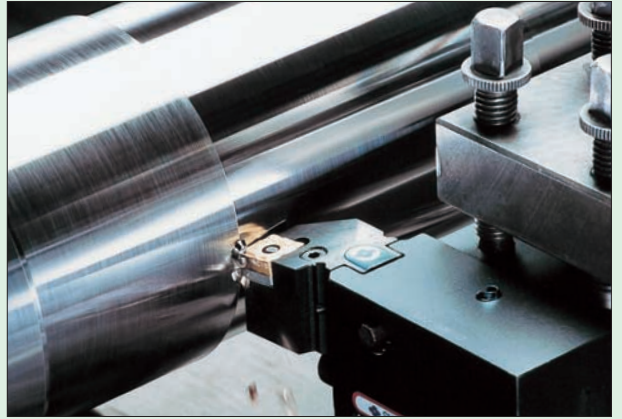


Cartridges

F



F1 ~ F4



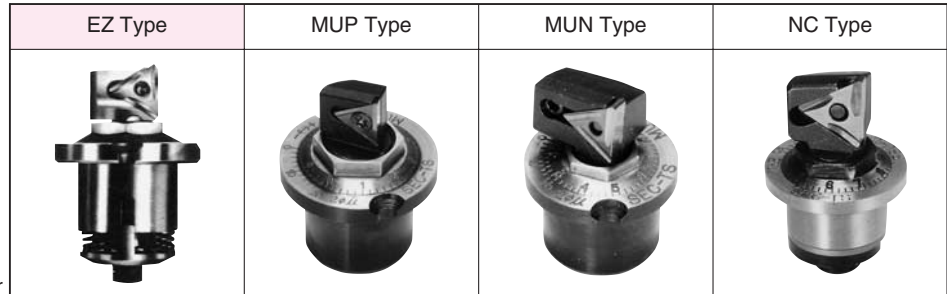
SEC-Micro Units	F2
SEC-Cartridges	F4

SEC- Micro Units

Please recommend using EZ type micro units when designing new tooling.

MUP, MUN and NC types should only be use as replacement parts for existing tooling which are already using these micro units.

Typical Toolings



() Indicate Smallest Applicable Diameter













Illustrations	Applications	EZ Type		MUP Type		MUN Type		NC Type	
		Catalogue No.	stock	Catalogue No.	stock R LH	Catalogue No.	stock R LH	Catalogue No.	stock R LH
		MBUAA-MAHAC-3(25.4)	●	MUP1-A0 (25)		MUN2 -A0 (36)		FBU2-A0 (34)	
		MBUAA-MAHAS-5(25.4)	●	MUP2-A0 (36)		MUN3 -A0 (47)		FBU3-A0 (51.5)	
		MBUBA-MBHAC-3(36.5)	●	MUP3-A0 (47)		MUN3L-A0 (54)		FBU4-A0 (72.5)	
		MBUBA-MBHAS-3(36.5)	●	MUP4-A0 (73)		MUN4 -A0 (73)			
		MBUCA-MCHAC-3(47.6)	●			MUN4L-A0 (78)			
		MBUCA-MCHAS-3(47.6)	●						
		MBUCA-MCLAC-1(47.6)	●						
		MBUEA-MEHAC-3(73.0)	▲						
MBUEA-MELAC-1(73.0)	▲								
				MUP1-A15(25)		MUN2 -A15(36)		FBU2-A15(36)	
				MUP2-A15(36)		MUN3 -A15(47)		FBU3-A15(53)	
				MUP3-A15(47)		MUN3L-A15(54)		FBU4-A15(76)	
				MUP4-A15(73)		MUN4 -A15(73)			
						MUN4L-A15(78)			
		MBUAV-MAHVCS(25.4)	●	MUP1-V0 (25)		MUN2 -V0 (36)		FBU2-V0 (36)	
		MBUAV-MAHVSS(25.4)	▲	MUP2-V0 (36)		MUN3 -V0 (47)		FBU3-V0 (54)	
		MBUBV-MBHVCS(36.5)	●	MUP3-V0 (47)		MUN3L-V0 (54)		FBU4-V0 (78.5)	
		MBUBV-MBVSS(36.5)	●	MUP4-V0 (73)		MUN4 -V0 (73)			
		MBUCV-MCHVCS(47.6)	●			MUN4L-V0 (78)			
		MBUCV-MCHVSS(47.6)	●						
		MBUCV-MCLVC-1(47.6)	▲						
		MBUEV-MEHVCS(73.0)	●						
MBUEV-MELVC-1(73.0)	●								
				MUP1-V15(25)		MUN2 -V15(36)		FBU2-V15(36)	
				MUP2-V15(36)		MUN3 -V15(47)		FBU3-V15(54)	
				MUP3-V15(47)		MUN3L-V15(54)		FBU4-V15(78.5)	
				MUP4-V15(73)		MUN4 -V15(73)			
						MUN4L-V15(78)			

* If a left-hand unit is required, include "LH" after the catalogue number (ex.MUP1 - A0 - LH, MUP1 - V0 - LH)

* Insert are not included.

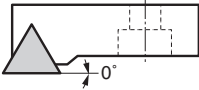
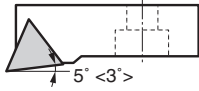

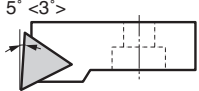
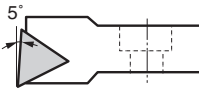
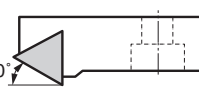
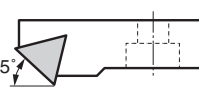
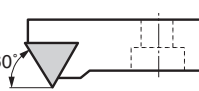
SEC- Cartridges Series

Features

Type	BU Type	MINIT P24 Type	MINIT N38 Type	PN Type	CP Type	CE Type
Shape	The most common type of cartridge units 	Mini type with good edge sharpness and chip control 	Compact type for multi-tooling configurations 	Economical type using common negative inserts 	Positive edge type for low rigidity work 	High rake type for Non-ferrous metal machining 
Functions						
Clamp Mechanism	Eccentric Pin	Screw On	Pin Lock	Pin Lock	Clamp On	Clamp On
Adjustability	Yes	Axial: No Radial: Yes	No (By using shims)	Yes	Yes	Yes
Rake Angle	Neg.	Pos.	Neg.	Neg.	Pos.	Pos.
Relief Angle	0°	11°	0°	0°	11°	20°
Cutting Edge Position	Above Center	Above Center	Above Center	On Center	On Center	On Center
Min. Effective Diameter (mm)	φ 24	φ 24	φ 38	φ 38	φ 30	φ 30

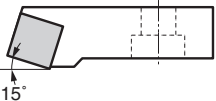
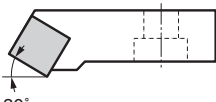
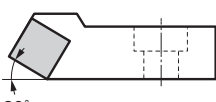
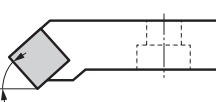
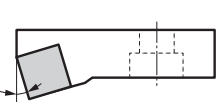
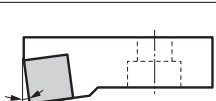
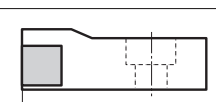



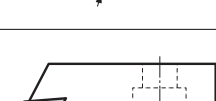
Typical Toolings

Insert are not included. () Indicate Smallest Applicable Diameter

Configuration	BU Type	stock		MINIT P24 Type	stock		MINIT N38 Type	stock		PN Type	stock		CP Type	stock		CE Type	stock	
		R	L		R	L		R	L		R	L		R	L		R	L
							MTGN3 R/L(38)	●	●	PTGN R/L10CA(38)	●	●	CTGP R/L10CA(38)	●	●	CTGE R/L10CA(38)		
										PTGN R/L12CA(50)	●	●	CTGP R/L12CA(50)	●	●	CTGE R/L12CA(50)		
										PTGN R/L16CA(60)	●	●	CTGP R/L16CA(60)	●	●			
										PTGN R/L20CA(70)	▲	●						
	BU224 R/L(48)	●		MTJP22 R/L(24)	●	●	MTJN3 R/L(38)	●					CTJP R/L10CA(38)	●		CTJE R/L10CA(38)	●	
	BU225 R/L(60)	●											CTJP R/L12CA(50)	●		CTJE R/L12CA(50)	●	
	BU252 R/L(24)	●	●	MTFP22 R/L(24)	●	●	MTFN3 R/L(38)	●	●	PTFN R/L10CA(38)	●	●	CTFP R/L 8CA(30)	●	●	CTFE R/L 8CA(30)	●	●
	BU253 R/L(30)	●								PTFN R/L12CA(50)	●	●	CTFP R/L10CA(38)	●	●	CTFE R/L10CA(38)	●	●
	BU254 R/L(38)	●								PTFN R/L16CA(55)	●	●	CTFP R/L12CA(50)	●	●	CTFE R/L12CA(50)	●	●
	BU255 R/L(48)	●	●							PTFN R/L20CA(70)	●	●	CTFP R/L16CA(55)	●	●	CTFE R/L16CA(55)	●	▲
	BU256 R/L(55)	●											CTFP R/L20CA(70)	●	●	CTFE R/L20CA(70)	●	▲
	BU293 R/L(30)	●		MTUP22 R/L(24)	●	●	MTUN3 R/L(38)	●	●				CTUP R/L10CA(38)	●	●	CTUE R/L10CA(38)	●	
	BU294 R/L(38)	●											CTUP R/L12CA(50)	●		CTUE R/L12CA(50)	▲	
	BU295 R/L(48)	●	●										CTUP R/L16CA(55)	●				
	BU295ER/L(48)	●																
										PTTN R/L10CA(38)	●	▲	CTTP R/L 8CA(30)	●		CTTE R/L 8CA(30)	●	
										PTTN R/L12CA(50)	●	●	CTTP R/L10CA(38)	●	●	CTTE R/L10CA(38)	●	
										PTTN R/L16CA(60)	●	▲	CTTP R/L12CA(50)	●	●	CTTE R/L12CA(50)	●	
													CTTP R/L16CA(60)	●	▲	CTTE R/L16CA(60)	▲	
													CTSP R/L10CA(38)	●		CTSE R/L 8CA(30)	●	
													CTSP R/L12CA(50)	●		CTSE R/L10CA(38)	●	
													CTSP R/L16CA(55)	●		CTSE R/L12CA(50)	●	
																CTSE R/L16CA(55)	▲	
				MTWP22 R/L(24)	●	●	MTWN3 R/L(38)	●					CTWP R/L 8CA(30)	●		CTWE R/L 8CA(30)	●	
													CTWP R/L10CA(38)	●	●	CTWE R/L10CA(38)	●	
													CTWP R/L12CA(50)	●	●	CTWE R/L12CA(50)	●	
													CTWP R/L16CA(55)	▲	●	CTWE R/L16CA(55)		

SEC- Cartridges Series

Typical Toolings

Configuration	BU Type	stock		MINIT P24 Type	stock		MINIT N38 Type	stock		PN Type	stock		CP Type	stock		CE Type	stock	
		R	L		R	L		R	L		R	L		R	L		R	L
 15°	BU113 R/L(30)	●					MSTRN4 R/L(38)	●	●				CSR P R/L10CA(38)	●		CSRE R/L10CA(38)	●	
	BU114 R/L(38)	●											CSR P R/L12CA(50)	●		CSRE R/L12CA(50)	●	
	BU115 R/L(48)	●											CSR P R/L16CA(55)	▲				
 30°	BU133 R/L(30)	●		MSTP04 R/L(24)	●	●	MSTN4 R/L(38)	●	●									
	BU134 R/L(38)	●	●															
	BU135 R/L(48)	●	●															
 30°	BU134E R/L(30)	●																
	BU135E R/L(38)	●																
 45°	BU142 R/L(24)	●	●	MSSP04 R/L(24)	●	●	MSSN4 R/L(38)	●	●	PSSN R/L10CA(38)	●	●	CSSP R/L 8CA(30)	●	▲	CSSE R/L 8CA(30)	●	
	BU143 R/L(30)	●								PSSN R/L12CA(50)	●	●	CSSP R/L10CA(38)	●	●	CSSE R/L10CA(38)	●	●
	BU144 R/L(38)	●	●							PSSN R/L16CA(55)	●	●	CSSP R/L12CA(50)	●	●	CSSE R/L12CA(50)	●	
	BU145 R/L(48)	●	●										CSSP R/L16CA(55)	●	▲	CSSE R/L16CA(55)	▲	▲
 15°	BU152 R/L(24)	●	●				MSKN4 R/L(38)	●	●	PSKN R/L10CA(38)	●	▲	CSKP R/L 8CA(30)	●	▲	CSKE R/L 8CA(30)	●	●
	BU153 R/L(30)	●	●							PSKN R/L12CA(50)	●	●	CSKP R/L10CA(38)	●	●	CSKE R/L10CA(38)	●	●
	BU154 R/L(38)	●	●							PSKN R/L16CA(55)	●	▲	CSKP R/L12CA(50)	●	●	CSKE R/L12CA(50)	●	
	BU155 R/L(48)	●	●							PSKN R/L20CA(70)	●	▲	CSKP R/L16CA(55)	●	●	CSKE R/L16CA(55)	▲	
 5°	BU183 R/L(30)	●		MSSY04 R/L(24)	●	●	MSSYN4 R/L(38)	●	●	PSYN R/L10CA(38)	●	▲	CSYP R/L 8CA(30)	●	●	CSYE R/L 8CA(30)	●	
	BU184 R/L(38)	●								PSYN R/L12CA(50)	●	●	CSYP R/L10CA(38)	●	▲	CSYE R/L10CA(38)	●	▲
	BU185 R/L(48)	●								PSYN R/L16CA(55)	●	●	CSYP R/L12CA(50)	●	●	CSYE R/L12CA(50)	●	▲
										PSYN R/L20CA(70)	▲	▲	CSYP R/L16CA(55)	▲	▲	CSYE R/L16CA(55)		
 0°	BU194 R/L(30)	●																
	BU195 R/L(38)	●																
 5° 5°							MCLN4 R/L(38)	●	●	PCLN R/L12CA(50)	●	●						
										PCLN R/L16CA(55)	●	●						
										PCLN R/L20CA(70)	●	●						
 0° 10°							MCFN4 R/L(38)	●	●									
 10° 0°							MCGN4 R/L(38)	●	●									
 3°							MDJN4 R/L(38)	●	●									