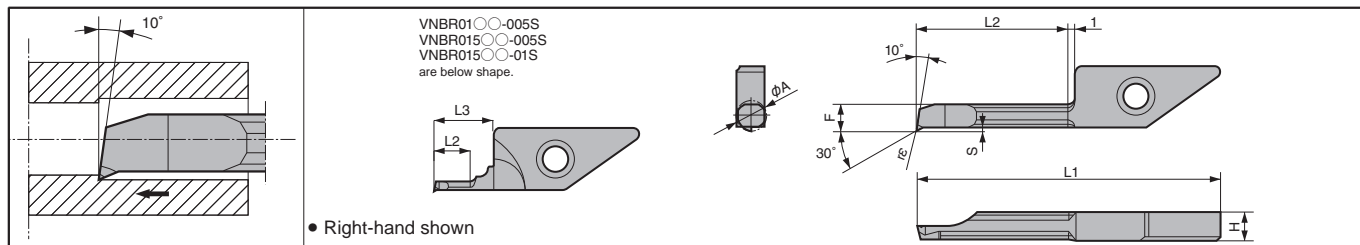
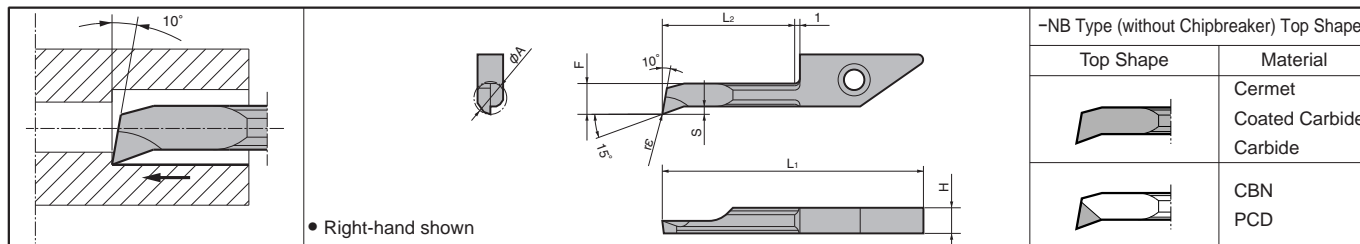


# System Tip-Bar

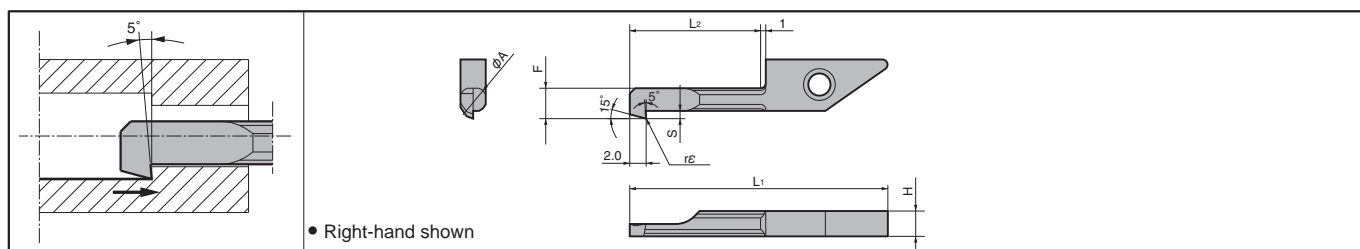
## VNB-S (Boring) [Corner-R (rε): Minus tolerance]



## VNB (Boring)



## VNBT (Back Boring)



### Insert Dimensions

Description	Min. Bore Dia. øA	Dimension (mm)							Insert Grade							
		H	L1	L2	L3	F	S	rε	Cermet		PVD Coated Carbide		Carbide	CBN	PCD	
									TC60	PR915	PR930	KW10	KBN510	KPD001	KPD010	
VNBR 0103-005S 0105-005S 01503-005S 01505-005S 0206-005S 025075-005S 0311-005S 03515-005S 0411-005S 0420-005S	1.0	3.9	26.5	3	7	0.85	0.2	0.05			●					
										●						
										●						
	1.5						1.3					●				
	2.0				6		1.8		0.25			●				
	2.5			28.1	7.5		2.1		0.4			●				
	3.0			30.8	11		2.6		0.4			●				
	3.5			34.8	15		2.9		0.5			●				
	4.0			30.8	11		3.5		0.5			●				
			39.8	20						●						
VNBR 01503-01S 01505-01S 0206-01S 025075-01S 0311-01S 03515-01S 0411-01S 0420-01S	1.5	3.9	26.5	3	7	1.3	0.2	0.1			●					
										●						
										●						
	2.0				6		1.8		0.25			●				
	2.5			28.1	7.5		2.1		0.4			●				
	3.0			30.8	11		2.6		0.4			●				
	3.5			34.8	15		2.9		0.5			●				
4.0		30.8	11		3.5	0.5			●							
			39.8	20						●						
VNBR 0411-02S 0420-02S	4.0	3.9	30.8	11		3.5	0.5	0.2			●					

### Recommended Cutting Conditions (In the case of VNB-S)

Workpiece Material	Recommended Insert Grade (Cutting Speed: m/min)							VNBO1-S Type VNBO15-S Type		VNBO2-S Type { VNBO4-S Type		Remarks
	Cermet	PVD Coated Carbide	Carbide	CBN	PCD							
	TC60	PR915	PR930	KW10	KBN510	KPD001	KPD010	Cut: ap (mm), Feed: f (mm/rev)				
	ap	f	ap	f								
Carbon Steel / Alloy Steel			★ 30-100					~0.1	~0.01	~0.2	~0.03	Coolant
Stainless Steel			★ 30-80					~0.1	~0.01	~0.2	~0.02	

★ : 1st Recommendation

● : Std. Item □ : Check Availability