14	150	68	22	22	4	G
6058879	VTSFT8612	6058878	VTSFT8612	1 - 11	160	74	24	25	5	G

NOTE: Suitable for tension/compression holders.

• WU40EG Bright



■ VTSTR • NPT and NPTF • Standard Projection • Form C



● first choice
○ alternate choice

grade WU40EG Bright							number of flutes	thread type
order #	catalogue #	D1 TPI	L	L2	L3	D		
6058953	VTSTR8301	1/16 - 27	90	35	13	6	3	NPT
6058960	VTSTR8801	1/16 - 27	90	35	13	6	3	NPTF
6058954	VTSTR8302	1/8 - 27	90	36	13	7	4	NPT
6059011	VTSTR8802	1/8 - 27	90	36	13	7	4	NPTF
6058955	VTSTR8303	1/4 - 18	100	39	20	11	4	NPT
6059012	VTSTR8803	1/4 - 18	100	39	20	11	4	NPTF
6058956	VTSTR8304	3/8 - 18	110	39	20	12	4	NPT
6059013	VTSTR8804	3/8 - 18	110	39	20	12	4	NPTF
6058957	VTSTR8305	1/2 - 14	125	56	26	16	4	NPT
6059014	VTSTR8805	1/2 - 14	125	56	26	16	4	NPTF
6058958	VTSTR8306	3/4 - 14	140	55	26	20	4	NPT
6059015	VTSTR8806	3/4 - 14	140	55	26	20	4	NPTF
6058959	VTSTR8307	1 - 11.5	160	71	32	25	5	NPT
6059016	VTSTR8807	1 - 11.5	160	71	32	25	5	NPTF

NOTE: Suitable for tension/compression holders.

■ VariTap™ HSS-E • Metric

Material Group		 Through Holes					 Blind Holes				
				Range — m/min					Range — m/min		
		Tap Style	Grade	min	Starting Value	max	Tap Style	Grade	min	Starting Value	max
P	6,7,8,10	VTSP0	WU41EG	20	22	24	VTSFT	WU41EG	13	15	17
		VTSP0	WP49EG	8	10	12	VTSFT	WP49EG	6	7	9
		VTSTR	WU40EG	5	6	8	VTSTR	WU40EG	3	4	6
M	14.1,14.3	VTSP0	WU41EG	10	12	14	VTSFT	WU41EG	6	8	10
		VTSP0	WP49EG	6	7	9	VTSFT	WP49EG	4	5	6
		VTSTR	WU40EG	4	5	7	VTSTR	WU40EG	3	4	6
K	15,16	VTSP0	WU41EG	16	18	20	VTSFT	WU41EG	11	13	15
		VTSP0	WP49EG	7	9	11	VTSFT	WP49EG	5	6	8
		VTSTR	WU40EG	4	5	7	VTSTR	WU40EG	3	4	6
N	23,24	VTSP0	WU41EG	20	22	24	VTSFT	WU41EG	13	15	17
		VTSP0	WP49EG	8	10	12	VTSFT	WP49EG	6	7	9
		VTSTR	WU40EG	11	13	15	VTSTR	WU40EG	7	9	11