



VX-7

GARR TOOL[®]
High Performance Solid Carbide

**ENGINEERED FOR
HIGH EFFICIENCY MILLING**

A NEW 7-FLUTE SERIES FROM GARR TOOL



The needs of today's manufacturing world are always evolving, and the new 7-flute VX-7 Series from GARR TOOL has been engineered to meet them. Designed for High Efficiency Milling/Trochoidal Milling and paired with a next generation coating, this tooling has increased lubricity and wear resistance in materials such as Titanium (high temp alloys), stainless steels, and tool steels. As an added bonus, our VX-7 Series is noticeably quieter than the competition; the difference can be heard at first cut.



Die Anforderungen der heutigen Fertigungswelt ändern sich ständig, und die neue GARR TOOL 7-Schneider Fräser von der Serie -VX-7- von wurde speziell für diese Anforderungen entwickelt. Dieses Werkzeug wurde für hocheffizientes Fräsen / Trochoidalfräsen entwickelt und mit einer Beschichtung der nächsten Generation kombiniert. Es weist eine erhöhte Schmierfähigkeit und Verschleißfestigkeit in Materialien wie Titan (Hochtemperaturlegierungen), rostfreien Stählen und Werkzeugstählen auf. Als zusätzlichen Bonus ist unsere VX-7-Serie deutlich leiser als die der Konkurrenz. Der Unterschied ist auf den ersten Blick zu hören.



La necesidades de la industria manufacturera siempre esta evolucionando. Diseñado para la próxima nivel de fresado de alta eficiencia/fresado trocoidal, introducimos la nueva serie VX-7. Con 7 filos y un recubrimiento de próxima generación, esta combinación mejora lubricidad y resistencia de desgaste en materiales como titanio (y los superaleaciones), aceros inoxidables y aceros generales. Como beneficio adicional, nuestra serie VX-7 es notablemente más silenciosa contra la competencia; La diferencia se puede escuchar en el primer corte.



Les besoins du monde de l'usinage sont en constante évolution et la nouvelle fraise GARR TOOL de la série VX-7 à 7 dents a été conçue pour y répondre. Conçu pour le fraisage haute performance / fraisage trochoïdal et associé à un revêtement de nouvelle génération, cette fraise augmente la capacité de lubrification et la résistance à l'usure dans des matériaux tels que le titane (alliages à haute température), les aciers inoxydables et les aciers à outils. En outre, notre série VX-7 est sensiblement plus silencieuse que la concurrence; la différence peut être entendue dès la première coupe.



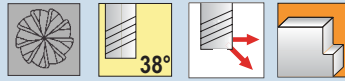
Le esigenze nel mondo delle lavorazioni meccaniche evolvono continuamente e le nuove frese a 7 taglienti della serie VX-7 prodotte da GARR TOOL sono state sviluppate per affrontare le esigenze del futuro. Progettate e disegnate per le lavorazioni ad alta efficienza e le lavorazioni Trocoidali, ottimizzate con rivestimenti di ultima generazione queste frese offrono una maggiore resistenza all'usura nelle lavorazioni del Titanio, degli acciai resistenti al calore, degli acciai inossidabili e degli acciai per utensili. Come valore aggiunto, le nostre frese serie VX-7 offrono una maggiore silenziosità rispetto alla concorrenza, facilmente riscontrabile già dal primo taglio.



如今，全球生产需求一直不断发展，GARR TOOL 全新7刃VX-7系列应运而生。设计用于高效铣/摆线铣，搭配新一代涂层，在材料加工，如钛合金（高温合金），不锈钢，及工具钢加工中增加了润滑性及耐磨性。还有一个额外的优点，我们VX-7系列明显比竞争对手更加安静；区别可以在首切就听出来。

TOLERANCES

$d1$	$+0.000" - .002" (+.000mm - .050mm)$
$d2$	$h6$
r	$+0.001" - .001" (+.025mm - .025mm)$



Series VX-7

.3150" - .4724"
(8.000mm - 12.000mm)

Recommended for titanium, stainless, and tool steels under 45Rc

Seven-Flute End Mill

AlCrN-Based Coating

Solid submicron grain carbide end mill - non-center cutting

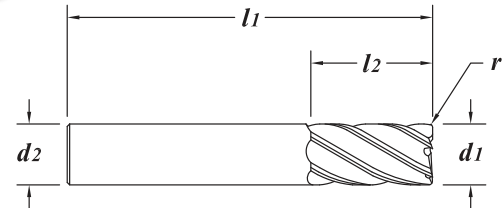
Engineered for Dynamic Milling

Multiple flutes for increased feed rates

Staggered flute geometry

Effective for Trochoidal milling

Up to 15% Radial (ae) engagement



EDP#	$d1$ †		$d2$	$l1$	$l2$	r
	Decimal	Diameter Metric				
64100	.3150	8.000	8.0	65	22	-
64102	.3150	8.000	8.0	65	22	0.50
64104	.3150	8.000	8.0	65	22	1.00
64106	.3150	8.000	8.0	75	32	-
64108	.3150	8.000	8.0	75	32	0.50
64110	.3150	8.000	8.0	75	32	1.00
64112	.3750	3/8"	9.525	3/8"	2-1/2"	1"
64114	.3750	3/8"	9.525	3/8"	2-1/2"	1"
64116	.3750	3/8"	9.525	3/8"	2-1/2"	1"
64118	.3750	3/8"	9.525	3/8"	3"	1-1/2"
64120	.3750	3/8"	9.525	3/8"	3"	1-1/2"
64122	.3750	3/8"	9.525	3/8"	3"	1-1/2"
64124	.3937	10.000	10.0	70	22	-
64126	.3937	10.000	10.0	70	22	0.50
64128	.3937	10.000	10.0	70	22	1.00
64130	.4724	12.000	12.0	75	26	-
64132	.4724	12.000	12.0	75	26	0.50
64134	.4724	12.000	12.0	75	26	1.00
64136	.4724	12.000	12.0	75	32	-
64138	.4724	12.000	12.0	75	32	0.50
64140	.4724	12.000	12.0	75	32	1.00
64142	.4724	12.000	12.0	100	50	-
64144	.4724	12.000	12.0	100	50	0.50
64146	.4724	12.000	12.0	100	50	1.00

HIGH PERFORMANCE
END MILLS

70

35

MATERIAL HARDNESS (Rc)

0

Series VX-7 (continued)

.5000" - 1.0000"
(12.700mm - 25.400mm)

EDP#	$d1^{\dagger}$			$d2$ Shank Diameter	$l1$ Overall Length	$l2$ Flute Length	r Corner Radius
	Decimal	Diameter	Metric				
64148	.5000	1/2"	12.700	1/2"	3"	1-1/4"	-
64150	.5000	1/2"	12.700	1/2"	3"	1-1/4"	.015"
64152	.5000	1/2"	12.700	1/2"	3"	1-1/4"	.020"
64154	.5000	1/2"	12.700	1/2"	3"	1-1/4"	.030"
64156	.5000	1/2"	12.700	1/2"	3"	1-1/4"	.060"
64158	.5000	1/2"	12.700	1/2"	3-1/2"	1-1/2"	-
64160	.5000	1/2"	12.700	1/2"	3-1/2"	1-1/2"	.030"
64162	.5000	1/2"	12.700	1/2"	4"	2"	-
64164	.5000	1/2"	12.700	1/2"	4"	2"	.030"
64166	.6250	5/8"	15.875	5/8"	3-1/2"	1-1/4"	-
64168	.6250	5/8"	15.875	5/8"	3-1/2"	1-1/4"	.030"
64170	.6250	5/8"	15.875	5/8"	3-1/2"	1-1/4"	.060"
64172	.6250	5/8"	15.875	5/8"	4"	1-3/4"	-
64174	.6250	5/8"	15.875	5/8"	4"	1-3/4"	.030"
64176	.6250	5/8"	15.875	5/8"	4"	1-3/4"	.060"
64178	.6299		16.000	16.0	88	32	-
64180	.6299		16.000	16.0	88	32	0.50
64182	.6299		16.000	16.0	88	32	1.00
64184	.7500	3/4"	19.050	3/4"	4"	1-1/2"	-
64186	.7500	3/4"	19.050	3/4"	4"	1-1/2"	.030"
64188	.7500	3/4"	19.050	3/4"	4"	1-1/2"	.060"
64190	.7500	3/4"	19.050	3/4"	4"	1-1/2"	.120"
64192	.7500	3/4"	19.050	3/4"	5"	2-1/4"	-
64194	.7500	3/4"	19.050	3/4"	5"	2-1/4"	.030"
64196	.7500	3/4"	19.050	3/4"	6"	3-1/4"	-
64198	.7500	3/4"	19.050	3/4"	6"	3-1/4"	.030"
64200	.7874		20.000	20.0	100	38	-
64202	.7874		20.000	20.0	100	38	0.50
64204	.7874		20.000	20.0	100	38	1.00
64206	1.000	1"	25.400	1"	4"	1-1/2"	-
64208	1.000	1"	25.400	1"	4"	1-1/2"	.030"
64210	1.000	1"	25.400	1"	5"	2"	-
64212	1.000	1"	25.400	1"	5"	2-1/2"	-
64214	1.000	1"	25.400	1"	6"	3-1/4"	-
64216	1.000	1"	25.400	1"	6"	3-1/4"	.030"

70

35

MATERIAL HARDNESS (Rc)

0

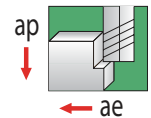
GARR TOOL Milling Guide for VX-7 Series End Mills

Fractional

	Material Group S	Material Group M	Material Group S	Material Group P	Material Group K
	Nickel or Cobalt-based	Stainless	Titanium Alloys	Carbon Steels	Grey Cast Iron
	Inconel, Cobalt Chrome, Ductile Iron	Invair, 400, 316, pH Series	6Al4V	1000 Series	
	SFM = 150 - 225	SFM = 250 - 400	SFM = 250 - 450	SFM = 400 - 600	SFM = 400 - 500
DIA	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
3/8"	.0008" - .0016"	.0015" - .0025"	.0015" - .0025"	.0020" - .0030"	.0020" - .0030"
1/2"	.0012" - .0023"	.0020" - .0030"	.0020" - .0030"	.0025" - .0035"	.0025" - .0035"
5/8"	.0015" - .0025"	.0025" - .0035"	.0025" - .0035"	.0030" - .0040"	.0030" - .0040"
3/4"	.0018" - .0025"	.0030" - .0040"	.0030" - .0040"	.0035" - .0045"	.0035" - .0045"
1"	.0020" - .0030"	.0035" - .0050"	.0035" - .0050"	.0040" - .0055"	.0040" - .0055"

Profile/Trochoidal Milling

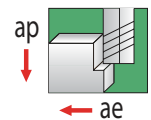
Axial (ap)	up to max LOC
Radial (ae)	15% of Dia.



	Nickel or Cobalt-based	Stainless	Titanium Alloys	Carbon Steels	Grey Cast Iron
	Inconel, Cobalt Chrome, Ductile Iron	Invair, 400, 316, pH Series	6Al4V	1000 Series	
	SFM = 200 - 250	SFM = 300 - 500	SFM = 300 - 600	SFM = 450 - 650	SFM = 450 - 550
DIA	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
3/8"	.0012" - .0020"	.0020" - .0030"	.0020" - .0030"	.0025" - .0035"	.0025" - .0035"
1/2"	.0015" - .0025"	.0025" - .0035"	.0025" - .0035"	.0030" - .0040"	.0030" - .0040"
5/8"	.0018" - .0028"	.0030" - .0040"	.0030" - .0040"	.0035" - .0045"	.0035" - .0045"
3/4"	.0020" - .0030"	.0035" - .0045"	.0035" - .0045"	.0040" - .0050"	.0040" - .0050"
1"	.0025" - .0035"	.0040" - .0055"	.0040" - .0055"	.0050" - .0065"	.0050" - .0065"

Profile/Trochoidal Milling

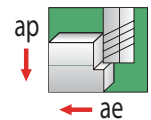
Axial (ap)	up to max LOC
Radial (ae)	10% of Dia.



	Nickel or Cobalt-based	Stainless	Titanium Alloys	Carbon Steels	Grey Cast Iron
	Inconel, Cobalt Chrome, Ductile Iron	Invair, 400, 316, pH Series	6Al4V	1000 Series	
	SFM = 225 - 300	SFM = 400 - 600	SFM = 400 - 700	SFM = 500 - 700	SFM = 450 - 600
DIA	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
3/8"	.0017" - .0030"	.0025" - .0040"	.0025" - .0040"	.0030" - .0045"	.0030" - .0045"
1/2"	.0020" - .0035"	.0030" - .0045"	.0030" - .0045"	.0035" - .0050"	.0035" - .0050"
5/8"	.0025" - .0040"	.0035" - .0050"	.0035" - .0050"	.0040" - .0055"	.0040" - .0055"
3/4"	.0030" - .0045"	.0040" - .0055"	.0040" - .0055"	.0045" - .0060"	.0045" - .0060"
1"	.0035" - .0050"	.0050" - .0070"	.0050" - .0070"	.0055" - .0070"	.0055" - .0070"

Profile/Trochoidal Milling

Axial (ap)	up to max LOC
Radial (ae)	5% of Dia.



NOTE - ABOVE ARE STARTING PARAMETERS ONLY. HIGHER RESULTS MAY BE ACHIEVED WITH OPTIMUM CONDITIONS.

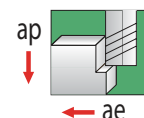
GARR TOOL Milling Guide for VX-7 Series End Mills

Metric

	Material Group S	Material Group M	Material Group S	Material Group P	Material Group K
	Nickel or Cobalt-based	Stainless	Titanium Alloys	Carbon Steels	Grey Cast Iron
	Inconel, Cobalt Chrome, Ductile Iron	Invar, 400, 316, pH Series	6Al4V	1000 Series	
	SMM = 45 - 70	SMM = 75 - 120	SMM = 75 - 140	SMM = 120 - 180	SMM = 120 - 150
DIA	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
8,0	0,020 - 0,040	0,030 - 0,050	0,030 - 0,050	0,040 - 0,060	0,040 - 0,060
10,0	0,025 - 0,055	0,035 - 0,065	0,035 - 0,065	0,050 - 0,075	0,050 - 0,075
12,0	0,030 - 0,060	0,050 - 0,075	0,050 - 0,075	0,060 - 0,090	0,060 - 0,090
16,0	0,035 - 0,065	0,065 - 0,090	0,065 - 0,090	0,075 - 0,100	0,075 - 0,100
20,0	0,045 - 0,065	0,075 - 0,100	0,075 - 0,100	0,090 - 0,115	0,090 - 0,115
25,0	0,050 - 0,075	0,085 - 0,125	0,090 - 0,125	0,100 - 0,140	0,100 - 0,140

Profile/Trochoidal Milling

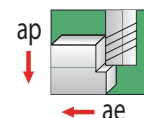
Axial (ap)	up to max LOC
Radial (ae)	15% of Dia.



	Nickel or Cobalt-based	Stainless	Titanium Alloys	Carbon Steels	Grey Cast Iron
	Inconel, Cobalt Chrome, Ductile Iron	Invar, 400, 316, pH Series	6Al4V	1000 Series	
	SMM = 60 - 75	SMM = 90 - 150	SMM = 90 - 180	SMM = 140 - 200	SMM = 140 - 160
DIA	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
8,0	0,025 - 0,045	0,040 - 0,060	0,040 - 0,060	0,060 - 0,080	0,060 - 0,080
10,0	0,030 - 0,050	0,050 - 0,075	0,050 - 0,075	0,065 - 0,090	0,065 - 0,090
12,0	0,035 - 0,060	0,060 - 0,085	0,060 - 0,090	0,075 - 0,100	0,075 - 0,100
16,0	0,040 - 0,065	0,075 - 0,100	0,075 - 0,100	0,090 - 0,115	0,090 - 0,115
20,0	0,050 - 0,075	0,085 - 0,110	0,085 - 0,115	0,100 - 0,125	0,100 - 0,125
25,0	0,060 - 0,085	0,100 - 0,140	0,100 - 0,140	0,125 - 0,165	0,125 - 0,165

Profile/Trochoidal Milling

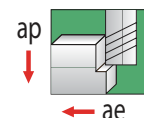
Axial (ap)	up to max LOC
Radial (ae)	10% of Dia.



	Nickel or Cobalt-based	Stainless	Titanium Alloys	Carbon Steels	Grey Cast Iron
	Inconel, Cobalt Chrome, Ductile Iron	Invar, 400, 316, pH Series	6Al4V	1000 Series	
	SMM = 70 - 90	SMM = 120 - 180	SMM = 120 - 210	SMM = 150 - 210	SMM = 140 - 180
DIA	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)	CPT (Fz)
8,0	0,035 - 0,065	0,055 - 0,085	0,055 - 0,085	0,070 - 0,095	0,070 - 0,095
10,0	0,040 - 0,070	0,065 - 0,100	0,065 - 0,100	0,075 - 0,110	0,075 - 0,110
12,0	0,050 - 0,085	0,075 - 0,110	0,075 - 0,110	0,090 - 0,125	0,090 - 0,125
16,0	0,060 - 0,100	0,090 - 0,120	0,090 - 0,120	0,100 - 0,135	0,100 - 0,135
20,0	0,075 - 0,110	0,100 - 0,130	0,100 - 0,130	0,115 - 0,150	0,115 - 0,150
25,0	0,090 - 0,125	0,120 - 0,170	0,120 - 0,170	0,140 - 0,185	0,140 - 0,185

Profile/Trochoidal Milling

Axial (ap)	up to max LOC
Radial (ae)	5% of Dia.



NOTE - ABOVE ARE STARTING PARAMETERS ONLY. HIGHER RESULTS MAY BE ACHIEVED WITH OPTIMUM CONDITIONS.

HEADQUARTERS/ MANUFACTURING FACILITY



99+% FILL RATE



GARR TOOL®
High Performance Solid Carbide

GARR TOOL®

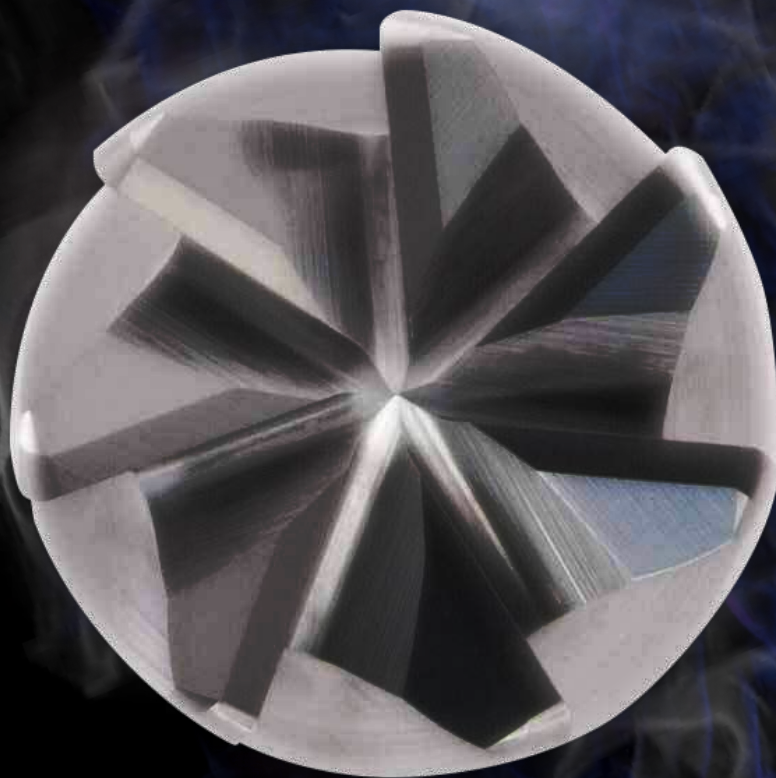
High Performance Solid Carbide

HEADQUARTERS / MANUFACTURING

7800 N Alger Road
Alma, Michigan 48801
Toll Free: 800-248-9003
Tele: 989-463-6171
Fax: 989-463-3609

EUROPEAN DISTRIBUTION CENTRE

4 Genoa Way
High Wycombe
HP11 1NY
UK
Tele: +44 (0)1494 418160



**Sold through select industrial distributors
Prices subject to change without notice**