

NPN

New Product News



POSSTURN
DOUBLE SIDED POSITIVE TURNING

4 Cutting Edge Inserts and Holders for All-Directional Turning Including High Feed Backward Turning



KEY POINT

TaeguTec has unveiled a new POS-S-TURN line for all-directional turning including high feed backward turning.

Conventional turning requires the tool to move in one direction, then be exchanged to go in the reverse direction. As a result, productivity decreases with the increased downtime resulting from changing the tool. TaeguTec has solved this problem with the release of an innovative line that covers both forward and backward turning with one tool. The innovative ZNMV inserts and holders are capable of effective turning for longitudinal and facing operations in both forward and backward directions.

The double-sided **POS-S-TURN** inserts have the same axial and radial rake angle and capabilities as standard positive inserts when mounted to holders, allowing for low cutting force with double the number of cutting edges. In addition, it is a multi-functional, flexible line capable of all directional turning, profile and undercut machining without the required exchanging of holders.

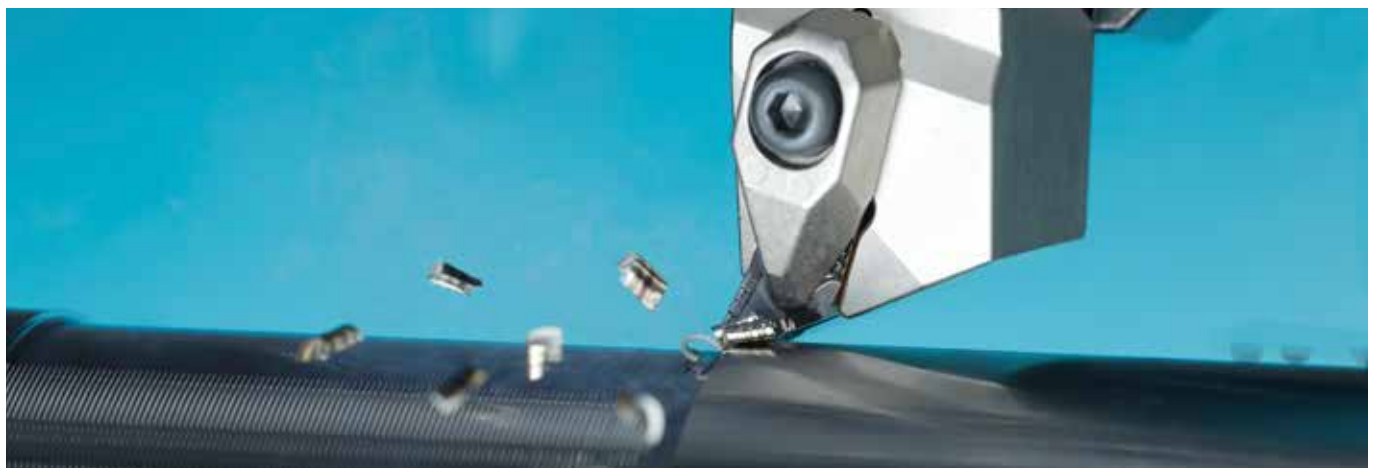
Moreover, the outstanding high feed feature is due to the small entering angle, and this enables higher productivity for both longitudinal turning and facing in the backward direction (BWT & BWF).

Using the same **T-HOLDER** design, this holder is user-friendly and has strong clamping force. Inserts are available in three chip breaker types: BM for general purpose in steel, BS for super alloy and BF for finishing in steel, which are compatible with TZQNR/L holders.

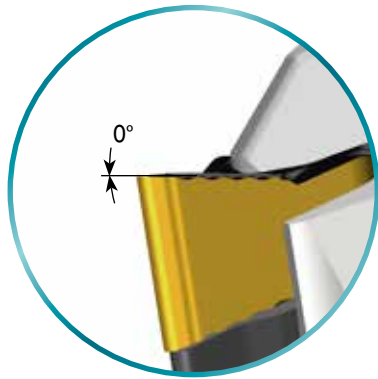
They are an optimal replacement for the standard VBMT insert and SVVBN holder when using the BF insert and TZXNN holder, doubling the number of cutting edges.

Features

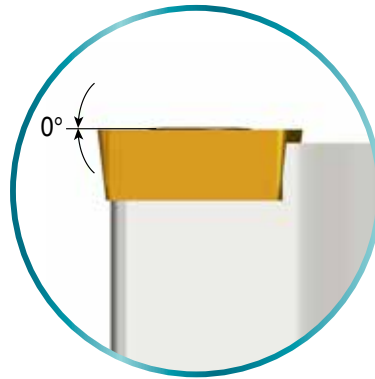
- Double-sided 4 corners negative insert with optimized design
- The same axial and radial rake angle as standard positive inserts with low cutting force when mounted to holders
- Serrated cutting edge enables excellent chip control in variable depth of cut operations
- All directional turning and multiple applications including backward and forward longitudinal turning, face turning, profile and undercutting without exchanging the tool holder
 - Higher productivity due to reduced down time and reduced holder inventory
- High feed, backward longitudinal and face turning solution that maximizes productivity
- The same T-Holder's simple clamping operation and strong clamping force
- High-pressure coolant supplying COOL-BURST holders are available as standard holders
- TT8105, TT8115, TT8125 are bi-colored CVD coated grades for improved machining performance



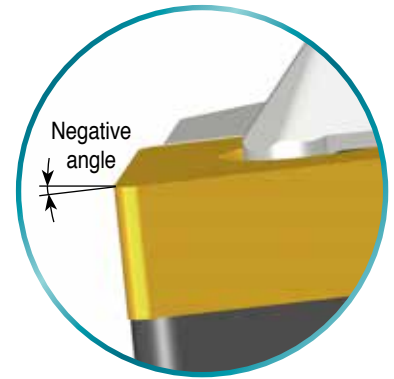
Same cutting edge angle as a standard positive insert when mounted to the holder



Cutting edge angle of a POS-S-TURN insert

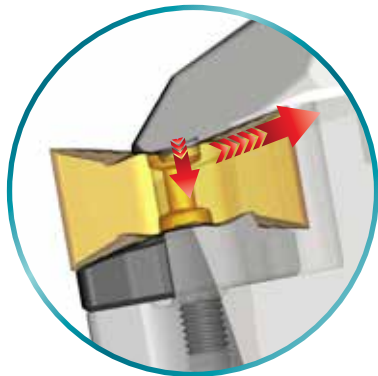


Cutting edge angle of a standard positive insert



Cutting edge angle of a standard negative insert

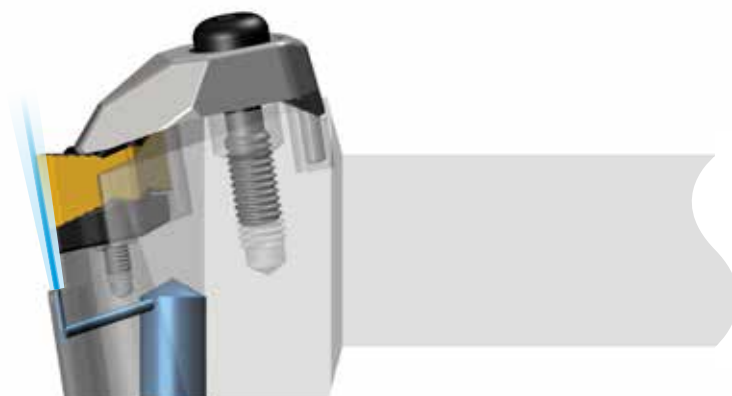
T-Holder clamping design



Strong 2 directional clamping force

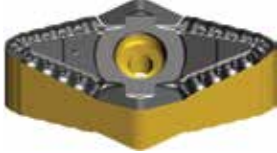
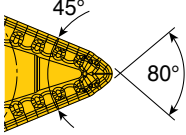
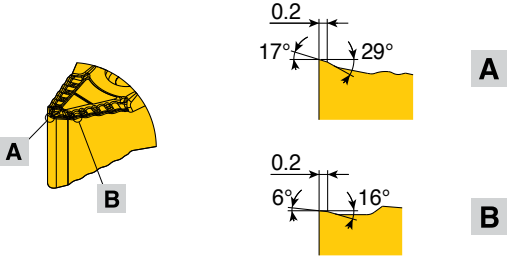


COOL-BURST high pressure coolant supply holder

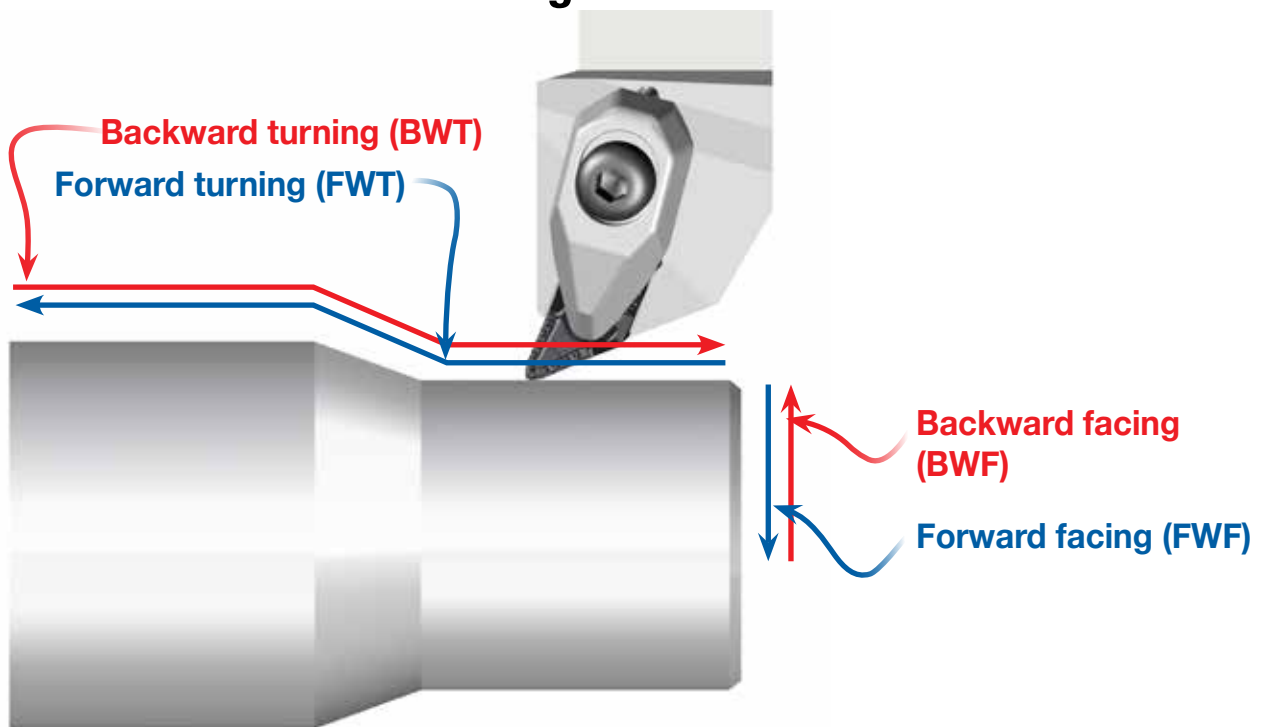


Stable and long tool life

ZNMV-BM insert geometry

Chip breaker	Cutting edge geometry	
 <p data-bbox="156 680 491 707">For general purpose steel machining</p>		

Application range of ZNMV-BM insert with TZQNL holder - Capable of all directional turning

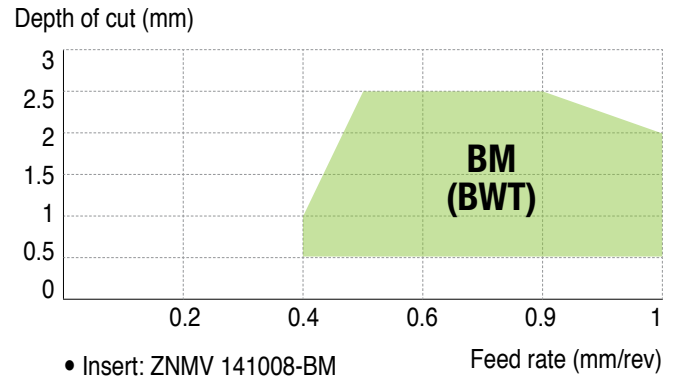
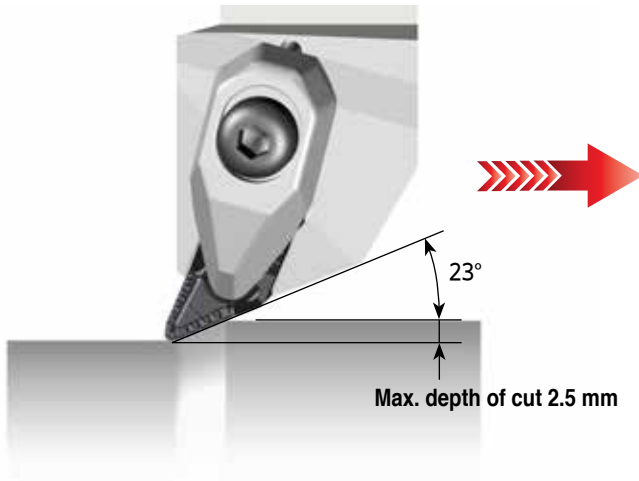


	BWT	BWF	FWT	FWF
f_{Min} (mm/rev)	0.4	0.4	0.2	0.2
$f_{Recom.}$ (mm/rev)	0.7	0.7	0.3	0.3
f_{Max} (mm/rev)	1.0	1.0	0.6	0.6
ap_{Min} (mm)	0.5	0.5	0.5	0.5
$ap_{Recom.}$ (mm)	1.5	1.0	1.5	1.5
ap_{Max} (mm)	2.5	1.2	2.0	2.0

- BWT (main machining) and FWT machining
- BWF (main machining) and FWF machining

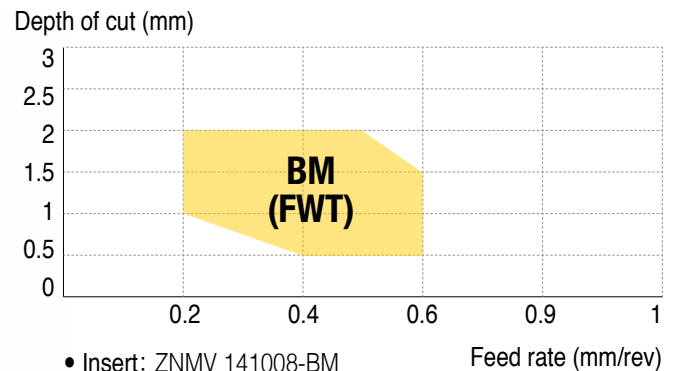
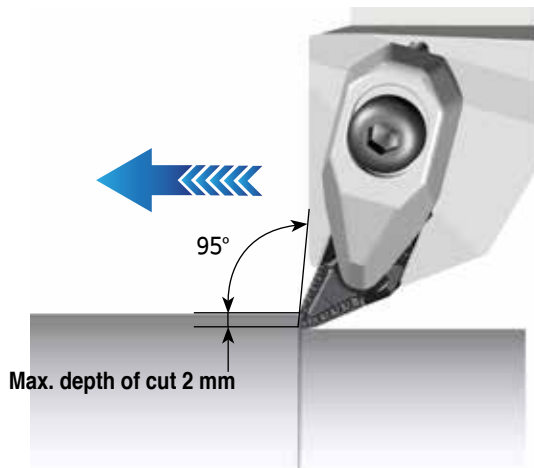
- Capable of profile turning
- Capable of high feed turning in BWT and BWF

TZQNL holder's **backward** turning (BWT) and ZNMV-BM's chip control range



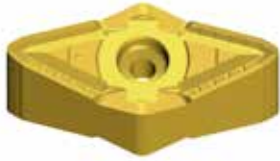
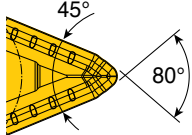
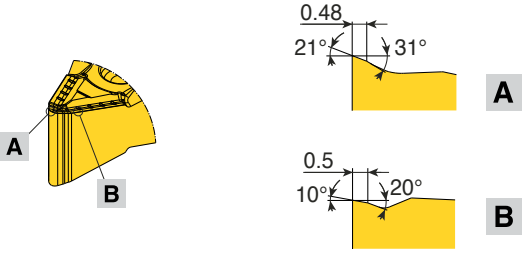
- Insert: ZNMV 141008-BM
- Cutting speed (V): 200 m/min
- Material: AISI 4140 (HB230-260)

TZQNL holder's **forward** turning (FWT) and ZNMV-BM's chip control range

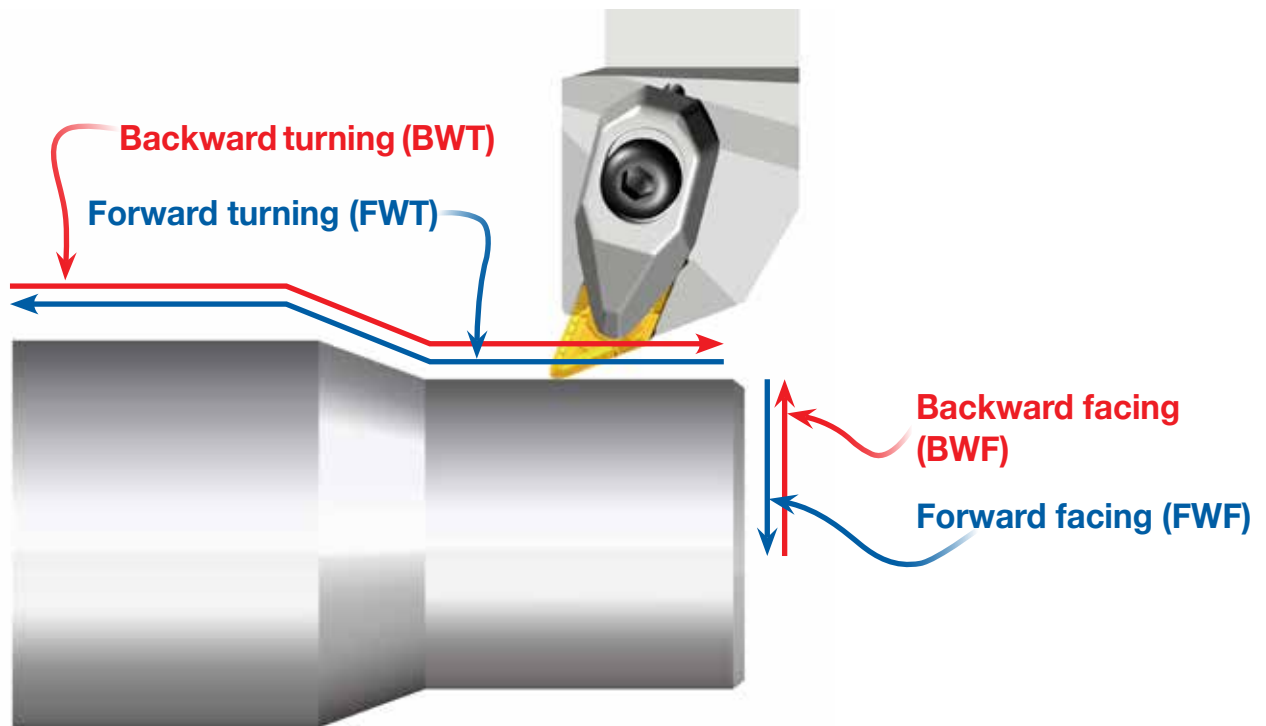


- Insert: ZNMV 141008-BM
- Cutting speed (V): 200 m/min
- Material: AISI 4140 (HB230-260)

ZNMV-BS insert geometry

Chip breaker	Cutting edge geometry	
 <p data-bbox="183 667 464 696">For heat-resistant super alloys</p>		

Application range of ZNMV-BS insert with TZQNL holder - Capable of all directional turning

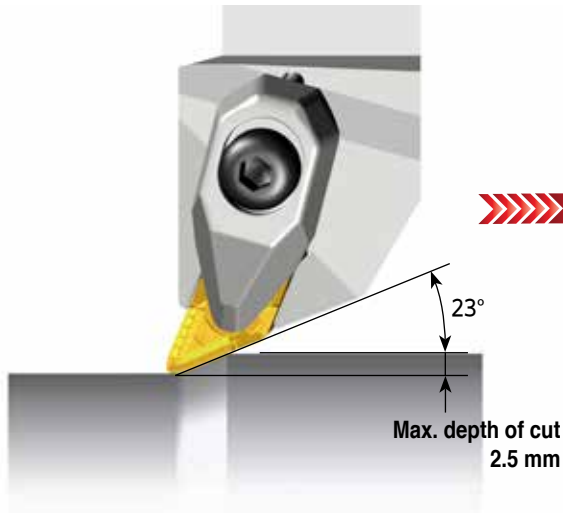


	BWT	BWF	FWT	FWF
f_{Min} (mm/rev)	0.5	0.5	0.2	0.2
$f_{Recom.}$ (mm/rev)	0.7	0.7	0.25	0.25
f_{Max} (mm/rev)	1.0	1.0	0.4	0.4
ap_{Min} (mm)	0.5	0.5	1.0	1.0
$ap_{Recom.}$ (mm)	1.5	1.0	1.2	1.2
ap_{Max} (mm)	2.5	1.2	2.0	2.0

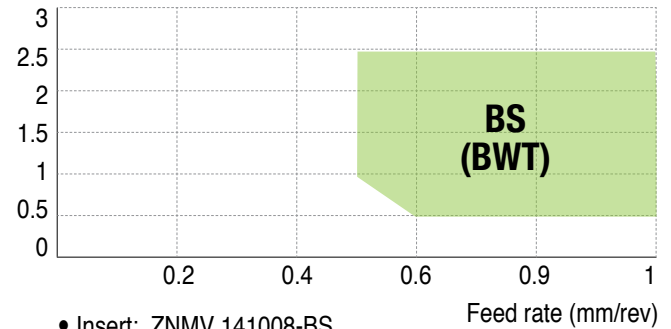
- BWT (main machining) and FWT machining
- BWF (main machining) and FWF machining

- Capable of profile turning
- Capable of high feed turning in BWT and BWF

TZQNL holder's **backward** turning (BWT) and ZNMV-BS's chip control range

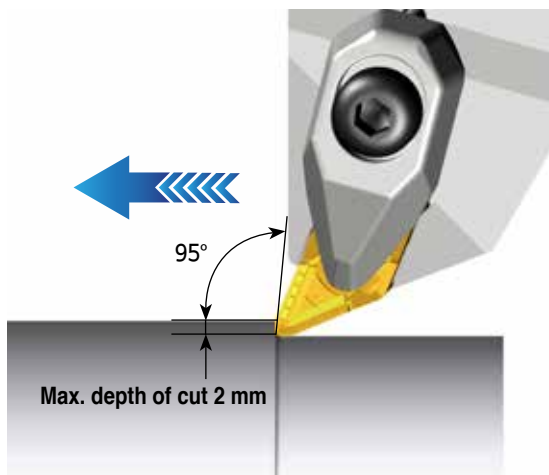


Depth of cut (mm)

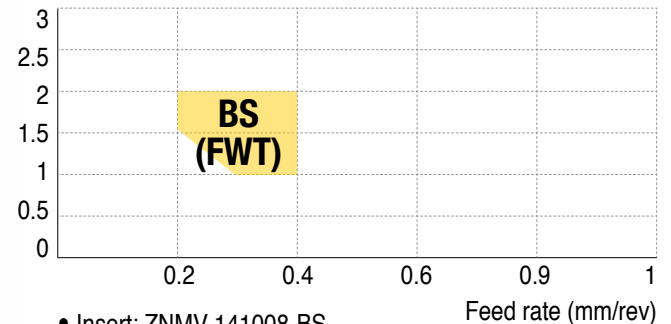


- Insert: ZNMV 141008-BS
- Cutting speed (V): 30m/min
- Material: INCONEL 718 (HB340-360)

TZQNL holder's **forward** turning (FWT) and ZNMV-BS's chip control range

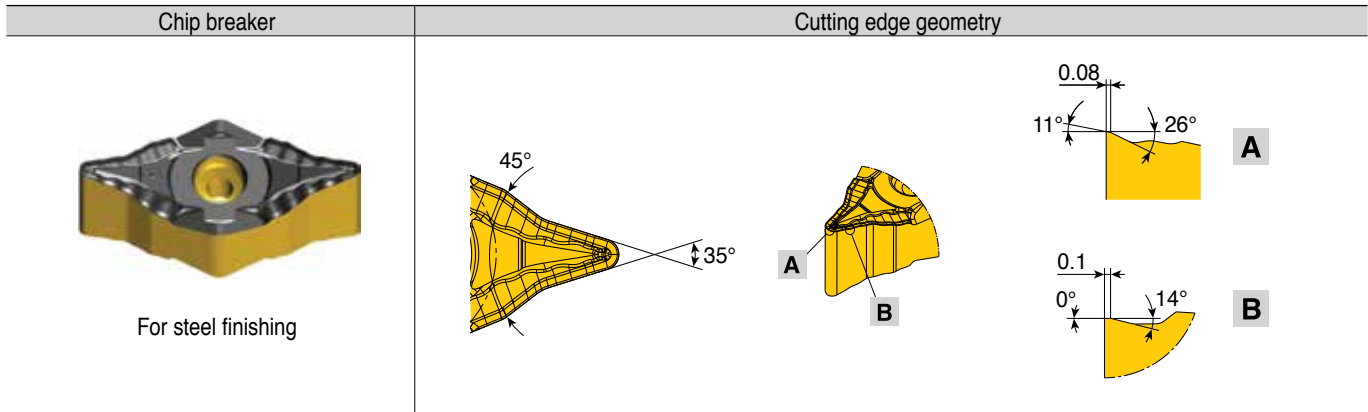


Depth of cut (mm)

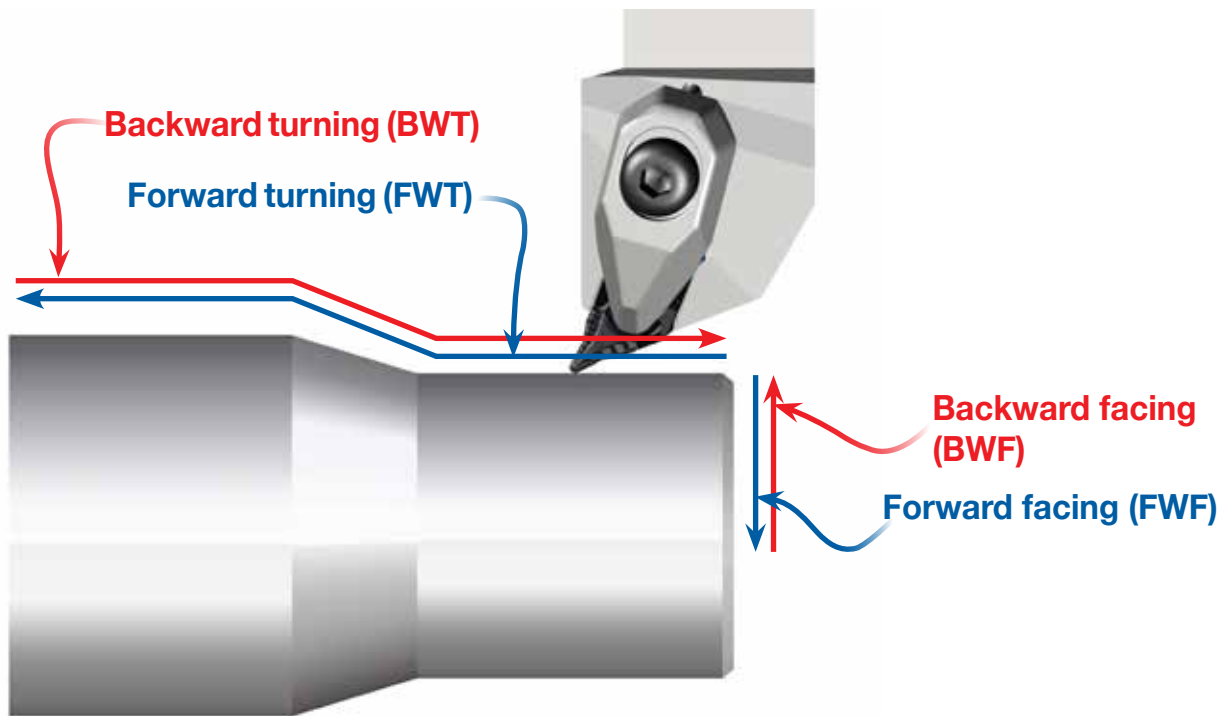


- Insert: ZNMV 141008-BS
- Cutting speed (V): 30m/min
- Material: INCONEL 718 (HB340-360)

ZNMV Y-BF insert geometry



Application range of ZNMV Y-BF insert with TZQNL holder - Capable of all directional turning

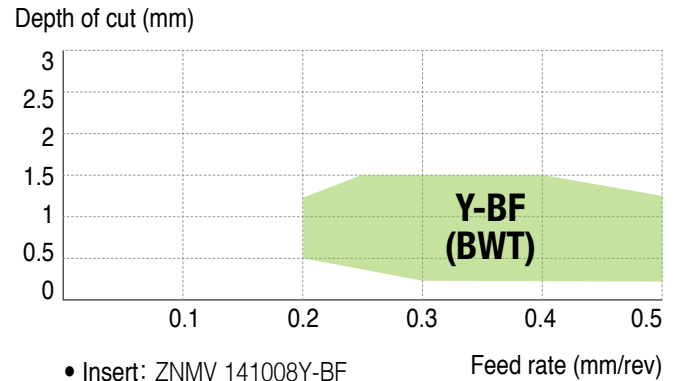
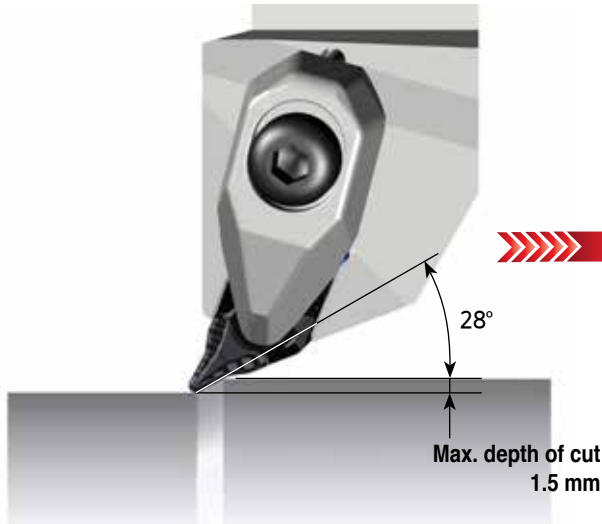


	BWT	BWF	FWT	FWF
f_{Min} (mm/rev)	0.2	0.2	0.2	0.2
$f_{Recom.}$ (mm/rev)	0.4	0.4	0.25	0.25
f_{Max} (mm/rev)	0.5	0.5	0.35	0.35
ap_{Min} (mm)	0.25	0.25	0.25	0.25
$ap_{Recom.}$ (mm)	1.2	1	0.6	0.6
ap_{Max} (mm)	1.5	1.2	1	1

- BWT (main machining) and FWT machining
- BWF (main machining) and FWF machining

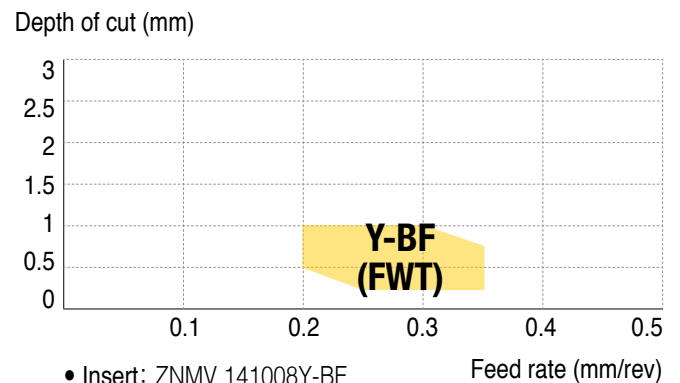
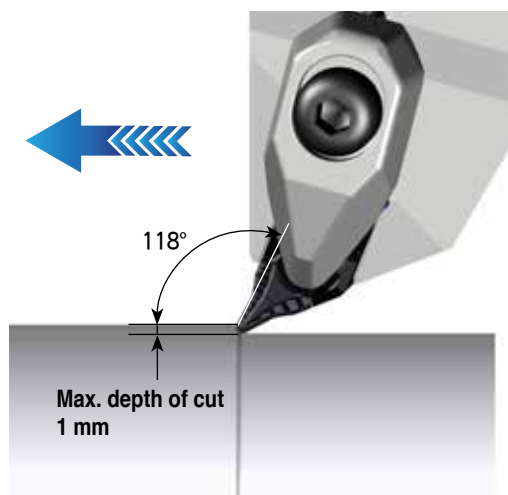
- Capable of undercut and profile turning
- Capable of high-feed turning in BWT and BWF

TZQNL holder's **backward** turning (BWT) and ZNMV Y-BF's chip control range



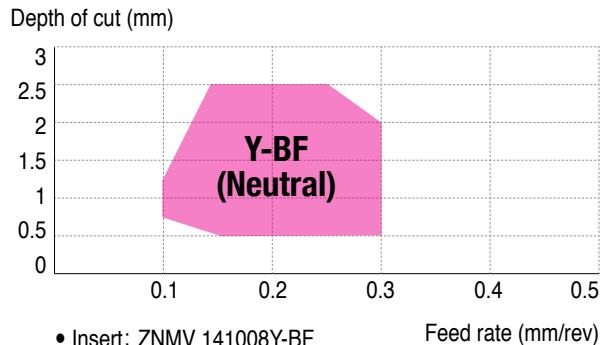
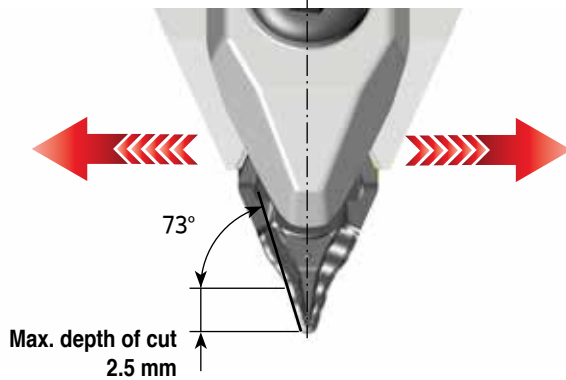
- Insert: ZNMV 141008Y-BF
- Cutting speed (V): 200 m/min
- Material: AISI 4140 (HB230-260)

TZQNL holder's **forward** turning (FWT) and ZNMV Y-BF's chip control range



- Insert: ZNMV 141008Y-BF
- Cutting speed (V): 200 m/min
- Material: AISI 4140 (HB230-260)

TZXNN holder's left and right bi-directional turning and ZNMV Y-BF's chip control range



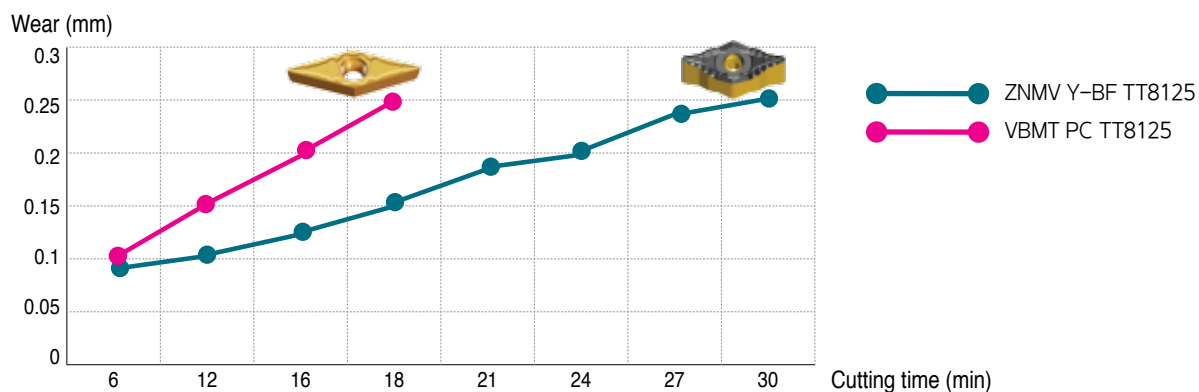
- Insert: ZNMV 141008Y-BF
- Cutting speed (V): 200 m/min
- Material: AISI 4140 (HB230-260)

Chip control comparison

Insert	ZNMV 141008Y-BF (TZXNN holder)	VBMT 160408 (SVVBN holder)
V=200m/min, AISI 4140 (HB243)		

Wear resistance comparison

V=300 m/min, $a_p=1.5$ mm, $f=0.2$ mm/rev, AISI 4140 (HB245)



KIT COLLECTIONS

These kit products are available in the format listed below.



Cat. No.	Designation	Bill of materials	Qty.
6334752	KISFT-TZQNR 25 TB-ZN1410	TZQNR 2525 M1410-TB	1
		ZNMV 141008Y-BF TT8115	3
		ZNMV 141008-BM TT8125	3
		ZNMV 141008-BS TT3020	3
6334753	KISFT-TZXNN 25 TB-ZN1410	TZXNN 2525 M1410-TB	1
		ZNMV 141008Y-BF TT8115	3



Cat. No.	Designation	Bill of materials	Qty.
6334765	KISFS-TZQNR 25 TB-ZN1410	TZQNR 2525 M1410-TB	1
		ZNMV 141008-BM TT8125	20
6334766	KISFS-TZXNN 25 TB-ZN1410	TZXNN 2525 M1410-TB	1
		ZNMV 141008Y-BF TT8115	20



Cat. No.	Designation	Bill of materials	Qty.
6338402	KISFF-A-ZN141008BF TT8115	ZNMV 141008Y-BF TT8115	100
6338403	KISFF-B-ZN141008BF TT8115		300
6338404	KISFF-A-ZN141008BM TT8125	ZNMV 141008-BM TT8125	100
6338405	KISFF-B-ZN141008BM TT8125		300
6338406	KISFF-A-ZN141008BS TT3020	ZNMV 141008-BS TT3020	100
6338408	KISFF-B-ZN141008BS TT3020		300