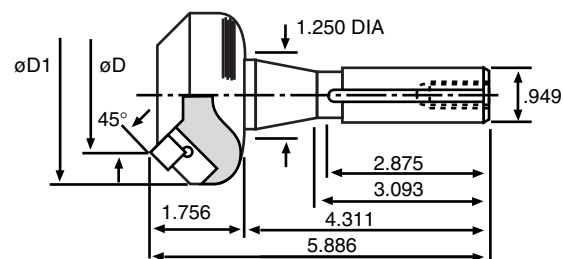


UFO Series Indexable End Mills

UFO "400" End Mills

Ultra High Positive End Mill

BODY - BRIDGEPORT SHANK



UFO End Mill Series

Catalog Number	Dimensions		No. of Teeth	Max. D.O.C.	Axial Rake	Radial Rake	Lead Angle	Insert I.C.	Insert Type
	øD	øD ₁							
UFO 420EX-R8	2.000	3.000	4	.197	+27°	-7°	45°	.500	SFKN
UFO 425EX-R8	2.500	3.406	5						
UFO 430EX-R8	3.000	3.953	6						
UFO 403R/L	3.000	3.945	6						

Inserts

Sumitomo Cat. No.	Coated								Cermet			Uncoated			Dimensions (Inches)			
	ACZ310	ACZ330	ACZ350	ACZ30	AC325	AC211	EH20Z	T250A	T110A	A30N	G10E	H10E	EH20	H1	I.C.	T	Facet Width	Figure
SFEN12T3AZFN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	0.500	0.156	0.088	1
SFKN12T3AZTN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	0.625	0.1875	0.088	1
SFKN1504AZTN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	0.625	0.1875	0.088	1
SFKN1504AZFN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	0.625	0.1875	0.088	1
UW12500R/L	•	•	•	•	•	•	•	•	•	•	•	•	•	0.500	0.156	0.218	2	
UW15500R/L	•	•	•	•	•	•	•	•	•	•	•	•	•	0.625	0.1875	0.250	2	

TN = "T" land FN = honed

Hardware

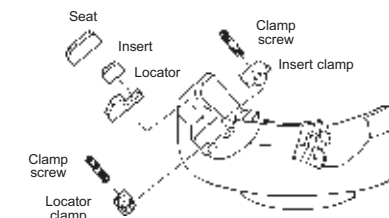
Catalog Number	Locator	Seat	*Insert Clamp	**Locator Clamp	Clamp Screw	Wrench
UFO4 □ □ XR8	UF4KR	UF4SR	UFTWR	UFKWR	WB715T	TT25

* Torque specifications for insert clamp screw=49-53 in/lbs.
** Torque specifications for locator clamp screws=62-66 in/lbs.

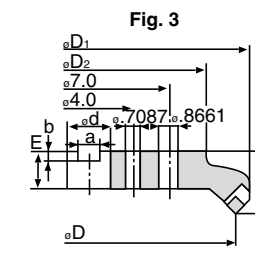
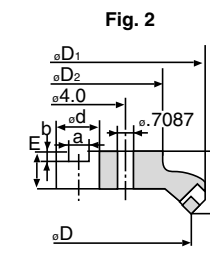
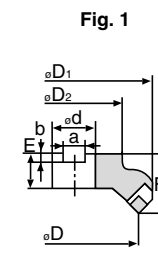
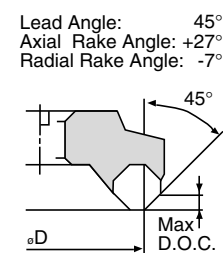
UFO Series Indexable Shell Mills

UFOF "400" Face Mills

Ultra High Positive Face Mill



UFO Fine Pitch Face Mill Series



Catalog Number	Dimensions									No. of Teeth	Max. D.O.C.	Fig.	I.C.
	D	D ₁	D ₂	F	d	a	b	E					
UFOF 403R/L	3.000	3.945	2.362	1.969	1.000	.375	.250	1.000	6	.197	1	1/2	
UFOF 404R/L*	4.000	4.898	2.953	2.362	1.500	.625	.405	1.496	8				
UFOF 405R/L*	5.000	5.843	2.953	2.362	1.500	.625	.405	1.496	10				
UFOF 406R/L**	6.000	6.834	3.937	2.362	2.000	.750	.437	1.496	12				
UFOF 408R/L	8.000	8.819	5.118	2.362	2.500	1.000	.531	1.496	16	.197	2	1/2	
UFOF 410R/L	10.000	10.803	7.087	2.756	2.500	1.000	.531	1.575	20				
UFOF 412R/L	12.000	12.756	9.449	2.756	2.500	1.000	.531	1.575	24	3			

*Requires BFX3/4x16 arbor screw

**Requires BFX1x14 arbor screw

Inserts

Sumitomo Cat. No.	Coated								Cermet			Uncoated			Dimensions (Inches)			
	ACZ310	ACZ330	ACZ350	ACZ30	AC325	AC211	EH20Z	T250A	T110A	A30N	G10E	H10E	EH20	H1	I.C.	T	Facet Width	Figure
SFEN12T3AZFN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	0.500	0.156	0.088	1
SFKN12T3AZTN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	0.500	0.156	0.088	1
SFKN12T3AZFN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	0.500	0.156	0.088	1
SFKN12T3AZEN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	0.500	0.156	0.088	1
UW12500R/L	•	•	•	•	•	•	•	•	•	•	•	•	•	0.500	0.156	0.218	2	

TN = "T" land FN = honed

Hardware

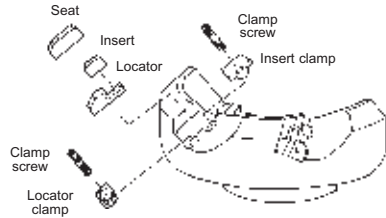
Catalog Number	Locator	Seat	*Insert Clamp	**Locator Clamp	Clamp Screw	Wrench
UFOF4 □ □ R	UF4KR	UF4SR	UFTWR	UFKWR	WB715T*	TT25
UFOF402L	UF4KL	UF4SLS	UFTWL	UFKWL	WB715T*	TT25
UFOF4 □ □ L	UF4KL	UF4SL	UFTWL	UFKWL	WB715T*	TT25

* Torque specifications for insert clamp screw=49-53 in/lbs.
** Torque specifications for locator clamp screws=62-66 in/lbs.

UFO Series Indexable Shell Mills

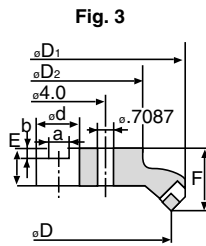
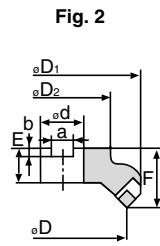
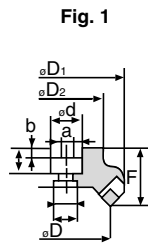
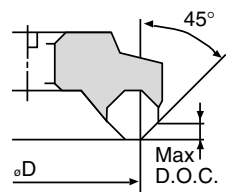
UFO "400 & 500" Face Mills

**Ultra High Positive
Face Mill**



UFO Coarse Pitch Face Mill Series

*Approach Angle: 45°
*Axial Rake Angle: +27°
*Radial Rake Angle: -7°



Catalog Number	Dimensions								No. of Teeth	Max. D.O.C.	Fig.	I.C.	
	D	D ₁	D ₂	F	d	a	b	E					
UFO 402R/L	2.000	2.992	1.772	1.969	.750	.321	.200	.787	4	.197	1	1/2	
UFO 403R/L	3.000	3.945	2.362	1.969	1.000	.375	.250	1.000					
UFO 404R/L*	4.000	4.898	2.953	2.362	1.500	.625	.405	1.496					
UFO 405R/L*	5.000	5.843	2.953	2.362	1.500	.625	.405	1.496					
UFO 406R/L**	6.000	6.834	3.937	2.362	2.000	.750	.437	1.496					
UFO 408R/L	8.000	8.819	5.118	2.362	2.500	1.000	.531	1.496					
UFO 410R/L	10.000	10.803	7.087	2.756	2.500	1.000	.531	1.575					
UFO 412R/L	12.000	12.756	9.449	2.756	2.500	1.000	.531	1.575					
UFO 503R/L	3.000	3.945	2.362	1.969	1.000	.375	.250	1.000		.276	1		5/8
UFO 504R/L*	4.000	4.898	2.953	2.362	1.500	.625	.405	1.496					
UFO 505R/L*	5.000	5.843	2.953	2.362	1.500	.625	.405	1.496					
UFO 506R/L**	6.000	6.834	3.937	2.362	2.000	.750	.437	1.496					
UFO 508R/L	8.000	8.819	5.118	2.362	2.500	1.000	.531	1.496					
UFO 510R/L	10.000	10.803	7.087	2.756	2.500	1.000	.531	1.575					
UFO 512R/L	12.000	12.756	9.449	2.756	2.500	1.000	.531	1.575					

*Requires BFX3/4x16 arbor screw

**Requires BFX1x14 arbor screw

Inserts

Sumitomo Cat. No.	Figure 1		Figure 2		Dimensions (Inches)				Figure	
	Coated		Cermet		Uncoated		I.C.	T		Facet Width
	ACZ310	ACZ330	ACZ350	ACZ30	AC325	AC211				
SFEN12T3AZFN										1
SFKN12T3AZTN										
SFKN12T3AZFN										
SFKR12T3AZEN										
SFKN1504AZTN										
SFKN1504AZFN										
UW12500R/L										2
UW15500R/L										

TN = "T" land FN = honed

Hardware

Catalog Number	Locator	Seat	*Insert Clamp	**Locator Clamp	Clamp Screw	Wrench
UFO402R	UF4KR	UF4SRS	UFTWR	UFKWR	WB715T	TT25
UFO4□□R	UF4KR	UF4SR	UFTWR	UFKWR	WB715T	TT25
UFO402L	UF4KL	UF4SLS	UFTWL	UFKWL	WB715T	TT25
UFO4□□L	UF4KL	UF4SL	UFTWL	UFKWL	WB715T	TT25
UFO5□□R	UF5KR	UF5SR	UFTWR	UFKWR	WB715T	TT25
UFO5□□L	UF5KL	UF5SL	UFTWL	UFKWL	WB715T	TT25

*Torque specifications for insert clamp screw=49-53 in/lbs.
**Torque specifications for locator clamp screws=62-66 in/lbs.

**See pages 92-93
For recommended
running parameters**