



TUNGALOY
ADD FORCE
ACCELERATED LINES

PROMOTIONS

Valid from July 1st, 2022 to December 15th, 2022

Member IMC Group
Tungaloy

www.tungaloy.com/us



ADDF^{ORC}CUT EXCELLENT STABILITY FOR DEEP GROOVING & PARTING-OFF

BUY 20 inserts
AND
GET 1 blade or 1 holder

FREE
of charge!

Promo code: TG161

BUY 10 inserts AND
1 block
AND
GET 1 blade or 1 holder

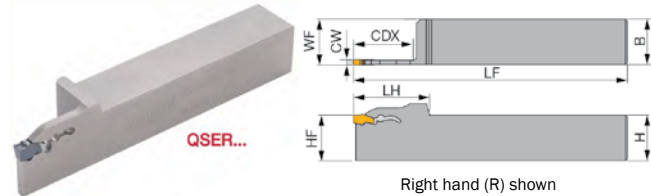
FREE
of charge!

Promo code: TG162



QSER/L

External toolholders for grooving and parting



Right hand (R) shown

PART#:	CW	CDX	Seat size	H:B	LF	LH	HF	WF
QSER/L12-2T26	0.079	1.024	2	0.750	5.000	1.417	0.750	0.756
QSER/L12-2T33	0.079	1.299	2	0.750	5.000	1.654	0.750	0.756
QSER/L16-2T26	0.079	1.024	2	1.000	6.000	1.417	1.000	1.004
QSER/L16-2T33	0.079	1.299	2	1.000	6.000	1.654	1.000	1.004
QSER/L12-3T26	0.118	1.024	3	0.750	5.000	1.417	0.750	0.764
QSER/L12-3T33	0.118	1.299	3	0.750	5.000	1.654	0.750	0.764
QSER/L16-3T26	0.118	1.024	3	1.000	6.000	1.417	1.000	1.012
QSER/L16-3T33	0.118	1.299	3	1.000	6.000	1.654	1.000	1.012
QSER/L12-4T33	0.157	1.299	4	0.750	5.000	1.654	0.750	0.768
QSER/L16-4T33	0.157	1.299	4	1.000	6.000	1.654	1.000	1.016
QSER/L16-5T33	0.197	1.299	5	1.000	6.000	1.654	1.000	1.020

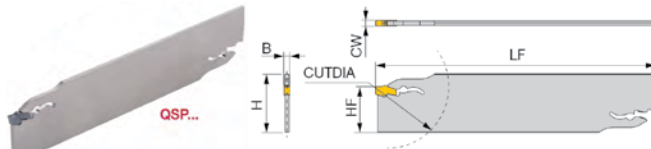


SPARE PART

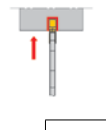
Wrench
QL-39

QSP

Blades for external deep grooving and parting



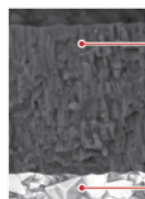
PART#:	CW (in)	CDX (mm)	Seat size	CUTDIA	H	B	LF	HF
QSP26-2D	0.079	2	2	1.969	1.024	0.071	5.906	0.831
QSP32-2D	0.079	2	2	2.598	1.260	0.071	5.906	0.965
QSP26-3D	0.118	3	3	2.953	1.024	0.094	5.906	0.831
QSP32-3D	0.118	3	3	4.724	1.260	0.094	5.906	0.965
QSP26-4D	0.157	4	4	3.150	1.024	0.126	5.906	0.827
QSP32-4D	0.157	4	4	4.724	1.260	0.126	5.906	0.961
QSP32-5D	0.197	5	5	4.724	1.260	0.157	5.906	0.961



SPARE PART

Wrench
QL-39

INSERTS WITH AH7025 COATING

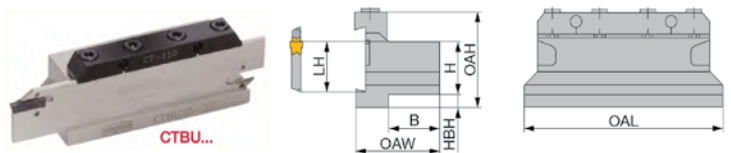


AH7025 uses the latest coating technology of a nano-scale multi-layered AlTiN PVD coating with high Al content, featuring

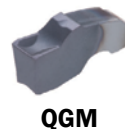
- Coating hardness increased by 20%
- A multi-layered coating structure impedes micro-crack propagation, reducing insert failures
- Enhanced adhesion strength between the coating and carbide substrate layer
- High wear and fracture resistant carbide substrate for optimal grooving performance

CTBU

Tool block for OSP blades



PART#:	H	B	OAL	LH	HBH	OAH	OAW	Blade (Optional)	Clamp	Clamping Screw	Wrench
CTBU-12-26-U	0.750	0.827	3.386	0.843	0.354	1.690	1.496	QSP26...	CT-86	CM6X30-S	P-5
CTBU-16-26-U	1.000	0.906	4.331	0.843	0.197	1.770	1.654	QSP26...	CT-100	CM6X30-S	P-5
CTBU-12-32-U	0.750	0.748	3.937	0.976	0.512	1.970	1.496	QSP32...	CT-105	CM6X30-S	P-5
CTBU-16-32-U	1.000	0.906	4.331	0.976	0.315	1.970	1.654	QSP32...	CT-110	CM6X30-S	P-5
CTBU-20-32-U	1.250	1.142	4.331	0.976	0.197	2.130	1.890	QSP32...	CT-110	CM6X30-S	P-5

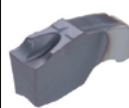


QGM
The first choice chipbreaker for grooving and parting-off

PART#:	Seat Size	CW±0.05	RE	AH7025	INSL	h
QGM2-020	2	0.079	0.008	●	0.433	0.209
QGM3-020	3	0.118	0.008	●	0.433	0.209
QGM4-030	4	0.157	0.012	●	0.512	0.287
QGM5-030	5	0.197	0.012	●	0.512	0.287

P Steel	★
M Stainless	★
K Cast iron	★
N Non-ferrous	★
S Superalloys	★
H Hard materials	

★ : First choice



QGS
Sharp cutting edge for lower cutting force

PART#:	Seat Size	CW±0.05	RE	AH7025	INSL	h
QGS2-020	2	0.079	0.008	●	0.433	0.209
QGS3-020	3	0.118	0.008	●	0.433	0.209
QGS4-030	4	0.157	0.012	●	0.512	0.287
QGS5-030	5	0.197	0.012	●	0.512	0.287

ADDICUT^{INTERNAL} 4 - EDGED ID GROOVING INSERT FOR .413" & LARGER DIAMETERS

BUY 10 inserts
AND
GET 1 steel shank holder

FREE
of charge!

Promo code: TG160

BUY 10 inserts
AND
GET 1 carbide shank holder at

50%
additional
discount!

Promo code: TG160



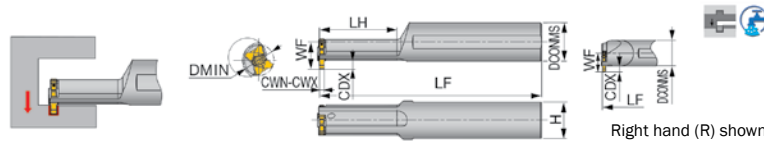
A/E-STCIR/L

Internal grooving toolholder



A*STCIR/L
Steel shank

E*STCIR/L
Carbide shank



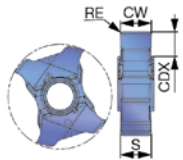
PART#:	Material	CWN	CWX	Seat size	DMIN	DCONMS	LH	LF	WF	H	Insert
A08-STCIR/L10-D07U	Steel	1.500	3.000	10	11.125	12.700	30.000	101.600	8.600	12.065	TCIG10...
A08-STCIR/L10-D08U	Steel	1.500	3.000	10	12.700	12.700	30.000	101.600	8.600	12.065	TCIG10...
E08-STCIR/L10-D10U	Carbide	1.500	3.000	10	15.875	12.700	-	127.000	8.600	12.065	TCIG10...

SPARE PARTS

For Holder	Clamping screw
A/E-STCIR10-...	CSTB-2.2L053DR
A/E-STCIL10-...	CSTB-2.2L053DL

INSERTS

TCIG



TCIG10

Low cutting force chip breaker prevents vibration and provides the surface finish

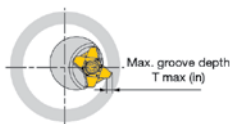
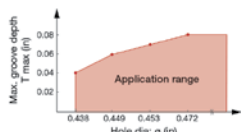
* : First choice

P	Steel	*
M	Stainless	*
K	Cast iron	*
N	Non-ferrous	*
S	Superalloys	*
H	Hard materials	*

PART#:	CW±0.05	RE	Coated	
			AH7025	CDX S
TCIG10-150-010	0.059	0.004	•	0.078 0.134
TCIG10-200-010	0.079	0.004	•	0.078 0.134
TCIG10-250-020	0.098	0.008	•	0.078 0.134

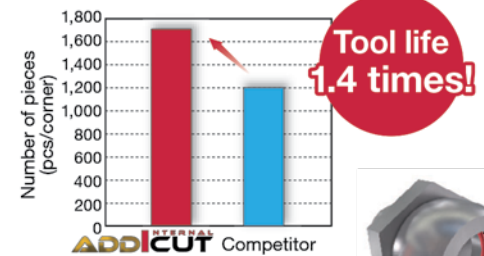
Note: Max groove depth for small holes

For hole diameters less than 0.453", the maximum groove depth (T max) for the insert becomes smaller than the specified value. Check the actual value in the chart below for hole diameters < 0.453".



ADDICUT^{INTERNAL}

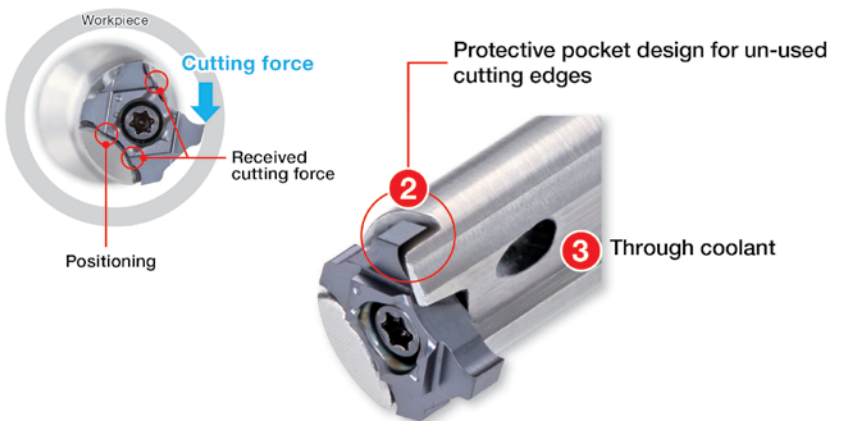
Unique clamping system for high precision internal grooving



AddInternalCut provided part quality consistency thanks to secure insert clamping and also provided 1.4 times tool life increase.

Features

1 The insert is supported at three optimized positions for rigid clamping and superior repeatability



4 The same insert can be assembled on either left- or right-handed holder





TUNGFEED BLADE

HIGH FEED GROOVING & PARTING-OFF

Strong holder design ensures excellent stability and productivity during demanding applications

BUY 20 inserts
AND
GET 1 blade

FREE
of charge!

Promo code: TG158

BUY 10 inserts AND
1 block
AND
GET 1 blade

FREE
of charge!

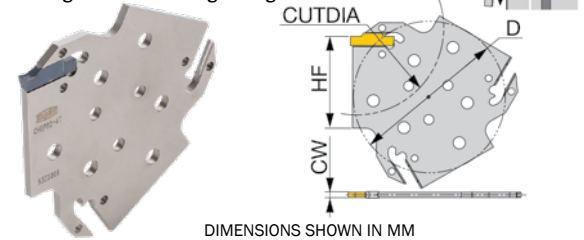
Promo code: TG159



- The blade is designed to eliminate chatter during machining, providing better surface finish and straightness of the groove.
- Each blade has three insert seats for tool economy.
- The holder has two contact faces for enhanced rigidity.
- The back view (above) shows the square shank used for clamping the holder.

THE BLADE - CHGP...

Parting-off and external grooving blade

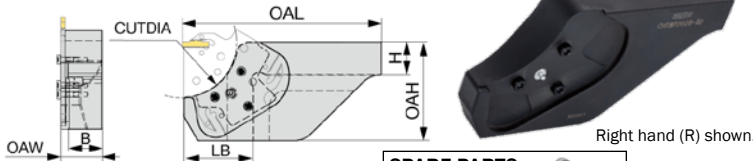


DIMENSIONS SHOWN IN MM

PART#:	CW	Seat Size	CUTDIA	HF	D	Wrench
CHGP52-2T	2	2	52	27	48.3	CRW33
CHGP52-3T	3	3	52	27	48.3	⌘
CHGP82-3T	3	3	82	42	69.3	
CHGP82-4T	4	4	82	42	69.3	

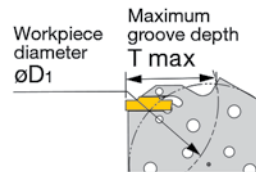
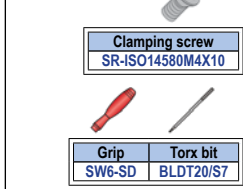
When depth is deeper than insert length - 1.5mm, 1 corner type is recommended.

THE HOLDER - CHTBR/L...



INCH	CUTDIA	H	B	OAL	OAH	OAW	LB
CHTBR/L12-52	2.047	0.750	0.770	4.000	1.970	1.000	1.457
CHTBR/L16-52	2.047	1.000	1.020	5.000	1.970	1.250	1.457
CHTBR/L12-82	3.228	0.750	0.770	5.500	2.950	1.000	2.087
CHTBR/L16-82	3.228	1.000	1.020	6.000	2.950	1.250	2.087
METRIC	CUTDIA	H	B	OAL	OAH	OAW	LB
CHTBR/L2020-52	52	20	20.5	100	50	26.5	37
CHTBR/L2525-52	52	25	25.5	125	50	31.5	37
CHTBR/L2020-82	82	20	20.5	140	75	26.5	53
CHTBR/L2525-82	82	25	25.5	150	75	31.5	53

SPARE PARTS

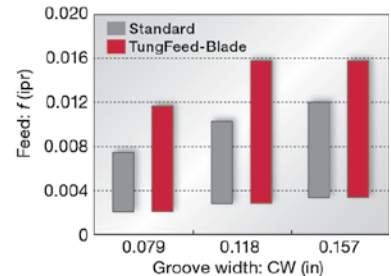


THE INSERTS

DGM type (2 corners)
SGM type (1 corner)



■ Increase with High feed blade



Maximum groove depth (T max) as function of workpiece diameter (øD1)

PART#:	øD1 (in)																	
CHTBR/L****-D52	2.087	2.126	2.165	2.205	2.283	2.362	2.441	2.559	2.677	2.835	3.071	3.307	3.622	4.016	4.528	5.236	6.260	7.795
CHTBR/L****-D82	4.094	4.252	4.409	4.567	4.764	5.000	5.276	5.591	5.945	6.378	6.929	7.559	8.346	9.331	10.630	12.323	14.764	18.425
T max	0.827	0.787	0.748	0.709	0.669	0.630	0.591	0.551	0.512	0.472	0.433	0.394	0.354	0.315	0.276	0.236	0.197	0.157

PART#:	øD1 (in)																	
CHTBR/L****-D82	3.268	3.307	3.346	3.386	3.425	3.504	3.543	3.622	3.701	3.780	3.858	3.976						
T max	1.339	1.299	1.220	1.181	1.142	1.102	1.063	1.024	0.984	0.945	0.906	0.866						

INSERT TYPES

DGM...
(Two cornered type)

SGM...
(One cornered type)

DGS...
(Two cornered type)

SGS...
(One cornered type)

DGL...
Specially designed chipbreaker for machining of gummy material.

The first choice for grooving and parting-off. Smooth chip evacuation, well-designed edge with high strength.

Lower cutting force with extremely sharp cutting edge.

PRACTICAL EXAMPLES

P

P

Productivity 5 times!

Productivity 5 times!

INCREASED TOOL LIFE WHILE INCREASING FEED RATE

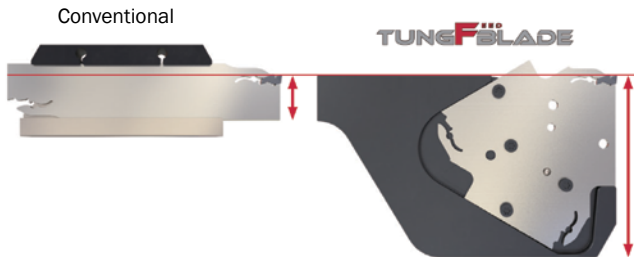


ADD^{ORCI}CUT
TUNGF^{3RD}BLADE

SUPERB STABILITY AND PRODUCTIVITY FOR DEEP GROOVING AND PARTING-OFF OPERATIONS

ADD highly rigid self-clamping system to improve productivity in deep grooving and parting-off operations

- With much thicker support than existing grooving blades, tool deflection and chatter are minimized even at higher feed rates



BUY 20 inserts
AND
GET 1 blade

FREE of charge!
Promo code: **TG158**

BUY 10 inserts AND 1 block
AND
GET 1 blade

FREE of charge!
Promo code: **TG159***

- A thick support beneath the insert allows the tool to produce grooves with high surface quality and straightness at increased feed rates
- Economical blade with three insert pockets
- The block is clamped by contacting two surfaces for enhanced rigidity
- With much thicker support than existing grooving blades, tool deflection and chatter are minimized even at higher feed rates

Blade:
QSG...
CW = .079" - .197"
(2 - 5 mm)
Max cut-off diameters:
CUTDIA = Ø2.047",
Ø3.228", Ø4.724"
(Ø52, Ø82, and Ø32mm)

QSG

Block:
CHTBR/L
H = 0.75", 1.00", 1.25"
(20, 25, and 32mm)

Inserts:
QGM...
QGS
CW = .079" - .197" (2 - 5 mm)

Grade:
AH7025

CHTBR/L
QGM
QGS

Parting-off and external grooving blade

PART#:	CW	Seat size	CUTDIA	HF	D
QSG52-2T	0.079	2	2.047	1.063	1.902
QSG82-2T	0.079	2	3.228	1.654	2.728
QSG52-3T	0.118	3	2.047	1.063	1.902
QSG82-3T	0.118	3	3.228	1.654	2.728
QSG120-3T	0.118	3	4.724	2.402	3.465
QSG52-4T	0.157	4	2.047	1.063	2.728
QSG82-4T	0.157	4	3.228	1.654	2.728
QSG120-4T	0.157	4	4.724	2.402	3.465
QSG120-5T	0.197	5	4.724	2.402	3.465

Tool block for OSG blade

Right hand (R) shown

PART#:	CUTDIA	H	B	OAL	OAH	OAW	LB
CHTBR/L12-52	2.047	0.750	0.770	4.000	1.970	1.000	1.457
CHTBR/L16-52	2.047	1.000	1.020	5.000	1.970	1.250	1.457
CHTBR/L12-82	3.228	0.750	0.770	5.500	2.950	1.000	2.087
CHTBR/L16-82	3.228	1.000	1.020	6.000	2.950	1.250	2.087
CHTBR/L16-120	4.724	1.000	1.020	6.500	3.940	1.250	2.638
CHTBR/L20-120	4.724	1.252	1.268	6.500	3.940	1.500	2.638

INSERTS WITH AH7025 COATING

QGM
The first choice chipbreaker for grooving and parting-off

PART#:	Seat Size	CW±0.05	RE	AH7025	INSL	h
QGM2-020	2	0.079	0.008	•	0.433	0.209
QGM3-020	3	0.118	0.008	•	0.433	0.209
QGM4-030	4	0.157	0.012	•	0.512	0.287
QGM5-030	5	0.197	0.012	•	0.512	0.287

QGS
Sharp cutting edge for lower cutting force

PART#:	Seat Size	CW±0.05	RE	AH7025	INSL	h
QGS2-020	2	0.079	0.008	•	0.433	0.209
QGS3-020	3	0.118	0.008	•	0.433	0.209
QGS4-030	4	0.157	0.012	•	0.512	0.287
QGS5-030	5	0.197	0.012	•	0.512	0.287

★ : First choice



BORING BARS USING INSERTS CLAMPED IN A DOVETAIL POCKET

- Using inserts with sharpness of positive inserts and with twice the number of cutting edges
- Double sided inserts - double the cutting edges
- Coolant hole directed to the cutting edge

6-CORNER CBN INSERT FOR MORE RELIABLE, ECONOMICAL AND PRODUCTIVE I.D. TURNING OF HARD METALS

**BUY 5 CBN inserts
AND
GET 1 holder FREE**

Promo code: TG163



- Innovative insert geometry and secure insert clamping method ensures machining stability
- Available in two grades: **BXA20** grade for general applications and **BXA10** grade suited for continuous cuts, providing reliability and long tool life from continuous to interrupted cuts.
- **HP** type chipbreaker guarantees short chips, ensuring good chip breaking and control at 0.008" (0.2 mm) and lighter d.o.c.
- Double-sided insert with six positive cutting edges for excellent cost-per-edge economy for reduced tool cost.

Lineup

Inserts

- **6QS-WXGQ...**
RE = 0.2 - 0.8 mm
- **6QS-WXGU**HP**
RE = 0.4, 0.8 mm

Chipbreaker

- **HP type:** For chatter prevention and the finest machined surfaces. Suitable for turning operations of hardened steel materials

Toolholders

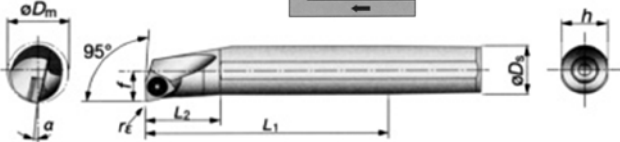
- **A-SWLXR/L...**
- **E-SWLXR/L...**
DCONMS = $\varnothing 10 - \varnothing 20$ mm

Grades

- **BXA10:** Incredible reliability in hardened steel turning. First choice for continuous to light interrupted cuts.
- **BXA20:** Incredible reliability in hardened steel turning. Covers a wide range of application areas from continuous to heavy interrupted cutting.



BORING BARS



STEEL SHANK

PART #	MIN BORE DIA. φD_m	DIMENSIONS (in)							STD. CORNER RADIUS r_e	INSERT
		φD_s	f	L1	L2	h	θ	a		
A06-SWLXR/L2-D08	.500	.375	.281	5.000	.750	.350	-10°	-14°	.016	6QS-WXGU04*L/R
A08-SWLXR/L2-D11	.688	.500	.406	5.000	1.000	.475	-10°	-10°	.016	
A10-SWLXR/L2-D14	.875	.625	.531	7.000	1.250	.600	-10°	-8°	.016	
A12-SWLXR/L2-D16	1.000	.750	.593	7.000	1.438	.725	-10°	-7°	.016	



6QS-WXGQ...
Double-sided insert with six positive cutting edges for excellent cost-per-edge economy for reduced tool cost.

CARBIDE SHANK

PART #	MIN BORE DIA. φD_m	DIMENSIONS (in)							STD. CORNER RADIUS r_e	INSERT
		φD_s	f	L1	L2	h	θ	a		
E06-SWLXR/L2-D08	.500	.375	.281	5.000	1.000	.350	-10°	-14°	.016	6QS-WXGU04*L/R
E08-SWLXR/L2-D11	.688	.500	.406	5.000	1.063	.475	-10°	-10°	.016	
E10-SWLXR/L2-D14	.875	.625	.531	7.000	1.250	.600	-10°	-8°	.016	
E12-SWLXR/L2-D16	1.000	.750	.593	7.000	1.438	.725	-10°	-7°	.016	



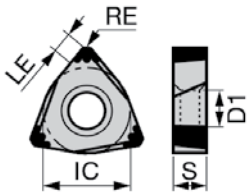
6QS-WXGUHP**
The HP chipbreaker provides excellent surface quality and good chip control.

Note: Right hand toolholders (R) are used with right hand inserts (R)
Left hand toolholders (L) are used with left hand inserts (L)

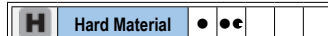
STANDARD CUTTING CONDITIONS

INSERT POSITIVE TYPE

CBN Inserts with WavyJoint brazing technology



ISO	Grade	Edge Preparation	Workpiece Condition	Cutting Speed vc (sfm)	Depth of cut ap (in)	Feed f (ipr)
H	BXA10	No symbol	Continuous	328 - 755	0.002 - 0.02	0.001 - 0.012
			Light interrupted	328 - 755	0.002 - 0.02	0.001 - 0.008
		-HP	Continuous	328 - 755	0.002 - 0.008	0.001 - 0.008
	BXA20	No symbol	Continuous	197 - 591	0.002 - 0.02	0.001 - 0.012
			Interrupted	197 - 591	0.002 - 0.02	0.001 - 0.008
		-HP	Continuous	197 - 591	0.002 - 0.08	0.001 - 0.008



Shape	Designation		BXA10	BXA20			No. of corners	LE	RE	IC	S	D1	Standard	SP	L	LF	LC	H	Wiper	Chipbreaker
	Inch	Metric																		
6QS-WXGQ	6QS-WXGQ 220.5SPR	6QS-WXGQ040302SPR	•	•			6	0.071	0.008	0.250	0.125	0.106		○						
	6QS-WXGQ 220.5SPL	6QS-WXGQ040302SPL	•	•			6	0.071	0.008	0.250	0.125	0.106		○						
	6QS-WXGQ 221SPR	6QS-WXGQ040304SPR	•	•			6	0.071	0.016	0.250	0.125	0.106		○						
	6QS-WXGQ 221SPL	6QS-WXGQ040304SPL	•	•			6	0.071	0.016	0.250	0.125	0.106		○						
	6QS-WXGQ 222SPR	6QS-WXGQ040308SPR	•	•			6	0.067	0.031	0.250	0.125	0.106		○						
	6QS-WXGQ 222SPL	6QS-WXGQ040308SPL	•	•			6	0.067	0.031	0.250	0.125	0.106		○						
6QS-WXGU**HP	6QS-WXGU 221R HP	6QS-WXGU040304R-HP	•	•			6	0.071	0.016	0.250	0.125	0.106								○
	6QS-WXGU 221L HP	6QS-WXGU040304L-HP	•	•			6	0.071	0.016	0.250	0.125	0.106								○
	6QS-WXGU 222R HP	6QS-WXGU040308R-HP	•	•			6	0.067	0.031	0.250	0.125	0.106								○
	6QS-WXGU 222L HP	6QS-WXGU040308L-HP	•	•			6	0.067	0.031	0.250	0.125	0.106								○

•: Continuous cutting ◦: Light interrupted cutting



Tungaloy DOFTRI

BUY 10 inserts per pocket
up to max 50 inserts

AND
GET 1 cutter

FREE of charge!

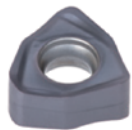
Promo code: TG164

HIGH PERFORMANCE AND PROFITABILITY IN HIGH-FEED MILLING OPERATIONS

ADD more cutting edges per insert to your machining operations

Insert:
WXMU03-MM
APMX = 0.039"

Grades:
AH3225
AH8015



WXMU03-MM
Economical double-sided inserts with six cutting edges

Shank type:
EXWX03... (Short type)
DCX = $\varnothing 0.625'' - \varnothing 1.250''$
EXWX03L (Long type)**
DCX = $\varnothing 0.625'' - \varnothing 1.250''$



EXWX03...

Bore type:
TXWX03...
DCX = $\varnothing 1.50'' - \varnothing 2.00''$



TXWX03...

Modular type:
HXWX03...
DCX = $\varnothing 16 - \varnothing 32$ mm

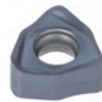


HXWX03...

Tungaloy DOFTRI

HIGH FEED MILLING

- Large effective cutter diameter leaves less uncut material.
- Utilizing 6-corner double sided inserts
- Steep ramping capability makes the cutter ideal for pocketing and cavity milling applications.



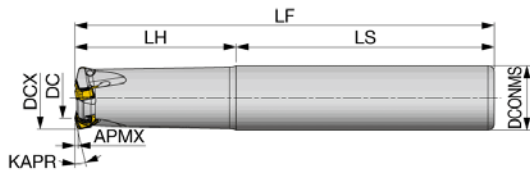
The cutter features a small approach angle, providing smooth access into the material, making it an ideal tool for long overhang setups.



EXWX03

HIGH FEED END MILLS WITH COOLANT HOLE

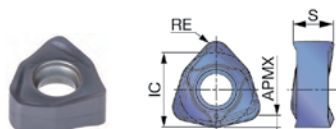
INDEXABLE END-MILLS



PART#:	DCX	DCONMS	DC	APMX	LS	LH	LF	KAPR	z*	Insert
EXWX03U0.62C0.62R02	0.625	0.625	0.3448	0.039	2.750	1.250	4.000	12°	2	WXMU03...
EXWX03U0.62C0.62R02L	0.625	0.625	0.3448	0.039	4.000	2.000	6.000	12°	2	WXMU03...
EXWX03U0.75C0.75R03	0.750	0.750	0.4645	0.039	3.000	2.000	5.000	12°	3	WXMU03...
EXWX03U0.75C0.75R03L	0.750	0.750	0.4645	0.039	3.000	3.500	6.500	12°	3	WXMU03...
EXWX03U1.00C1.00R04	1.000	1.000	0.7125	0.039	3.000	2.500	5.500	12°	4	WXMU03...
EXWX03U1.00C1.00R04L	1.000	1.000	0.7125	0.039	3.000	4.000	7.000	12°	4	WXMU03...
EXWX03U1.25C1.25R05	1.250	1.250	0.9606	0.039	3.000	3.000	6.000	12°	5	WXMU03...
EXWX03U1.25C1.25R05L	1.250	1.250	0.9606	0.039	3.000	5.000	8.000	12°	5	WXMU03...

z* = No. of inserts

INSERTS: WXMU0303-MM



PART#:	RE	APMX	IC	S
WXMU0303ZER-MM	0.047	0.039	.219	0.143

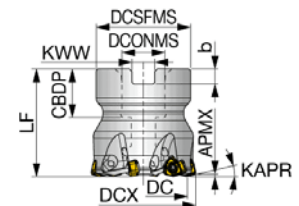
P	Steel	★	☆
M	Stainless	★	☆
K	Cast iron	☆	★
S	Superalloys	☆	★
H	Hard Materials	★	

★ First choice
☆ Second choice

AH3225	AH8015
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TXWX03

HIGH FEED CUTTERS WITH COOLANT HOLES

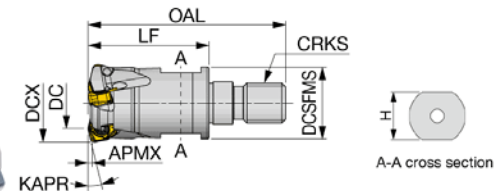
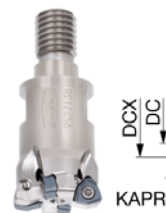


PART#:	DCX	DCONMS	DC	DCSFMS	APMX	CBDP	LF	b	KWW	KAPR	z*	Insert
TXWX03U1.50B0.50R05	1.500	0.500	1.217	1.457	0.039	0.630	1.575	0.157	0.258	12°	6	WXMU03...
TXWX03U2.00B0.75R08	2.000	0.750	1.713	1.693	0.039	0.750	1.969	0.197	0.315	12°	8	WXMU03...

z* = No. of inserts

HXWX03-M

TUNGFLEX MODULAR HIGH-FEED END MILL WITH COOLANT HOLES



PART#:	DCX	CRKS	DC	APMX	OAL	LF	H	DCSFMS	KAPR	z*	Insert
HXWX03M016M08R02	16	M8	8.9	1	42	25	10	12.8	12°	2	WXMU03...
HXWX03M020M10R03	20	M10	12.8	1	49	30	15	17.8	12°	3	WXMU03...
HXWX03M025M12R04	25	M12	17.8	1	57	35	17	20.8	12°	4	WXMU03...
HXWX03M032M16R05	32	M16	24.7	1	63	40	22	28.8	12°	5	WXMU03...

z* = No. of inserts



ALL-ROUND CUTTER WITH CENTER CUTTING CAPABILITY FOR ULTIMATE MACHINING VERSATILITY — FROM SHOULDER MILLING TO HOLE MAKING

ADD high cost-per-edge economy with four-edged inserts

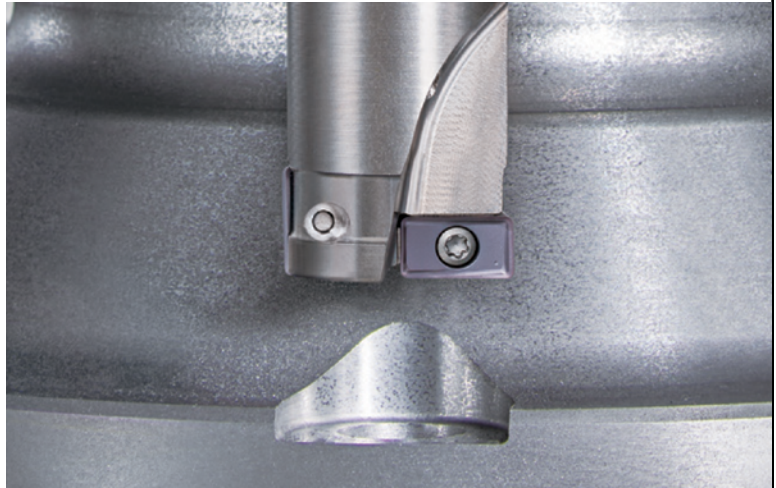
BUY 10 inserts per pocket

AND

GET 1 cutter

FREE
of charge!

Promo code: TG165



Insert:
LXMU08/10/12-MM
APMX = 0.276" - 0.433" (7 - 11 mm)

Grades:
AH3225
AH8015
AH120



LXMU-MM**
Four total cutting edges for highest insert economy

Shank type:
EVLX08/10/12... (Short type)
DC = ϕ 0.625" - ϕ 1.00" (ϕ 16 - ϕ 25 mm)
EVLX08/10/12**L (Long type)
DC = ϕ 0.625" - ϕ 1.00" (ϕ 16 - ϕ 26 mm)



EVLX...

Modular type:
HVLX08/10/12...
DC = ϕ 16 - ϕ 25 mm



HVLX...

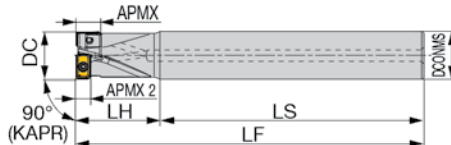
THE ULTIMATE MULTI-PURPOSE MILLING CUTTER

- DRILLING • SQUARE SHOULDER MILLING • COUNTERBORING
- SLOTTING • PLUNGING • HELICAL INTERPOLATION



**CENTER CUTTING
MULTI-FUNCTION
MILLING CUTTER
WITH COOLANT HOLE**

EVLX08/10/12



PART#:	DC	DCONMS	APMX	APMX2	LS	LH	LF	z*	Insert
EVLX08U0.62W0.62R02	0.625	0.625	0.276	0.157	1.910	1.250	3.160	2	LXMU08...
EVLX08U0.62C0.62R02L	0.625	0.625	0.276	0.157	5.000	2.000	7.000	2	LXMU08...
EVLX10U0.787W0.75R02	0.787	0.750	0.354	0.157	2.030	1.380	3.410	2	LXMU10...
EVLX10U0.787C0.75R02L	0.787	0.750	0.354	0.157	5.000	2.380	7.380	2	LXMU10...
EVLX12U1.00W1.00R02	1.000	1.000	0.433	0.236	2.280	1.750	4.030	2	LXMU12...
EVLX12U1.00C1.00R02L	1.000	1.000	0.433	0.236	6.000	3.000	9.000	2	LXMU12...

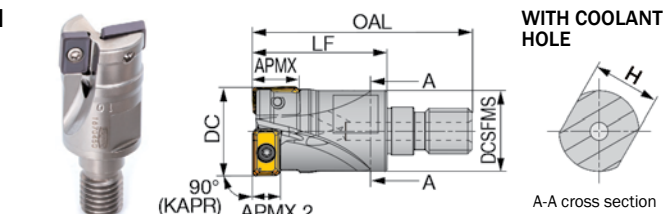
HVLX08/10/12-M

Multi-function endmill, modular type (TungFlex)

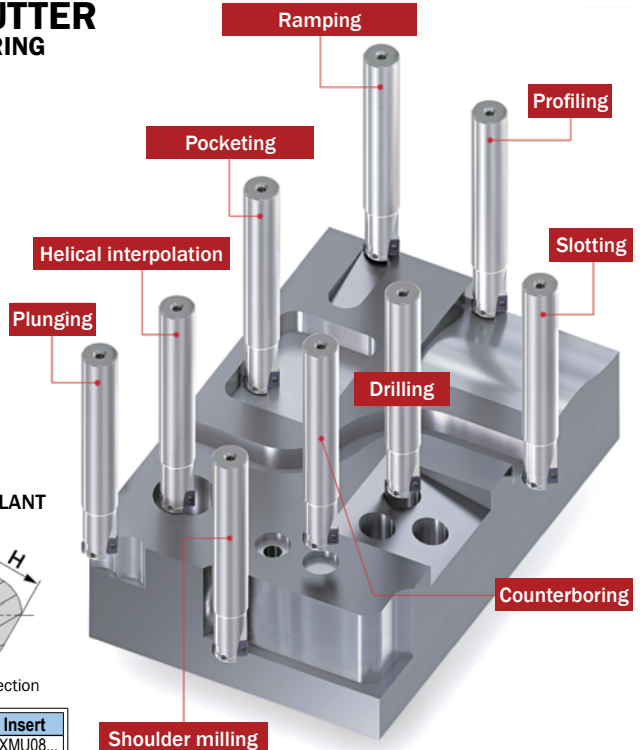
DIMENSIONS ARE SHOWN IN MM

INSERTS

LXMU08
LXMU10
LXMU12



PART#:	DC	CRKS	APMX	APMX2	OAL	LF	H	DCSFMS	z*	Insert
HVLX08M016M08R02	16	M8	7	4	42	25	10	14.5	2	LXMU08...
HVLX10M020M10R02	20	M10	9	4	49	30	15	17.8	2	LXMU10...
HVLX12M025M12R02	25	M12	11	6	57	35	17	23	2	LXMU12...



TUNG-TRI

BUY 10 inserts per pocket

AND GET 1 cutter

Maximum purchase of 50 inserts required

FREE of charge!

Promo code: TG166



TOMT04-MM

Single-sided, 3 cornered insert with MM chipbreaker

INCLUDED IN THE PROMO



EPA04R...

CUTTERS:

EPA04R... (Short type)

DC = $\varnothing 8 \sim \varnothing 25$ mm

EPA04R*...L... (Long type)

DC = $\varnothing 10 \sim \varnothing 25$ mm

Insert:

TOMT04-MM (AH3225, AH8015, AH120)

Max.ap = 3.5 mm (.138")

RE = 0.4, 0.8mm (.0157", .0315")

EXTREMELY COST-EFFICIENT SHOULDER MILL SERIES UNVEILS CUTTERS IN SMALLER DIAMETERS THAN EVER BEFORE

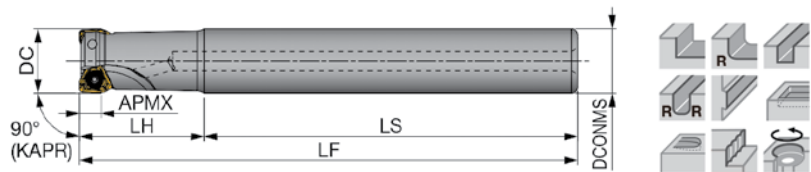
Tung-Tri O4 boasts an innovative insert geometry, featuring a super high rake for a small diameter cutter, which significantly reduces cutting forces while eliminating chatter and edge chipping.



EPA04 High precision square shoulder endmill WITH COOLANT HOLES



DIMENSIONS SHOWN IN MM



GAMP: Rake angle axial = +12.1° - +12.2°

GAMF: Rake angle radial = -14.2° ~ -18.3°

CARBIDE GRADE APPLICATION

- ★ First choice
- ☆ Second choice

		AH3225	AH120	AH8015
P	Steel	★	☆	
M	Stainless	★		
K	Cast iron		★	
N	Non-ferrous			
S	Superalloys	★		★
H	Hard Materials			★

PART#:	APMX	DC	z*	DCONMS	LS	LH	LF	WT (kg)	Insert
EPA04R008M08.0-01	3.5	8	1	8	48	12	60	0.02	TOMT04...
EPA04R010M10.0-02	3.5	10	2	10	60	20	80	0.04	TOMT04...
EPA04R010M10.0-02L	3.5	10	2	10	65	35	100	0.05	TOMT04...
EPA04R012M12.0-02	3.5	12	2	12	60	20	80	0.06	TOMT04...
EPA04R012M12.0-03	3.5	12	3	12	60	20	80	0.06	TOMT04...
EPA04R012M12.0-02L	3.5	12	2	12	85	35	120	0.09	TOMT04...
EPA04R016M16.0-03	3.5	16	3	16	70	20	90	0.12	TOMT04...
EPA04R016M16.0-04	3.5	16	4	16	70	20	90	0.12	TOMT04...
EPA04R016M16.0-03L	3.5	16	3	16	105	35	140	0.19	TOMT04...
EPA04R020M20.0-04	3.5	20	4	20	70	30	100	0.21	TOMT04...
EPA04R020M20.0-05	3.5	20	5	20	70	30	100	0.21	TOMT04...
EPA04R020M20.0-04L	3.5	20	4	20	165	35	200	0.44	TOMT04...
EPA04R025M25.0-05	3.5	25	5	25	80	35	115	0.39	TOMT04...
EPA04R025M25.0-06	3.5	25	6	25	80	35	115	0.39	TOMT04...
EPA04R025M25.0-04L	3.5	25	4	25	160	40	200	0.7	TOMT04...

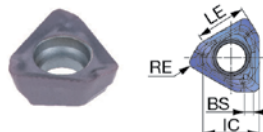
* z = No. of inserts

SPARE PARTS

Designation	Clamping screw	Wrench
EPA04R008M08.0-01	CSPB-1.8L3.3	IP-6DB
EPA04R010 - 025...	CSPB-1.8L3.6	IP-6DB

*Recommended clamping torque (Nm) : CSPB-1.8L3.3/CSPB-1.8L3.6 = 0.5

INSERTS TOMT-MM



APMX = MAX DEPTH OF CUT

PART#:	IC	S	BS	APMX	RE	LE
TOMT040204PXER-MM	4	2.2	0.6	3.5	0.4	3.6
TOMT040208PXER-MM	4	2.2	0.2	3.5	0.8	3.6

STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Hardness	Grades	Cutting speed vc (m/min)	Feed per tooth fz (mm/t)	
P	Low carbon steel SS400, S15C, etc. E275A, C15E4, etc.	- 200 HB	AH3225	100 - 250	0.05 - 0.12	
	Carbon steel and alloy steel S55C, SCM440, etc. C55, 42CrMo4, etc.	- 300 HB	AH3225	100 - 230	0.05 - 0.12	
	Prehardened steel NAK80, PX5, etc.	30 - 40 HRC	AH3225	100 - 180	0.05 - 0.1	
M	Stainless steel SUS304, etc. X5CrNi18-9, etc.	-	AH3225	90 - 200	0.05 - 0.1	
K	Grey cast iron FC250, etc. 250, etc., GG25, etc.	150 - 250 HB	AH120	100 - 300	0.05 - 0.12	
	Ductile cast iron FCD450, etc. 450-10S, etc., GGG45, etc.	150 - 250 HB	AH120	100 - 200	0.05 - 0.12	
S	Titanium alloys Ti-6Al-4V, etc.	-	AH3225	20 - 60	0.04 - 0.07	
	Heat-resistant alloys Inconel 718, etc.	-	AH8015	20 - 40	0.04 - 0.07	
H	Hardened steel	SKD61, etc. X40CrMoV5-1, etc.	40 - 50 HRC	AH8015	50 - 150	0.04 - 0.07
		SKD11, etc. X153CrMoV12, etc.	50 - 60 HRC	AH8015	40 - 70	0.04 - 0.07

TUNG-TRI O4

Lighter cutting and better chip control of broader application range



12° rake

Light cutting geometry with high rake angle

Large wiper radius provides improved surface quality



Large radius wiper

GRADES

AH3225 P M S

- Nano multi-layer coating technology with three major properties for optimal cutting edge integrity
- Increased resistance to wear, fracture, oxidation, built-up edge, and delamination

AH120 P K

- PVD grade with a well-balanced wear and fracture resistance
- Ideal for general machining of steel and stainless steel

AH8015 H S

- Incorporates a hard coating layer and carbide substrate
- Strong resistance to wear, heat, and built-up edge, ideal for machining hard or difficult materials