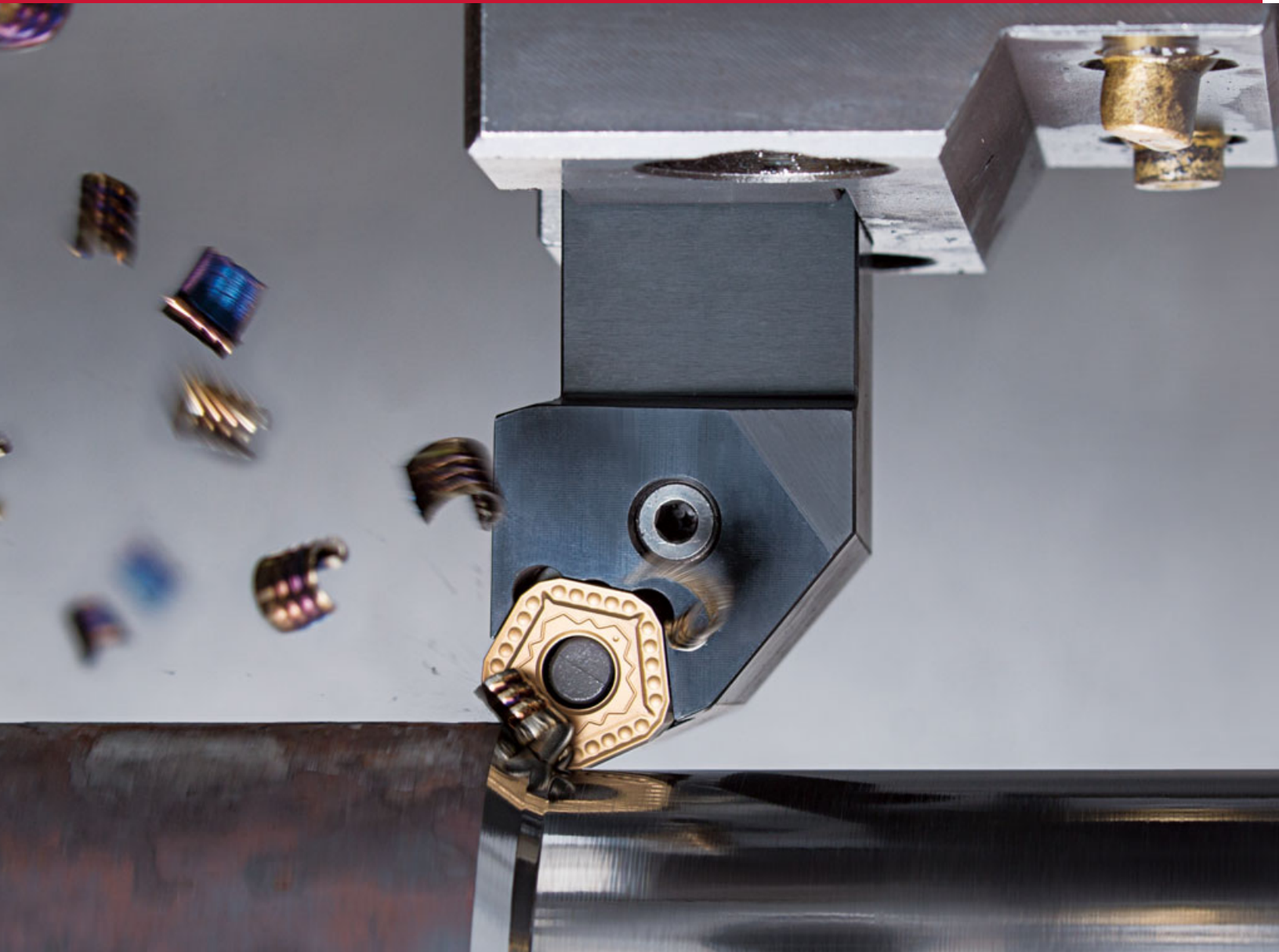


TURN^{EN}FEED

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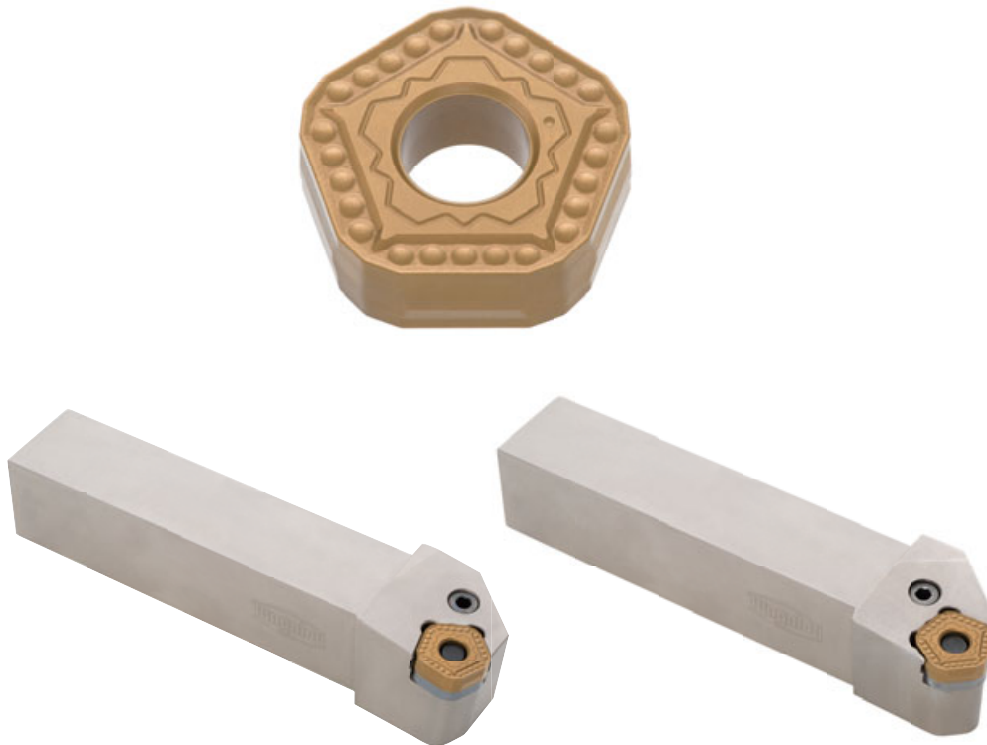
Innovative Tool for Machining Efficiency and Tool Economy



INDUSTRY 4.0
FEED the SPEED!



ACCELERATED MACHINING



Unique insert geometry, combined with two types of dedicated holders, for *Accelerated Machining*

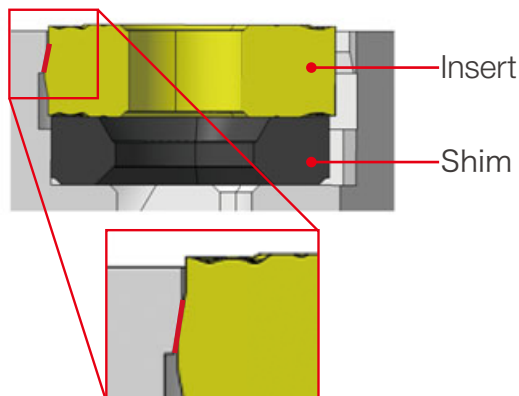
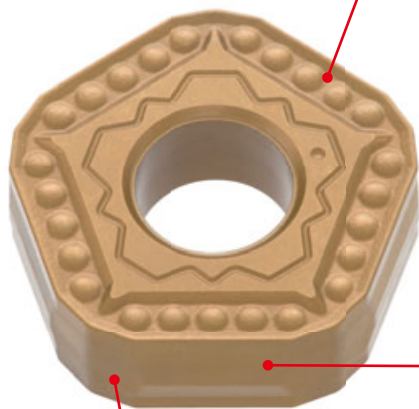
Economical, 10-cornered insert ensures high machining efficiency

- Available in 2 types of holders: HD type for large depths of cut and HF type for high feed turning
- Maximum 0.276" depth of cut with HD type, and maximum feed 0.079" per rev with HF type is attainable!

Economical 10-cornered, double-sided, M-class insert
Achieves outstanding cost efficiency over standard ISO inserts

New – MNW style chipbreaker
Features protrusions on the rake face to facilitate smooth chip control, while achieving high crater wear resistance

Dovetail clamping
Ensures secure insert retention while promoting smooth chip flow thanks to the integration of lever lock and dovetail clamping methods.

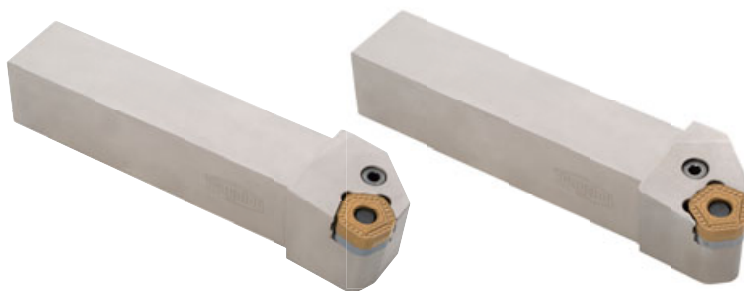


Insert / clamp contact cross section

Flat Wiper
Built in the cutting edge to achieve superior machining surface at higher feed rates!

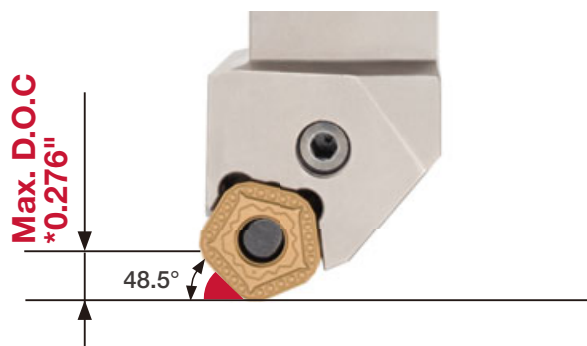
Holder selections

Available in 2 types:
 - HD holder for large depths of cut
 - HF holder for high feed turning
 Inserts are interchangeable between these two holders.



Features of Holders

HD holder
For **H**igh **D**epth of Cut



HF holder
For **H**igh **F**eed



* Insert: POMG 643 MNW

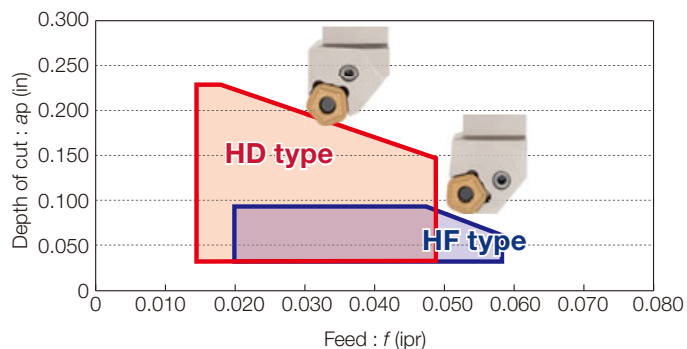
Grade properties

Application	Grade	Substrate			Coating layer	
		Specific gravity	Hardness (HRA)	T.R.S. (GPa)	Main Composition	Thickness (μm)
P	New T9215	14.0	90.5	2.6	Ti compound + Al ₂ O ₃	18
	T9125	13.7	90.0	2.6	Ti (C,N) + Al ₂ O ₃	16
	New T9225	13.4	89.8	2.7	Ti compound + Al ₂ O ₃	16

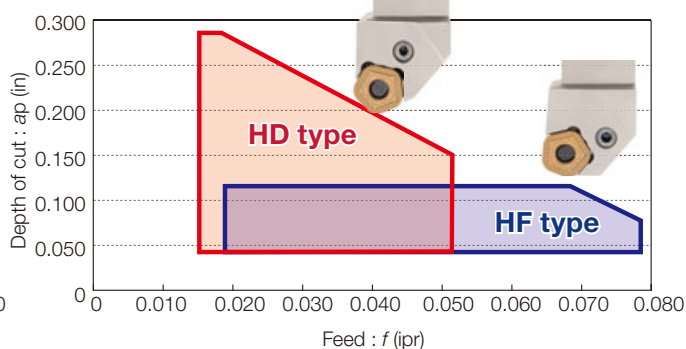
Application Area

Two types of holders to cover a wide range of applications!!

Insert
POMG 543 MN

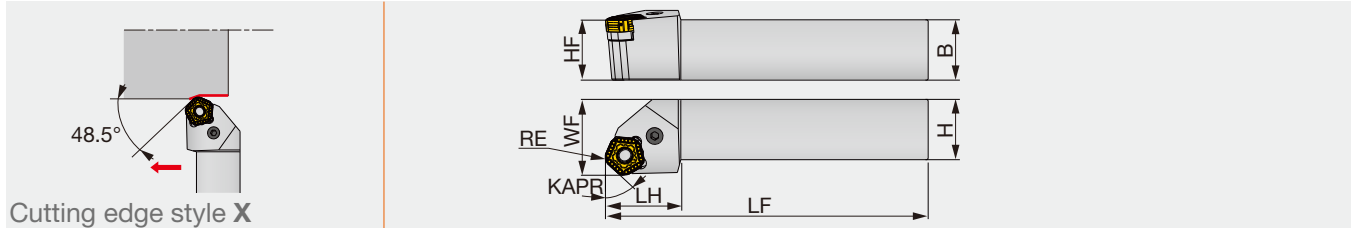


Insert
POMG 643 MNW



PPXOR/L-HD

Lever lock holder, with 48.5° approach angle, negative 108° pentagonal insert



Inch	H	B	LF	LH	HF	WF	KAPR	RE	Insert
PPXOR/L165-HD	1.000	1.000	6.000	1.380	1.000	1.260	48.5°	0.047	POMG 543 MNW
PPXOR/L206-HD	1.250	1.250	7.000	1.500	1.250	1.510	48.5°	0.047	POMG 643 MNW

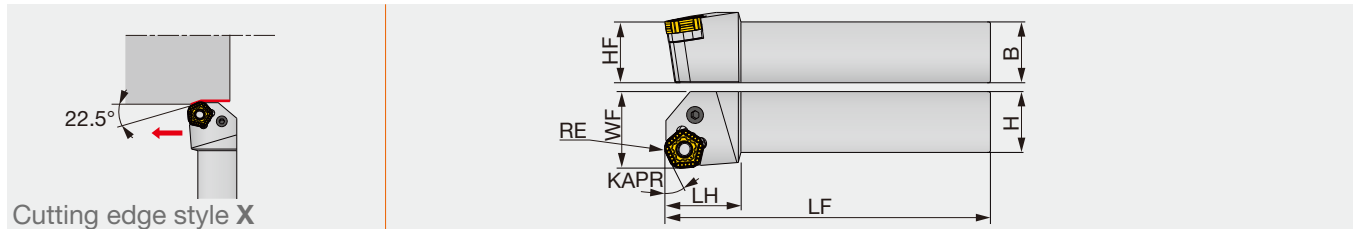
Metric	H	B	LF	LH	HF	WF	KAPR	RE	Insert
PPXOR/L2525M11-HD	25	25	150	35	25	32	48.5°	1.2	POMG110612
PPXOR/L3232P13-HD	32	32	170	40	32	40	48.5°	1.2	POMG130612

SPARE PARTS

Designation	Shim	Spring	Lever	Clamping screw	Wrench
PPXOR/L165-HD	LSP053	LSP5	LCL5	LCS5	P-3
PPXOR/L206-HD	LSP063	LSP6	LCL6	LCS6	P-4

PPXOR/L-HF

Lever lock holder, with 22.5° approach angle, for negative 108° pentagonal insert



Inch	H	B	LF	LH	HF	WF	KAPR	RE	Insert
PPXOR/L165-HF	1.000	1.000	6.000	1.380	1.000	1.260	22.5°	0.047	POMG 543 MNW
PPXOR/L206-HF	1.250	1.250	7.000	1.500	1.250	1.510	22.5°	0.047	POMG 643 MNW

Metric	H	B	LF	LH	HF	WF	KAPR	RE	Insert
PPXOR/L2525M11-HF	25	25	150	35	25	32	22.5°	1.2	POMG110612
PPXOR/L3232P13-HF	32	32	170	40	32	40	22.5°	1.2	POMG130612

SPARE PARTS

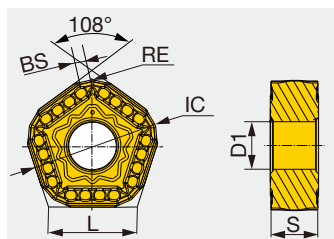


Designation	Shim	Spring	Lever	Clamping screw	Wrench
PPXOR/L165-HF	LSP053	LSP5	LCL5	LCS5	P-3
PPXOR/L206-HF	LSP063	LSP6	LCL6	LCS6	P-4

Note : Since the corner angle of TurnTenFeed insert is 108°, the workpiece corner may require additional post-process to remove stock to achieve a right angle.

INSERT

POMG-MNW



Designation	RE	Grade			IC	L	BS	S	D1
		T9215	T9125	T9225					
POMG 543 MNW	0.047	●	●	★	0.625	0.454	0.059	0.250	0.047
POMG 643 MNW	0.047	●	●	★	0.750	0.545	0.079	0.250	0.047

● : Line-up
★ : To be released in summer 2019

STANDARD CUTTING CONDITIONS

For HD holder (High Depth of Cut)

ISO	Insert	Depth of cut ap (inch)	Feed f (ipr)	Cutting speed Vc (sfm)		
				T9215	T9125	T9225
P	POMG 543 MNW	0.031 - 0.217	0.016 - 0.047	492 - 1312	262 - 591	394 - 984
	POMG 643 MNW	0.039 - 0.276	0.016 - 0.051	492 - 1312	262 - 591	394 - 984

For HF holder (High Feed)

ISO	Insert	Depth of cut ap (inch)	Feed f (ipr)	Cutting speed Vc (sfm)		
				T9215	T9125	T9225
P	POMG 543 MNW	0.039 - 0.098	0.020 - 0.059	492 - 1312	262 - 591	394 - 984
	POMG 643 MNW	0.039 - 0.118	0.020 - 0.079	492 - 1312	262 - 591	394 - 984

PRACTICAL EXAMPLES

Workpiece type	Forged steel pipe	Bar work
Holder	PPXOR206- HD	PPXOR206- HF
Insert	POMG 643 MNW	POMG 643 MNW
Grade	T9125	T9125
Workpiece material	Alloy steel (9%Cr)	4130
Cutting conditions	Cutting speed: Vc (sfm)	328
	Feed : f (ipr)	0.051
	Depth of cut : ap (in)	0.157
	Coolant	Dry
Results	<p>MRR has improved by 2.3 times over standard ISO turning insert. TurnTenFeed ensures machining stability at high feed rates.</p>	<p>MRR has improved by 1.6 times over standard ISO insert. A combination of high feed geometry insert with MNW chipbreaker provided light cutting action, improving tool life 5 times.</p>

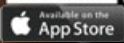
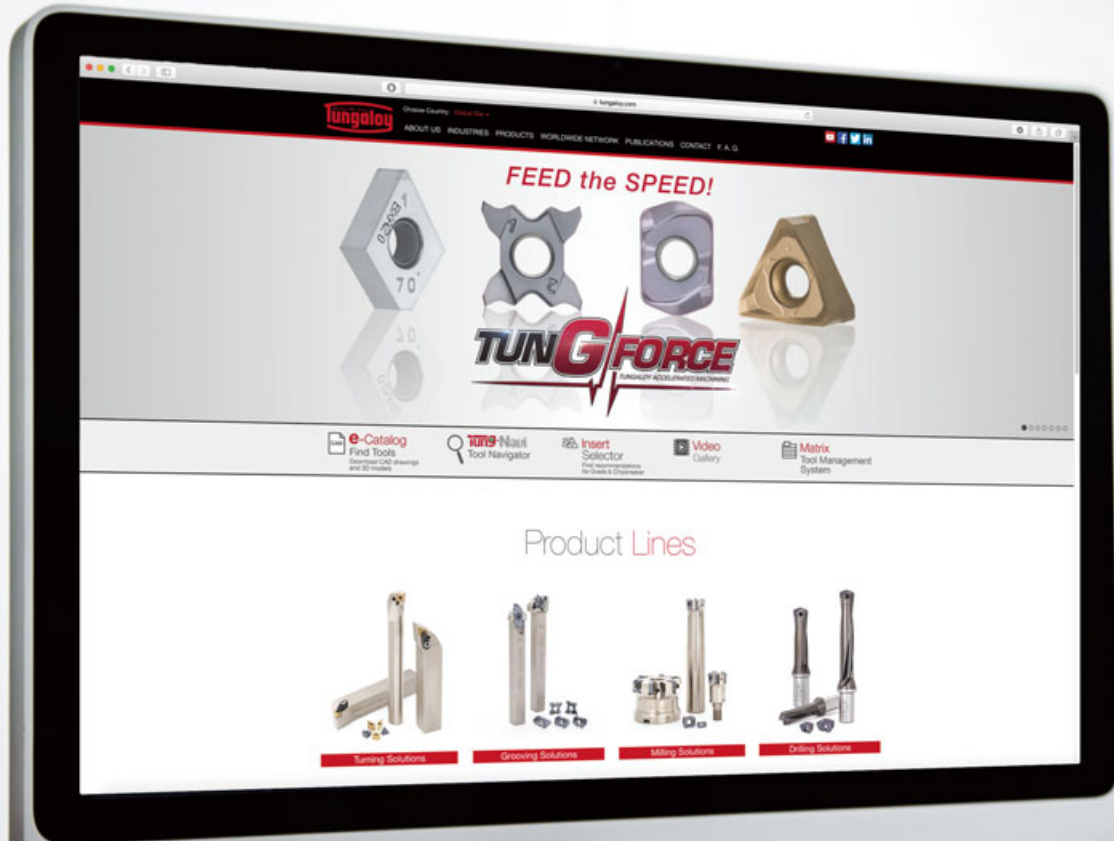
MEMO

A large grid of graph paper, consisting of 20 columns and 30 rows of small squares, intended for writing a memo.

MEMO

A large grid of graph paper for taking notes, consisting of 20 columns and 30 rows of small squares.

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