



# LIFTERS

## UNDERCUT RELEASE

### SECTION H



UniLifter Undercut Release (UL-Series)	UniLifter Undercut Release (C-Series)	FlexiCore System
Prefix: CB, UC, TG	Prefix: CB, CC, CG	Prefix: FCA, FCR, FCDA v
Page: H-1	Page: H-1	Page: H-18

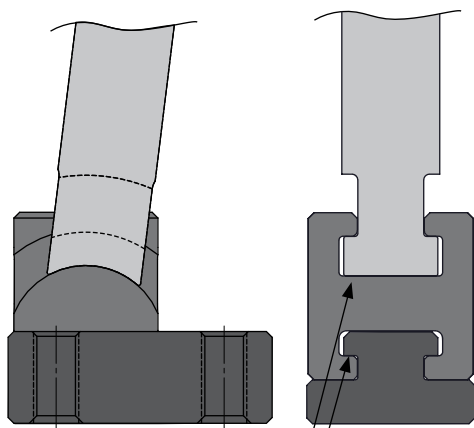
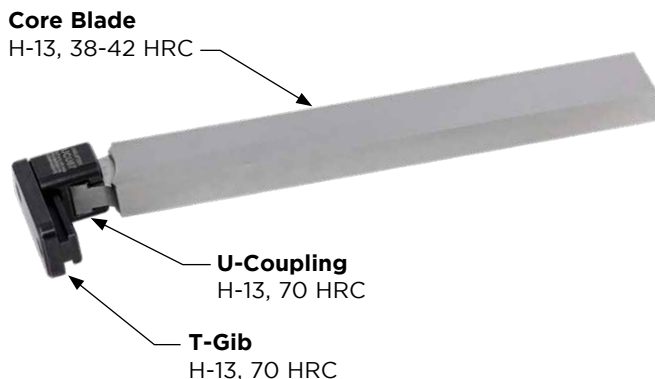


Spherical Bushings	Lifter Guides	Lifter Head Key
Prefix: LSB	Prefix: LG, SGV	Prefix: LHK
Page: H-9	Page: H-10	Page: H-11

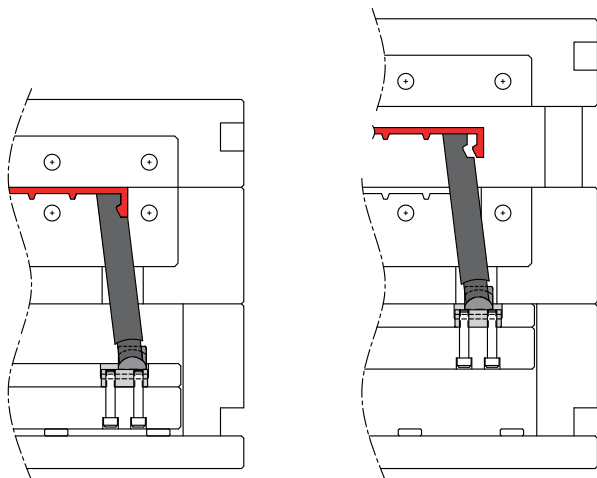



**UNILIFTER<sup>®</sup>**  
**UNDERCUT RELEASE LIFTER**

**UNILIFTER: UL-SERIES**



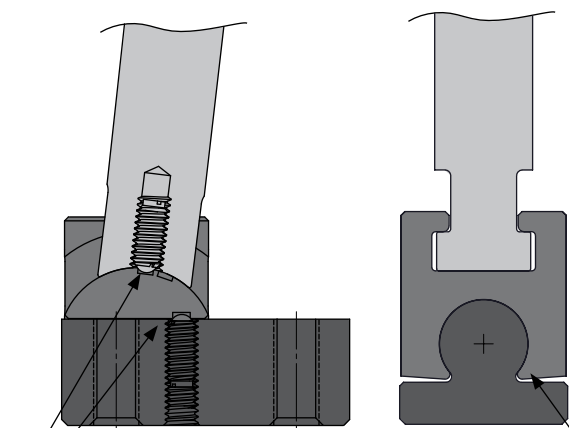
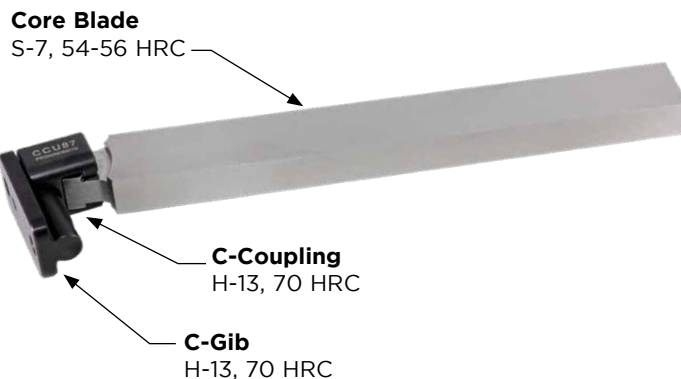
The T-slot's large surface contact is designed to withstand extreme force and run smoothly without binding.



**Mold Closed**

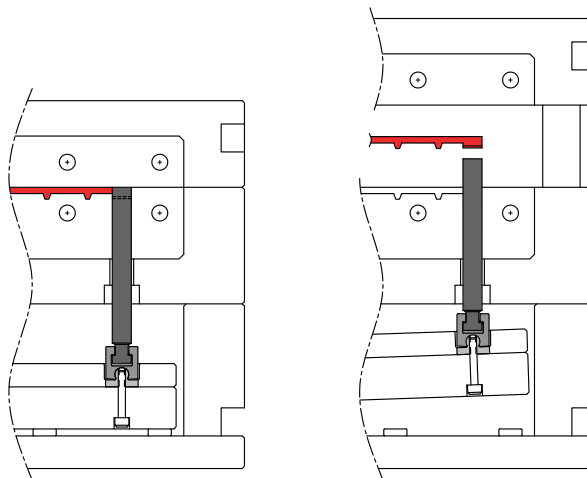
**Mold Open**

**UNILIFTER: C-SERIES**



Click-in-place assembly feature sets the components to the required operating position, allowing for simplified insertion into the mold plate pockets.

Self-adjusting cylindrical design to compensate for severe ejector plate misalignment or warpage.



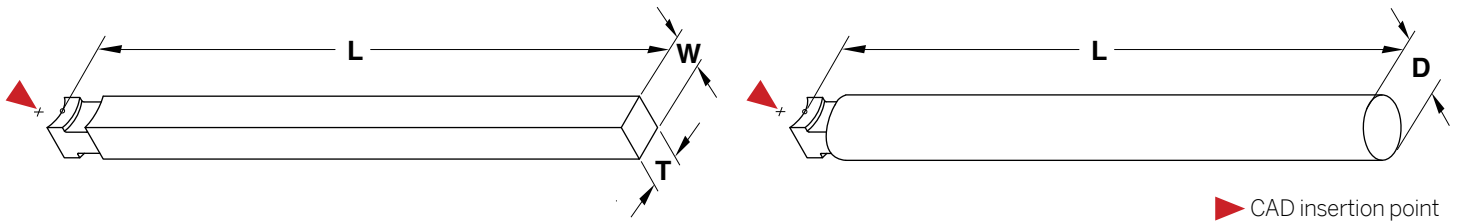
**Mold Closed**

**Mold Open**



# CORE BLADES

## METRIC STANDARD



▶ CAD insertion point

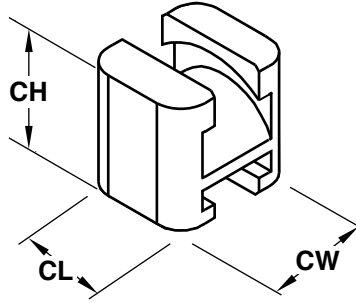
Flat Core Blades			H-13 48-50 HRC	DC53 58-60 HRC	H-13 38-42 HRC		S-7 54-56 HRC	COUPLINGS
T -0.005 -0.015	W -0.005 -0.015	SIZE	L=200MM +2 +0					
6.00	6.00	Metric Mini	CBMMH6X6L200	CBMMP6X6L200	—	—	—	UL-Series: UCMM16
6.00	10.00		CBMMH6X10L200	CBMMP6X10L200	—	—	—	
8.00	6.00		CBMMH8X6L200	CBMMP8X6L200	—	—	—	
8.00	8.00		CBMMH8X8L200	CBMMP8X8L200	—	—	—	
10.00	8.00		CBMMH10X8L200	CBMMP10X8L200	—	—	—	
T +0.000 -0.025	W +0.000 -0.025	SIZE			L=250MM +2 +0	L=400MM +2 +0	L=250MM +2 +0	COUPLINGS
10.25	10.25	Metric	—	—	CBMM10X10L250	—	CBMMS7X10X10L250	UL-Series: UCMM22
10.25	20.25		—	—	CBMM10X20L250	—	—	
15.25	15.25		—	—	CBMM15X15L250	—	CBMMS7X15X15L250	
15.25	30.25		—	—	—	CBMM15X30L400	—	C-Series: CCMM22
20.25	10.25		—	—	CBMM20X10L250	—	—	
20.25	20.25		—	—	—	CBMM20X20L400	—	
30.25	15.25		—	—	—	CBMM30X15L400	—	

Note: S-7 Core Blades come with the assembly detent installed.

Round Core Blades		H-13 48-50 HRC	DC53 58-60 HRC	H-13 38-42 HRC	COUPLINGS
D -0.005 -0.014	SIZE	L=200MM +2 +0			
8.00	Metric Mini	CBMMH8DL200	CBMMP8DL200	—	UL-Series: UCMM16
D +0.000 -0.025	SIZE			L=250MM +2 +0	COUPLINGS
10.00	Metric	—	—	CBMM10DL250	UL-Series: UCMM22 C-Series: CCMM22
15.00		—	—	CBMM15DL250	

# UNILIFTER: UL-SERIES COMPONENTS

## U-COUPPLINGS



### Inch Standard

**M** H-13 **H** Core: 40-44 HRC Surface: 70 HRC  
**S** Black Nitride

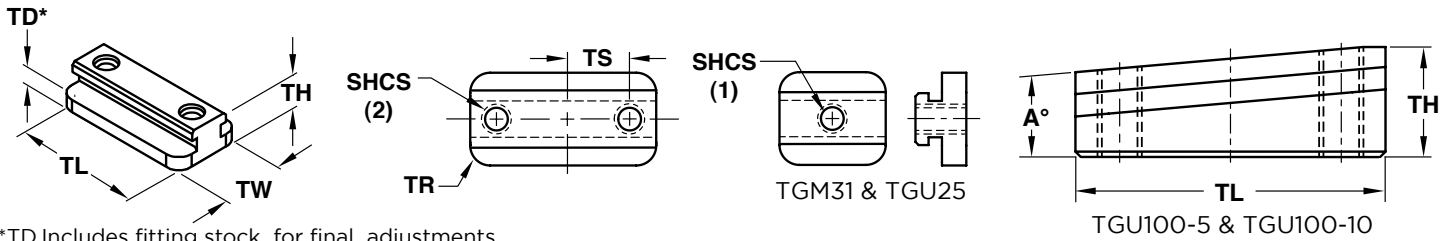
SIZE	CATALOG NUMBER	CW	CL	CH
Mini	UCM50	.50	.44	.62
UL	UCU87	.87	.75	.87
XL	UCX175	1.75	1.50	1.65

### Metric Standard

**M** H-13 **H** Core: 40-44 HRC Surface: 70 HRC  
**S** Black Nitride

SIZE	CATALOG NUMBER	CW	CL	CH
Metric Mini	UCMM16	16	14	21
Metric	UCMM22	22	18	25

### T-GIBS



\*TD Includes fitting stock for final adjustments.

### Inch Standard

**M** H-13 **H** Core: 40-44 HRC Surface: 70 HRC **S** Black Nitride

SIZE	CATALOG NUMBER	TRAVEL ALLOWED	TW +.000 -.001	TH +.010 -.000	TD* +.010 -.000	TR	TS ±.01	TL +.000 -.010	A ANGLE	SHCS (INCLUDED)
Mini	TGM31	.312	.500	.500	.344	.093	—	.750	—	#10-32 x 1
	TGM100	1.000					.50	1.50	—	
UL	TGU25	.250	.875	.468	.219	.187	—	1.00	—	1/4-20 x 3/4
	TGU50	.500					.37	1.25	—	
	TGU100	1.000		—			—	—		
	TGU100-5	1.000		.62			1.75	5°		
	TGU100-10	1.000		.75			1.75	10°		
XL	TGU150	1.500	1.750	.468	.250	.312	.75	2.25	—	3/8-16 x 1-1/4
	TGX50	.500					.62	2.00	—	
	TGX100	1.000					.87	2.50	—	
	TGX250	2.500					1.37	4.00	—	

### Metric Standard

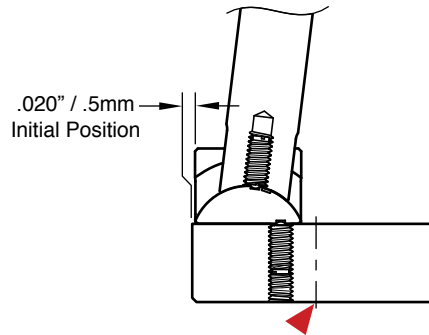
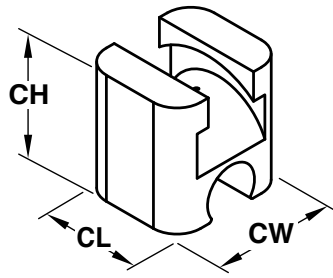
**M** H-13 **H** Core: 40-44 HRC Surface: 70 HRC **S** Black Nitride

SIZE	CATALOG NUMBER	TRAVEL ALLOWED	TW +.000 -.025	TH +.25 -.00	TD* +.25 -.00	TR	TS ±.25	TL +.00 -.25	SHCS (INCLUDED)
Mini	TGMM16	18	16	13	6	2.5	10	33	M4-.7x20
UL	TGMM10	15	22	13	6	5	10	33	M5-0.8 x 20
	TGMM30	34					15	52	



# UNILIFTER: C-SERIES COMPONENTS

## C-COUPPLINGS



### Inch Standard

**M** H-13 **H** Core: 40-44 HRC Surface: 70 HRC

**S** Black Nitride

SIZE	CATALOG NUMBER	CW	CL	CH
Mini	CCM50	.50	.44	.70
UL	CCU87	.87	.75	.87

### Metric Standard

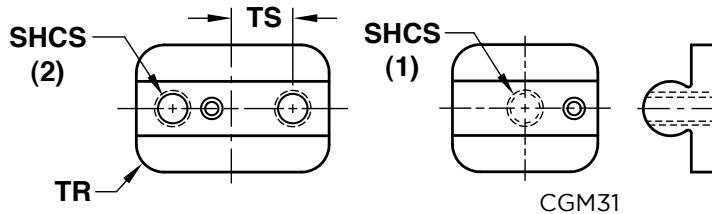
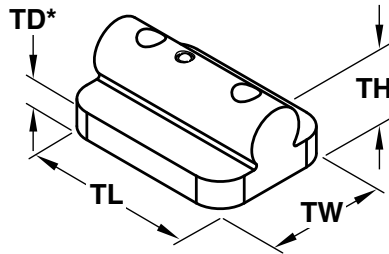
**M** H-13 **H** Core: 40-44 HRC Surface: 70 HRC

**S** Black Nitride

SIZE	CATALOG NUMBER	CW	CL	CH
Metric	CCMM22	22	18	24

▶ CAD insertion point

## C-GIBS



\*TD Includes fitting stock for final adjustments.

### Inch Standard

**M** H-13 **H** Core: 40-44 HRC Surface: 70 HRC **S** Black Nitride

SIZE	CATALOG NUMBER	TRAVEL ALLOWED	TW +.000 -.001	TH +.010 -.000	TD* +.010 -.000	TR	TS ±.01	TL +.000 -.010	SHCS (INCLUDED)
Mini	CGM31	.312	.500	.550	.250	.093	-	.750	#10-32 x 1
	CGM100	1.000					.50	1.50	
UL	CGU50	.500	.875	.540	.187	.187	.37	1.25	1/4-20 x 3/4
	CGU100	1.000					.62	1.75	

### Metric Standard

**M** H-13 **H** Core: 40-44 HRC Surface: 70 HRC **S** Black Nitride

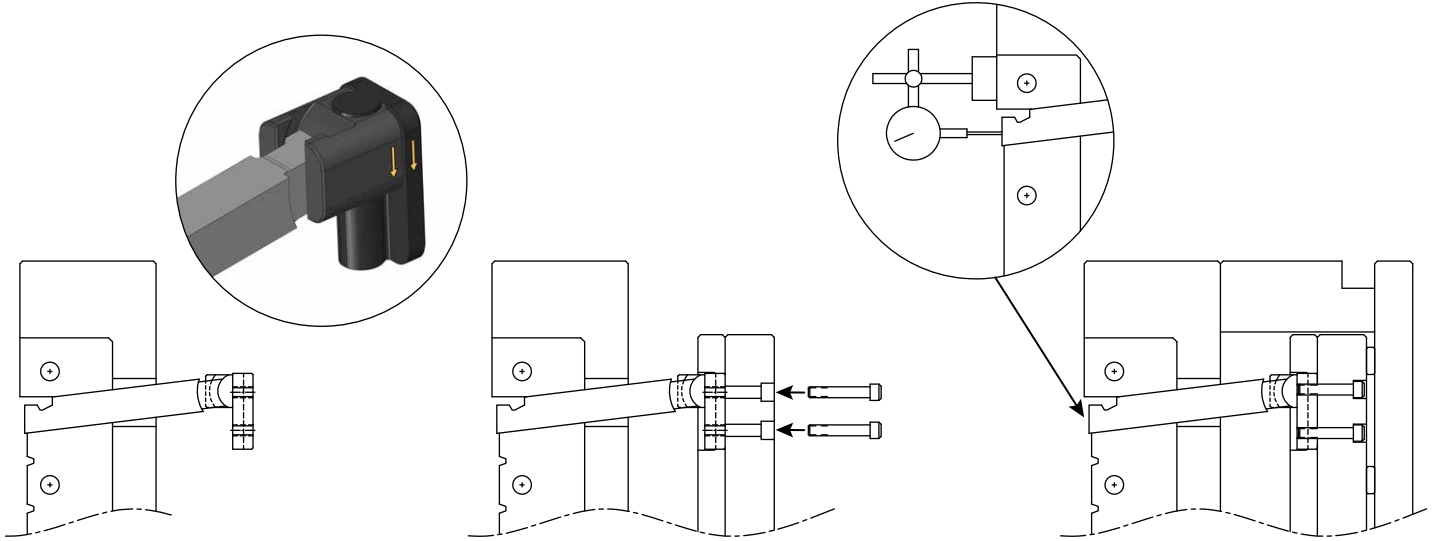
SIZE	CATALOG NUMBER	TRAVEL ALLOWED	TW +.000 -.025	TH +.25 -.00	TD* +.25 -.00	TR	TS ±.25	TL +.00 -.25	SHCS (INCLUDED)
UL	CGMM10	15	22	15	6	5	10	33	M5-0.8 x 20

### APPLICATION GUIDELINES

- C-Series Gibs come with the assembly detent installed.
- Screw thread is not through top of the C-Gib on the Mini sizes.

# C-SERIES LIFTER SYSTEMS

## INSTALLATION INSTRUCTIONS / APPLICATION GUIDELINES



**1** Install Core Blade, C-Gib and C-Coupling into the mold base. Align arrows to orient with ejection travel.

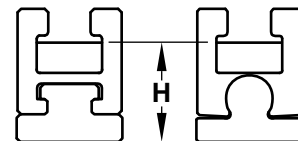
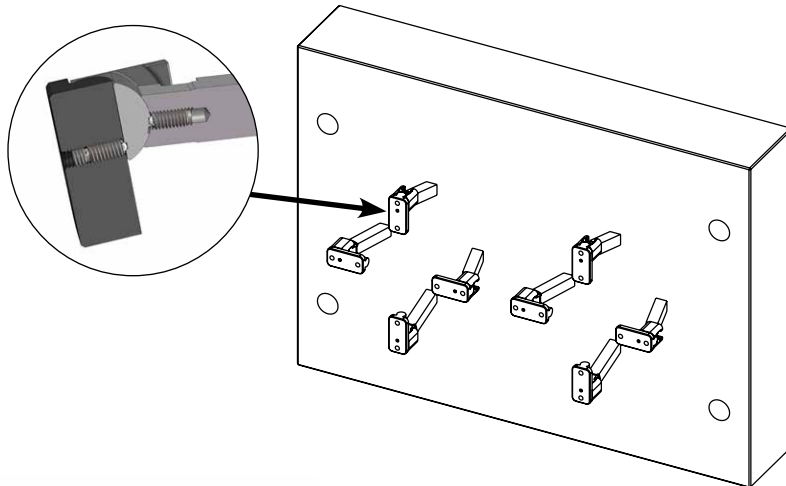
**2** Assemble the ejector plates and fasten the C-Gib into the pocket.

**3** With the mold assembled, check to verify final position of the lifter. Adjust by grinding the back of the C-Gib as required.

### C-Series Lifter Features

Assembly detents allow the toolmaker to set the Core Blade, C-Coupling and C-Gib to the correct angle and position, allowing easy assembly into the mold pocket without parts sliding out of position.

Maintenance Option: Should ejector plates warp over time, the C-Series Gib and Coupling can directly replace the UniLifter Series without altering the Core Blades.



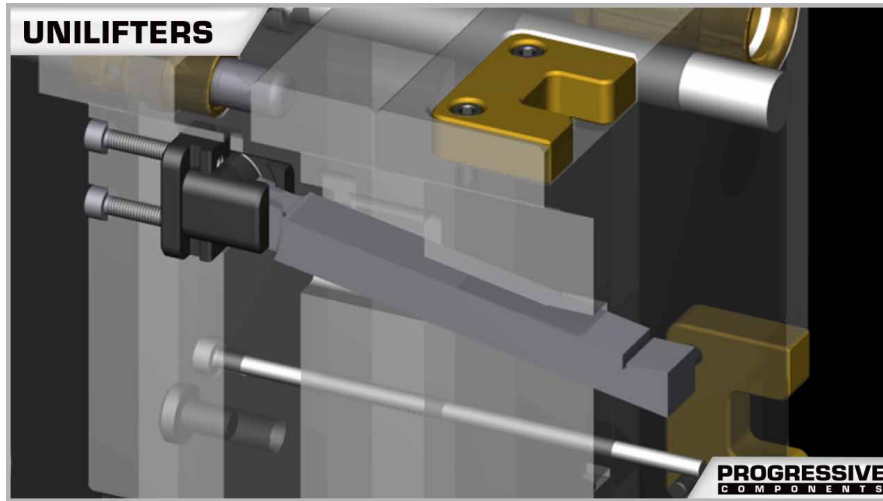
SIZE	H
Mini	.719"
UL	.812"
Metric	22mm



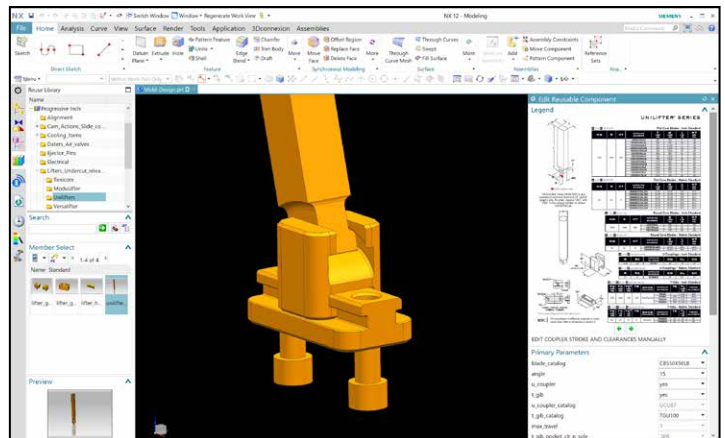
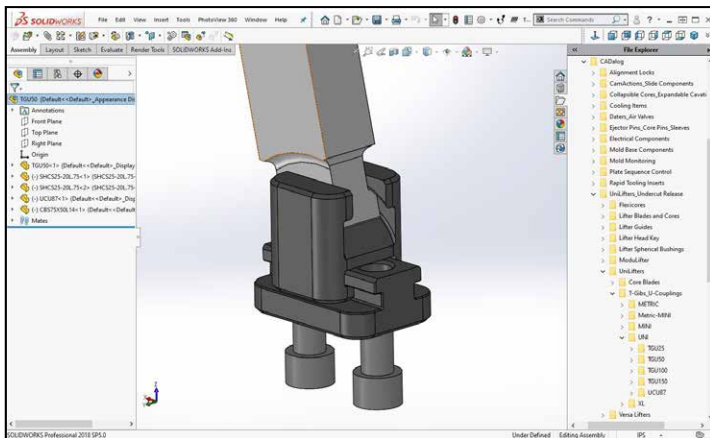
### UL-SERIES & C-SERIES APPLICATION GUIDELINES

- Typical Core Blade angle is 5-10°. For greater angles, Lifter Guides are recommended.
- Lifter Guides are also recommended if less than half of the Core Blade is bearing in the insert. Refer to page H-10 for Guides.
- Typical clearance is .001"-.0015" (.02-.04 mm), or a 3° taper on the Core Blade T & W to eliminate contact and friction.
- Core Blades are interchangeable between the UL-Series and C-Series.
- If treating the S-7 Core Blades, the assembly ball plunger should be removed prior to processing.
- For any questions including the availability of water-cooled Core Blades (as shown at left) or unusual applications, contact Progressive for an application review at [tech@procomps.com](mailto:tech@procomps.com).

# ONLINE RESOURCES



When considering design options, numerous animations can be viewed at [procomps.com/animations](http://procomps.com/animations).










CAD geometry is available online as individual downloads or as part of the CADalog system. The seven formats include: IGES (.igs), ACIS (.sat), STEP (.step), Parasolid (.x\_t), SolidWorks (.sldasm), NX (.prt) (Re-Use and MoldWizard) and Visi (.wfk).

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