

Small Tool Holder for External Turning

SVLP-SM/SVPP-SM

External turning / Facing / Copying / Recessing
Ideal for complicated small parts machining
with automatic lathes.



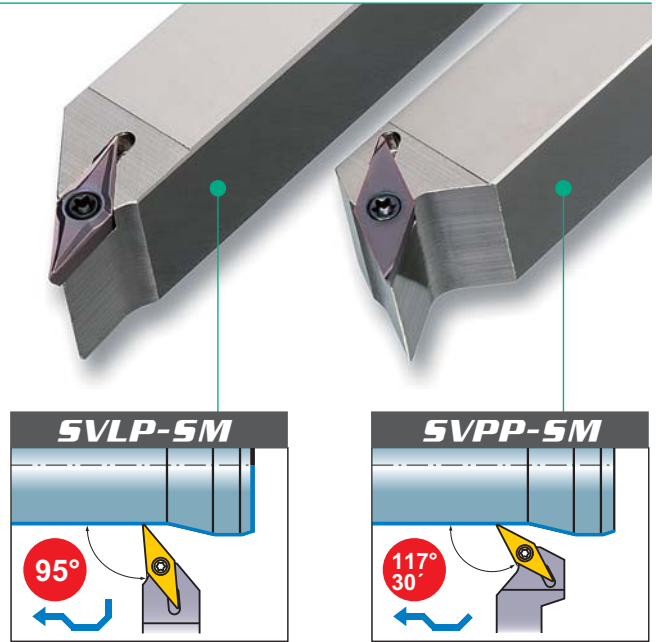
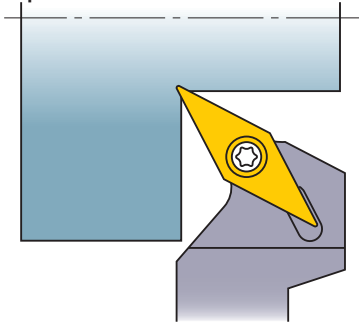
External Turning Small Tool Holder

SVLP-SM/SVPP-SM

Features

Design of the holders optimize profiling small diameter work pieces

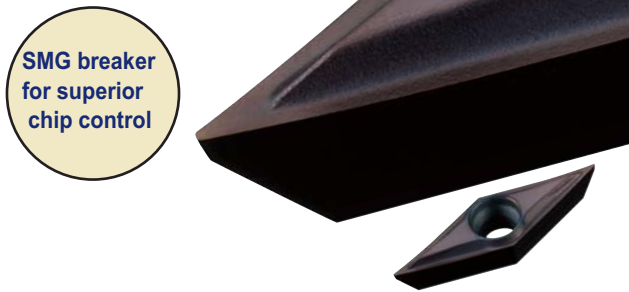
The 35 degree rhombic insert with 11 degree positive rake angle demonstrates excellent cutting performance for recessing and profiling small work pieces.



The optimum chip breakers for finish cutting.

SMG Breaker

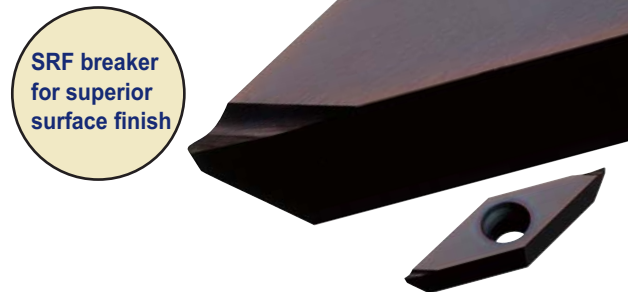
A curved cutting edge combined with a peninsula type breaker provides efficient chip breaking performance.



- Peripheral ground, G class molder breaker provides superior chip control and accurate cutting edge positioning, ideal for high precision machining.
- Corner radius is designed with a minus tolerance (0 to -0.05mm) suitable for precision part applications.

SRF Breaker

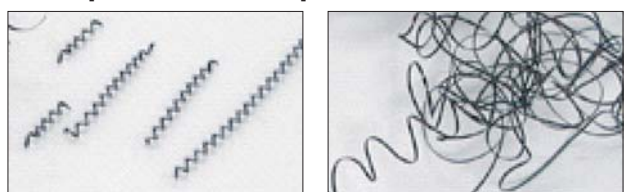
Angular breaker provides high quality surface finishes.



- Overall ground, E class inserts feature high rake angular type breaker which enables superior surface finishes and accurate cutting edge positioning, making it ideal for high precision machining.
- Corner radius is designed with a minus tolerance (0 to -0.02mm) suitable for high precision part applications.

Cutting performance

● Chip control comparison



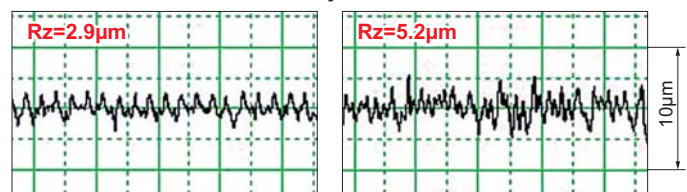
SMG Breaker

Competitor's

<Cutting conditions>
 Workpiece : S45C (External cutting)
 Insert : VPGT110302-0-0-0-0
 Cutting speed : 100m/min
 Depth of cut : 0.5mm
 Feed : 0.1mm/rev
 Wet cutting

SMG breaker shows good chip breaking

● Surface finish comparison



SMG Breaker

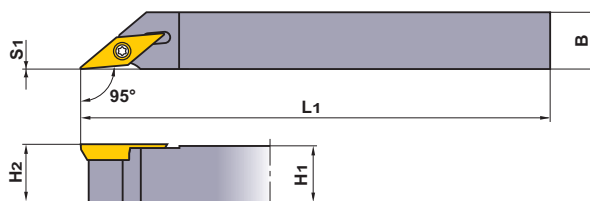
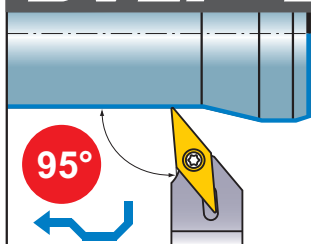
Competitor's

<Cutting conditions>
 Workpiece : S45C (External cutting)
 Insert : VPGT110302-0-0-0-0
 Cutting speed : 100m/min
 Depth of cut : 0.3mm
 Feed : 0.05mm/rev
 Wet cutting

SMG breaker shows high quality surface finishes

SVLP-SM/SVPP-SM

SVLP-SM



Right hand tool holder shown.

Finish
R/L-SRF



(08,11)

Finish
SMG

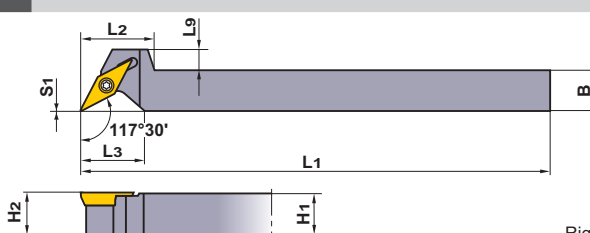
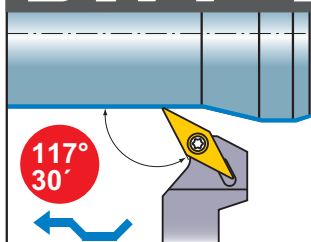


(08,11)

Order Number	Stock		Insert Number	Dimensions (mm)					Insert Screw *	Wrench	
	R	L		H1	B	L1	H2	S1			
SVLPR/L1010K08-SM	●	●	VPET VPGT	0802	10	10	125	10	0	TS202	TKY06R
1212M08-SM	●	●		0802	12	12	150	12	0	TS202	TKY06R
1010K11-SM	●	●		1103	10	10	125	10	0	TS255	TKY08R
1212M11-SM	●	●		1103	12	12	150	12	0	TS255	TKY08R
1616M11-SM	●	●		1103	16	16	150	16	0	TS255	TKY08R

* Clamp Torque (N · m) : TS202=0.6, TS255=1.0

SVPP-SM



SVPPR/L1616M11-SM
Right hand tool holder shown.

Finish
R/L-SRF



(11)

Finish
SMG



(11)

Order Number	Stock		Insert Number	Dimensions (mm)								Insert Screw *	Wrench	
	R	L		H1	B	L1	L2	L3	L9	H2	S1			
SVPPR/L1010K11-SM	●	●	VPET VPGT	1103	10	10	125	20	17	8	10	0	TS255	TKY08R
1212M11-SM	●	●		1103	12	12	150	20	17	6	12	0	TS255	TKY08R
1616M11-SM	●	●		1103	16	16	150	17	—	—	16	0	TS255	TKY08R

* Clamp Torque (N · m) : TS255=1.0

Recommended Cutting Conditions

	Work Material	Hardness	Insert Grade	Cutting Speed (m/min)	Feed (mm/rev)
P	Carbon Steel Alloy Steel	180HB—280HB	VP15TF	100 (70—120)	0.06 (0.02—0.1)
	Free Cutting Carbon Steel	—	VP15TF	110 (30—180)	0.06 (0.02—0.1)
M	Stainless Steel	≤200HB	VP15TF	100 (70—120)	0.06 (0.02—0.1)

(Note) The above cutting conditions are general guide lines.


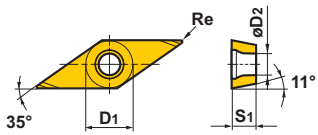

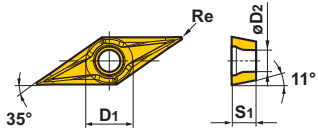
Adjustments may be necessary depending on machine rigidity, workpiece geometry and clamping.

(Note) Insert photo is an example. Letters show chip breaker style, figures show inscribed circle.

● : Inventory maintained. (10 inserts in a case)

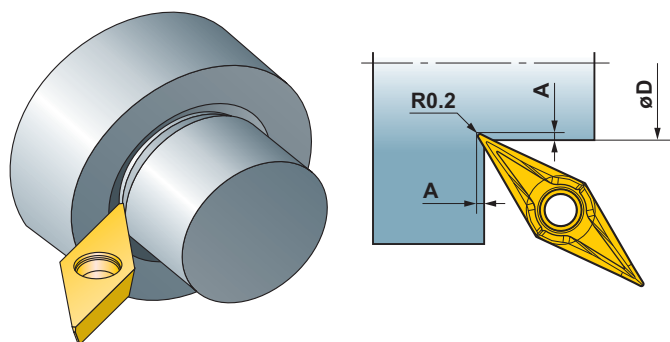
Small Tool Holder for External Turning

Inserts

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>VP15TF</i>	D1	S1	Re	D2	
R/L-SRF Breaker  Finish Cutting	VPET080201R-SRF	●	4.76	2.38	0.1	2.4	 Right hand insert shown.
	080201L-SRF	●	4.76	2.38	0.1	2.4	
	080202R-SRF	●	4.76	2.38	0.2	2.4	
	080202L-SRF	●	4.76	2.38	0.2	2.4	
	1103V3R-SRF	●	6.35	3.18	0.03	2.8	
	1103V3L-SRF	●	6.35	3.18	0.03	2.8	
	110301R-SRF	●	6.35	3.18	0.1	2.8	
	110301L-SRF	●	6.35	3.18	0.1	2.8	
SMG Breaker  Finish Cutting	VPGT080201M-SMG	●	4.76	2.38	0.1	2.4	
	080202M-SMG	●	4.76	2.38	0.2	2.4	
	110301M-SMG	●	6.35	3.18	0.1	2.8	
	110302M-SMG	●	6.35	3.18	0.2	2.8	

● : Inventory maintained. (10 inserts in a case)

Location of recess



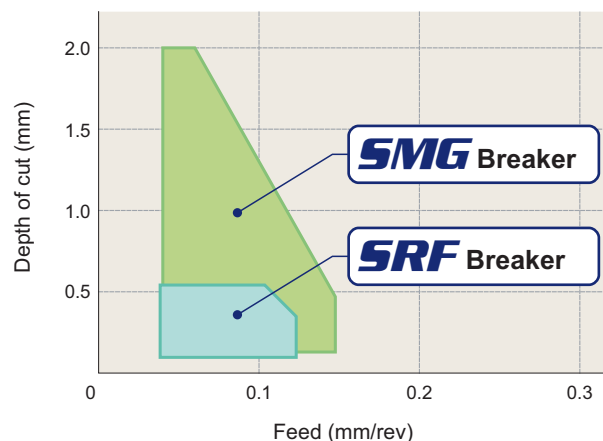
Corner radius Re (mm)	Max. depth of recessing A (mm)	Cutting diameter øD (mm)
0.2	0.5	ø20
	1.0	ø25

(Note 1) Please use inserts with corner radius Re 0.2mm for recessing.

(Note 2) Maximum depth of recessing has the limit of machining diameter.

This table shows referential machining diameter when the depth of recessing is 0.5 and 1.0mm.

Application Range



For Your Safety

●Don't handle inserts and chips without gloves. ●Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When attaching inserts or spare parts, please use only the correct wrench or spanner.

MITSUBISHI MATERIALS CORPORATION

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(Tools specifications subject to change without notice.)