

HOW TO PUT EACH INSERT TOGETHER

			For general	Accuracy of machining surface priority	Burr reduction priority
Applicable insert	General insert	SEGW12X4ZEFR-D DX140	◎	◎	◎
		2QP-SECW12X412ZETR BX480			
	Wiper insert	SEGW12X4ZEFR-WD DX140	—	◎	—
		1QP-SECW12X4ZETR-W BX480			
	Wiper insert for burr reduction	SEGW12X4ZEFR-BD DX140	—	—	◎
		1QP-SECW12X4ZETR-BX480			
	Number of Inserts by type		All general	1 or 2 wiper inserts in cutter body	General insert : Burr wiper insert = 1 : 1
Accuracy of machining surface (roughness and undulation)			△	◎	○
Burr of machining surface			△	○	◎

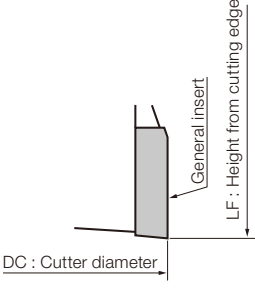
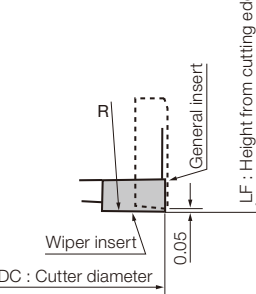
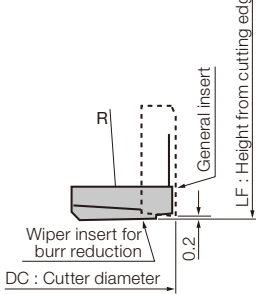
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Designation	Cutting speed Vc (m/min)	Feed per tooth fz (mm/t)
P	Carbon steels and alloy steels < 300HB	AH120	SEGW12X4ZEPR	100 - 180	0.03 - 0.15
		NS740	SEGW12X4ZEPR	100 - 180	0.03 - 0.15
M	Stainless steels < 250HB	AH140	SEGW12X4ZEPR	80 - 180	0.03 - 0.15
K	Grey and ductile cast irons	AH120	SEGW12X4ZEPR	100 - 200	0.03 - 0.15
	Grey cast irons	BX480	2QP-SECW12X412ZETR	800 - 1500	0.05 - 0.3
	Ductile cast irons	BX480	2QP-SECW12X412ZETR	500 - 800	0.05 - 0.2
N	Cast aluminium alloy / Die-cast Si < 13%	KS05F	SEGT12X4ZEFR-AJ	200 - 1500	0.05 - 0.2
		DX140	SEGW12X4ZEFR-D	200 - 1500	0.05 - 0.2
	Cast aluminium alloy / Die-cast Si ≥ 13%	KS05F	SEGT12X4ZEFR-AJ	80 - 200	0.05 - 0.2
		DX140	SEGW12X4ZEFR-D	200 - 500	0.05 - 0.2
	Aluminium alloy Tensile strength < 350 N/mm ²	KS05F	SEGT12X4ZEFR-AJ	200 - 1500	0.05 - 0.2
		DX140	SEGW12X4ZEFR-D	200 - 1500	0.05 - 0.2
	Aluminium alloy Tensile strength > 350 N/mm ²	KS05F	SEGW12X4ZEFR	200 - 1500	0.05 - 0.2
		DX140	SEGW12X4ZEFR-D	200 - 1500	0.05 - 0.2
	Copper alloy	KS05F	SEGT12X4ZEFR-AJ	200 - 500	0.05 - 0.2
		DX140	SEGW12X4ZEFR-D	200 - 500	0.05 - 0.2

Notes:

- In milling aluminium and copper alloys:
 - For improved surface finish, use together with wiper insert SEGW12X4ZEFR-WD
 - For reducing burr occurrence, use together with deburring inserts SEGW12X4ZEFR-BD
- When milling aluminium and copper alloys, use of a water soluble cutting fluid is recommended. When milling steels, cast irons, and stainless steels, dry cutting is recommended.
- When the length-to-diameter overhang ratio of the tool (L/D) exceeds 3, reduce cutting speed and feed to 70 to 80% of the values given in the table.

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Applicable insert	For general		Accuracy of machining surface priority	Burr reduction priority
	General insert	YDEN0905PDFR-D	◎	◎
	Wiper insert	YDEN0905PDFR-WD	—	—
	Wiper insert for burr reduction	YDEN0905PDFR-BD	—	◎
	Number of Inserts by type	All general	1 or 2 wiper inserts in cutter body	General insert : Burr wiper insert = 1 : 1
Specification of insert setting				
Accuracy of machining surface (roughness and undulation)		△	◎	○
Burr of machining surface		△	○	◎

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Designation	Cutting speed Vc (m/min)	Feed per tooth fz (mm/t)
N	Aluminium alloy castings & die castings Si < 13%	DX140	YDEN0905PDFR-D	500 - 4000	0.05 - 0.2
	Aluminium alloy castings & die castings Si ≥ 13%	DX140	YDEN0905PDFR-D	200 - 500	0.05 - 0.2
	Rolled aluminium alloys	DX140	YDEN0905PDFR-D	500 - 4000	0.05 - 0.2
	Copper alloys	DX140	YDEN0905PDFR-D	200 - 500	0.05 - 0.2

Notes:

- (1) When requiring improved surface finish, use the wiper insert together with regular inserts YDEN0905PDFR-WD.
- (2) When requiring reduced burr occurrence, use the deburring inserts together with regular inserts YDEN0905PDFR-BD.
- (3) When using the cutter at speeds over 1500m/min, use an arbor or tool-holder balanced to within G16.
- (4) Wet cutting, using a water soluble cutting fluid, is recommended.
- (5) When the length-to-diameter overhang ratio of the tool (L/D) exceeds 3, reduce cutting speed and feed to 70 to 80% of the values given in the table.