

# 7745 VSE 09 Milling Cutter

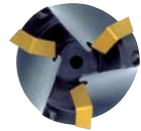


## 7745 VSE 09 Weldon Shank

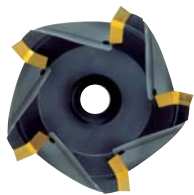
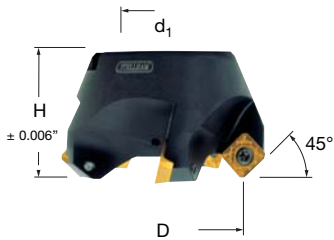
EDP #	Part Number	Dimensions (inch)							Plunge max.	No. of Inserts	Spares		
		D	L/H	l <sub>2</sub>	d <sub>1</sub>	a <sub>max.</sub>	EDP#	EDP#			EDP#		
014909	C7745VSE09WA.625Z02R	0.625	3.000	1.000	0.625	0.200	0.160	2	015269	F3508T	015240	T15	
014910	C7745VSE09WA.750Z02R	0.750	3.500	1.250	0.750	0.200	0.160	2	015269	F3508T	015240	T15	
014911	C7745VSE09WA1.00Z03R	1.000	3.750	1.370	1.000	0.200	0.160	3	015064	F3510T	015240	T15	
014912	C7745VSE09WA1.25Z03R	1.250	4.000	1.370	1.250	0.200	0.160	3	015064	F3510T	015240	T15	
014913	C7745VSE09WA1.50Z04R	1.500	4.300	1.750	1.250	0.200	0.160	4	015064	F3510T	015240	T15	

## 7745 VSE 09 Shell Mill Fixation

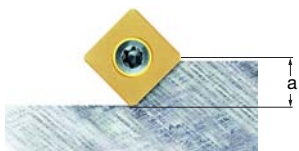
EDP #	Part Number	D	L/H	l <sub>2</sub>	d <sub>1</sub>	a <sub>max.</sub>	Plunge max.	No. of Inserts	EDP#	EDP#	EDP#
014900	C7745VSE09-A1.25Z04R	1.250	1.180	-	0.500	0.200	0.160	4	015064	F3510T	T15
014901	C7745VSE09-A1.50Z05R	1.500	1.570	-	0.500	0.200	0.160	5	015064	F3510T	T15
014902	C7745VSE09-A2.00Z05R	2.000	1.570	-	0.750	0.200	0.160	5	015064	F3510T	T15
014903	C7745VSE09-A2.00Z06R	2.000	1.570	-	0.750	0.200	0.160	6	015064	F3510T	T15
014904	C7745VSE09-A2.50Z05R	2.500	1.570	-	0.750	0.200	0.160	5	015064	F3510T	T15
014905	C7745VSE09-A2.50Z07R	2.500	1.970	-	0.750	0.200	0.160	7	015064	F3510T	T15
014906	C7745VSE09-A3.00Z06R	3.000	1.970	-	1.000	0.200	0.160	6	015064	F3510T	T15
014907	C7745VSE09-A3.00Z09R	3.000	1.970	-	1.000	0.200	0.160	9	015064	F3510T	T15
015431	C7745VSE09-A4.00Z07R	4.000	1.970	-	1.250	0.200	0.160	7	015064	F3510T	T15
014908	C7745VSE09-A4.00Z11R	4.000	2.480	-	1.250	0.200	0.160	11	015064	F3510T	T15
015432	C7745VSE09-A5.00Z08R	5.000	2.480	-	1.500	0.200	0.160	8	015064	F3510T	T15
015433	C7745VSE09-A5.00Z12R	5.000	1.570	-	1.500	0.200	0.160	12	015064	F3510T	T15



Weldon Shank



Shell Mill Fixation



Depth of Cut (a)

## 7745 VSE 09 Technical Advice

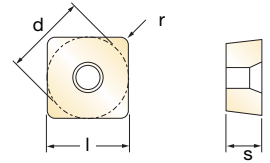
Milling Cutter Order Example: **C7745VSE09WA1.00Z03R**  
 Milling Insert Order Example: **SDHT09T3AEEN -421 MP91M**  
 For complete cutting conditions refer to page: **208**

Feedrate compensation: For 45° cutting, divide the h<sub>m</sub> value by the sine of the approach angle (the sine of 45° = 0.707)

$$\text{ie: } \frac{h_m}{0.707} \quad \text{or} \quad \frac{0.004''}{0.707} = 0.0056 \text{ in. programmed feed rate}$$



# Inserts for 7745 VSE 09



EDP#	Part Number	Grade	Application & Material			Dimensions (inch)				
			Roughing ▼	Semi-Finishing ▼▼	Finishing ▼▼▼	d	l	s	r	h <sub>m</sub> min
017714	SDCT09T3AEEN	SF30				0.375	0.375	0.156	Facet	0.0016
017242	SDCT09T3AEFN	GH1	◆	◆	◆	0.375	0.375	0.156	Facet	0.0008
017715	SDCW09T3AEFN	SFZ			◆	0.375	0.375	0.156	Facet	0.0008
017718	SDCW09T3AETN	GH1				0.375	0.375	0.156	Facet	0.0059
018204	SDCW09T3AETN	CN35				0.375	0.375	0.156	Facet	0.0047
017716	SDCW09T3AETN	SF30				0.375	0.375	0.156	Facet	0.0059
017717	SDCW09T3AETN	X44				0.375	0.375	0.156	Facet	0.0059
017726	SDEX09T3AEEN-701	PFZ				0.375	0.375	0.156	Facet	0.0012
015148	SDEX09T3AEFN-701	GH1				0.375	0.375	0.156	Facet	0.0008
015229	SDEX09T3AEFN-701	SFZ				0.375	0.375	0.156	Facet	0.0008
017320	SDHT09T3AEEN-421	MP91M				0.375	0.375	0.156	Facet	0.0012
023356	SDHT09T3AEEN-421	PFZ				0.375	0.375	0.156	Facet	0.0012
015186	SDHT09T3AEEN-421	X500			◆◆	0.375	0.375	0.156	Facet	0.0012
027733	SDHT09T3AEEN-421	SP6564				0.375	0.375	0.156	Facet	0.0012
017323	SDHW09T3AETN	MP91M				0.375	0.375	0.156	Facet	0.0039
023358	SDHW09T3AETN	PFZ				0.375	0.375	0.156	Facet	0.0039
015231	SDHW09T3AETN	X500				0.375	0.375	0.156	Facet	0.0039
027741	SDHW09T3AETN	SP6564				0.375	0.375	0.156	Facet	0.0039
026600	SDKT09T3AEEN-45	MP91M		◆◆	◆◆	0.375	0.375	0.156	Facet	0.0020
026602	SDKT09T3AEEN-45	X500		◆◆	◆◆	0.375	0.375	0.156	Facet	0.0020
027738	SDKT09T3AEEN-45	SP6564		◆◆	◆◆	0.375	0.375	0.156	Facet	0.0020
017319	SDET09T308EN	MP91M				0.375	0.375	0.156	0.031	0.0012
017724	SDET09T308EN	PFZ				0.375	0.375	0.156	0.031	0.0012
017725	SDET09T308FN	GH1				0.375	0.375	0.156	0.031	0.0008
017325	SDMT09T308EN-41	MP91M	◆			0.375	0.375	0.156	0.031	0.0016
023362	SDMT09T308EN-41	PFZ				0.375	0.375	0.156	0.031	0.0016
014410	SDMT09T308EN-41	X500				0.375	0.375	0.156	0.031	0.0016
027736	SDMT09T308EN-41	SP6564	◆◆			0.375	0.375	0.156	0.031	0.0016
017327	SDMW09T308TN	MP91M	◆			0.375	0.375	0.156	0.031	0.0059
027742	SDMW09T308TN	SP6564				0.375	0.375	0.156	0.031	0.0059
023363	SDMW09T308TN	PFZ				0.375	0.375	0.156	0.031	0.0059
015232	SDMW09T308TN	X500				0.375	0.375	0.156	0.031	0.0047



## SD\_09 Recommended Cutting Conditions

Material	▼ Roughing			▼▼ Semi-Finishing			▼▼▼ Finishing		
	Speed V <sub>C</sub> (feet/min)	Feed h <sub>m</sub> (inch)	D.O.C. a <sub>p</sub> (inch)	Speed V <sub>C</sub> (feet/min)	Feed h <sub>m</sub> (inch)	D.O.C. a <sub>p</sub> (inch)	Speed V <sub>C</sub> (feet/min)	Feed h <sub>m</sub> (inch)	D.O.C. a <sub>p</sub> (inch)
◆ Unalloyed Steels	600 - 720	0.005 - 0.012	0.12 - 0.20	730 - 850	0.004 - 0.010	0.04 - 0.12	730 - 980	0.003 - 0.006	0.01 - 0.04
◆ Alloyed Steels	230 - 360	0.005 - 0.010	0.12 - 0.20	330 - 490	0.004 - 0.008	0.04 - 0.12	330 - 630	0.003 - 0.006	0.01 - 0.04
◆ Stainless Steels	400 - 450	0.005 - 0.009	0.12 - 0.20	460 - 590	0.004 - 0.008	0.04 - 0.12	600 - 750	0.002 - 0.006	0.01 - 0.04
◆ PH Stainless	-	-	-	230 - 270	0.004 - 0.007	0.04 - 0.12	270 - 320	0.002 - 0.004	0.01 - 0.04
◆ Cast Irons	460 - 910	0.005 - 0.010	0.12 - 0.20	600 - 980	0.004 - 0.008	0.04 - 0.12	660 - 1140	0.002 - 0.006	0.01 - 0.04
◆ Aluminum & Alloys	910 - 1470	0.004 - 0.009	0.12 - 0.20	1320 - 2460	0.003 - 0.007	0.04 - 0.12	2300 - 3280	0.002 - 0.006	0.01 - 0.04
◆ High Temp. Alloys	-	-	-	120 - 160	0.004 - 0.007	0.04 - 0.12	150 - 190	0.002 - 0.004	0.01 - 0.04
◆ Hard Steels (52-56 HRC)	-	-	-	-	-	-	170 - 320	0.001 - 0.002	0.01 - 0.02

h<sub>m</sub> = average chip thickness

### Star Guide Key to Recommended Tools

Material Designations						
	◆ P	Unalloyed Steels	◆ M	Stainless Steels	◆ K	Cast Irons
	◆ P	Alloyed Steels	◆ M	PH Stainless	◆ N	Aluminum & Alloys
				◆ S	High Temp. Alloys	
				◆ H	Hard Materials	