

TV 90 Milling Cutters

For Non-Ferrous & Plastic Materials

Application

- High speed milling of
 - aluminum alloys
 - copper alloys
 - plastic materials
- Can be used for edge and slot milling, as well as axial plunge milling
- Excellent for deep cavity work
- Suitable for soft non-ferrous materials
- Up to .500" depth of cut
- Exceptionally high feed rates (over 200 IPM)
- Maximum metal removal on any machine
- Wide range of product available

Features / Benefits

- High positive geometry insert with wave shape topography eliminates edge build-up and provides efficient chip removal
- End mills designed with coolant bore holes directed toward cutting edges
- New insert grade TK10MP is specifically designed for the machining of aluminum and non-ferrous materials that require high cutting speeds



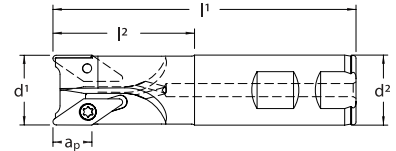
TV 90 Milling Cutters

For Non-Ferrous & Plastic Materials



TV90 End Mills

Optimized design for aluminum



Designation	Dimensions							Insert	Spare Parts	
	d ¹	d ²	l ¹	l ²	Max a _p	Max Plunge	Flutes		Insert Screw	Wrench
TVP90-0750C	.750	.750	3.28	1.25	.40	.200	2	VPGT-221-ALM	LF-89972	214.80.866 (S/D)
TVP90-1000XC	1.000	1.000	4.28	2.00	.40	.200	3			214.80.011 (F/T)
TVP90-1000C	1.000	1.000	4.28	2.00	.53	.250	2	VPGT-333-ALM VPGT-33 PPFR-ALM*	LF-51706	214.80.824 (S/D)
TVP90-1250C	1.250	1.250	4.28	2.00	.53	.250	2			214.80.012 (F/T)
TVP90-1500C	1.500	1.250	4.28	2.00	.53	.250	3			

* To provide necessary clearance when using VPGT-33 PPFR-ALM inserts, the cutter body must be relieved.



TV90 End Mills

Optimized design for aluminum

Designation	Dimensions							Insert	Spare Parts	
	d ¹	d ²	l ¹	l ²	Max a _p	Max Plunge	Flutes		Insert Screw	Wrench
TVP90CY-0750-XLC	.750	.625	6.75	1.25	.40	.200	2	VPGT-221-ALM	LF-89972	214.80.866 (S/D)
TVP90CY-1000X-XLC	1.000	.750	8.00	2.00	.40	.200	3			214.80.011 (F/T)
TVP90CY-1000-XLC	1.000	.750	8.00	2.00	.53	.250	2	VPGT-333-ALM VPGT-33 PPFR-ALM*	LF-51706	214.80.824 (S/D)
TVP90CY-1250-XLC	1.250	1.000	8.00	2.00	.53	.250	2			214.80.012 (F/T)
TVP90CY-1500-XLC	1.500	1.250	8.00	2.00	.53	.250	3			

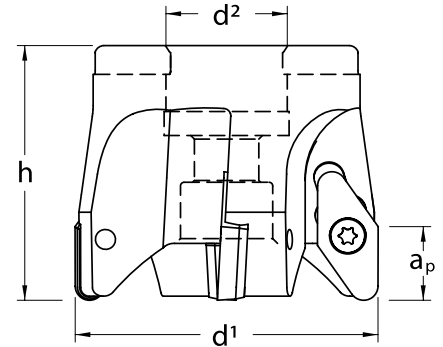
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TV 90 Milling Cutters

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TV90 Face Mills

Optimized design for aluminum

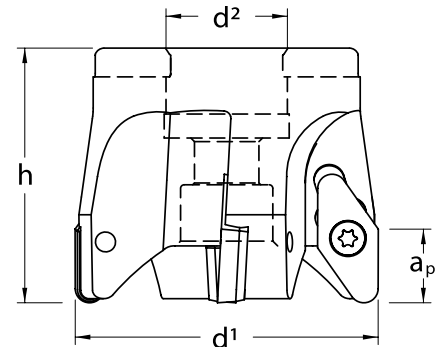


Designation	Dimensions						Insert	Spare Parts	
	d ¹	d ²	h	Max a _p	Max Plunge	Flutes		Insert Screw	Wrench
TVP90-2000	2.00	.750	2.12	.53	.250	4	VPGT-333-ALM VPGT-33 PPFR-ALM*	LF-51706	214.80.824 (S/D) 214.80.012 (F/T)
TVC90-2000	2.00	.750	2.12	.59	.300	3	VCGT-43.58-ALM	C-1250	214.80.994 (S/D) 214.80.076 (F/T)
TVC90-2500	2.50	1.000	2.12	.59	.300	4			
TVC90-3000	3.00	1.000	2.12	.59	.300	5			
TVC90-4000	4.00	1.500	2.12	.59	.300	6			

* To provide necessary clearance when using VPGT-33 PPFR-ALM inserts, the cutter body must be relieved.

TV90 Face Mills

Optimized design for aluminum



Designation	Dimensions						Insert	Spare Parts	
	d ¹	d ²	h	Max a _p	Max Plunge	Flutes		Insert Screw	Wrench
TVC90-2500AL-3	2.50	1.000	2.12	.59	.300	3	VCGT-43.58-ALM	C-1250	214.80.994 (S/D) 214.80.076 (F/T)
TVC90-3000AL-3	3.00	1.000	2.12	.59	.300	3			
TVC90-4000AL-4	4.00	1.500	2.12	.59	.300	4			

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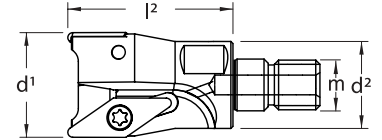
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TV90 Screw On Mills

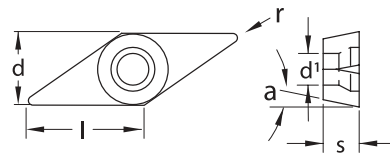
Optimized design for aluminum



Designation	Dimensions							Insert	Spare Parts	
	d ¹	d ²	l ²	m	Max a _p	Max Plunge	Flutes		Insert Screw	Wrench
TVP90-0750-TS **	.750	.709	1.18	M10	.40	.200	2	VPGT-221-ALM	LF-89972	214.80.866 (S/D)
TVP90-1000XC-TS	1.000	.827	1.57	M12	.40	.200	3			214.80.011 (F/T)
TVP90-1000C-TS	1.000	.827	1.57	M12	.53	.250	2	VPGT-333-ALM VPGT-33 PPFR-ALM*	LF-51706	214.80.824 (S/D)
TVP90-1250C-TS	1.250	1.142	1.97	M16	.53	.250	2			214.80.012 (F/T)
TVP90-1500C-TS	1.500	1.142	1.97	M16	.53	.250	3			

* To provide necessary clearance when using VPGT-33 PPFR-ALM inserts, the cutter body must be relieved.
 ** All threaded shank cutters come with coolant through, with the exception of TVP90-0750-TS.

Inserts



Designation	l	s	r	d	d ¹	a	VCGT / VPGT Inserts								
							Coated	Dia. Ctd.		Uncoated	Cermet				
VCGT-43.58-ALM	.870	7/32	.118	1/2	.216	7°	TK10MP								
VPGT-221-ALM	.437	1/8	1/64	1/4	.110	11°		TK10TB							
VPGT-333-ALM	.654	3/16	3/64	3/8	.173	11°									
VPGT-33 PPFR-ALM	.654	3/16	---	3/8	.173	11°									

- TK10M** Uncoated K10/C2 wear resistant grade, suited for machining of non-ferrous materials, high temp. alloys as well as synthetic materials including fibreglass, graphite and plastic. Recommended to run with coolant only when materials require wet machining.
- TK10MP** TiAlN coated K10/C2 grade designed for high speed machining of aluminum and other non-ferrous material. Recommended to run with coolant.
- TK10TB** PVD diamond film coating offering greatly extended tool life over conventional carbide. Recommended specifically for synthetic materials such as graphite.



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Available from:

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