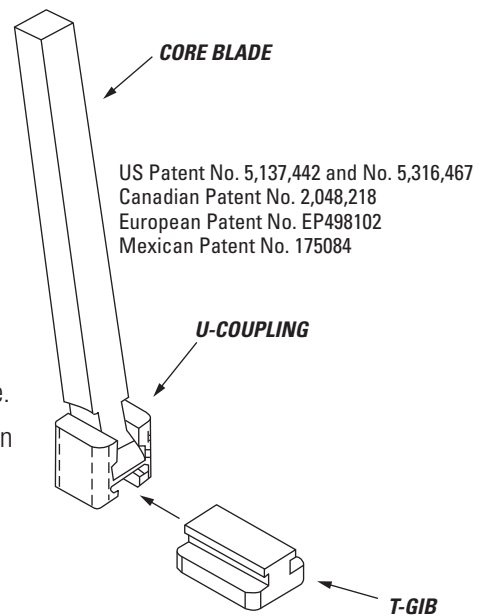


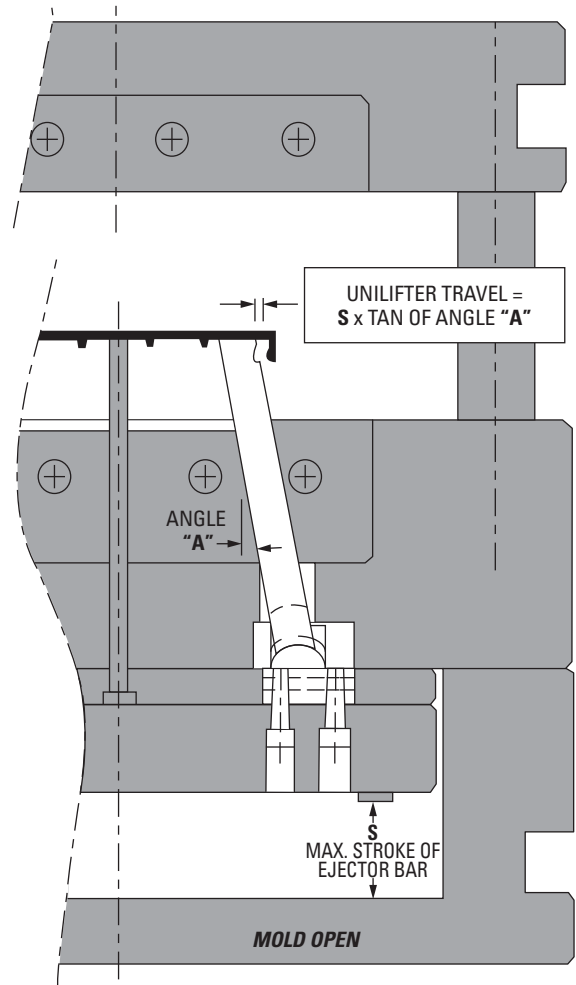
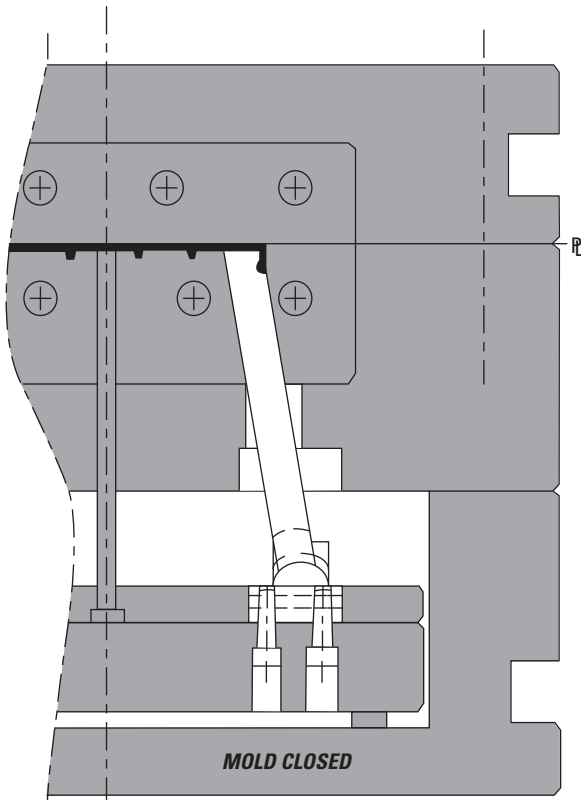
UniLifter™ Typical Application



- Standard components simplify mold design and construction for release of molded undercuts.
- Radiused dovetail design lets core blade seat automatically at the required angle.
- Smooth travel of U-Coupling in T-Gib eliminates heel binding often encountered in other fixed angle designs.
- Wide size selection covers more applications than similar standardized systems.
- H-13 core blades for easy conventional machining.
- Aluminum Bronze blades for high heat transfer application.

TYPICAL APPLICATION:

MOLD AND RELEASE INTERNAL UNDERCUT



UniLifter™ Core Blades

CORE BLADES

H-13 STEEL

(38-42 RC)



FLAT CORE BLADES (INCH)

STYLE	SERIES (MW)	R	HT	MT (MIN. THK.)	ITEM NUMBER	T + .010 - .000	W + .010 - .000	L
MiniLifter	.250	.250	.156	.250	ULBM37X25L8	3/8	1/4	8"
				.312	ULBM50X25L8	1/2	1/4	8"
					ULBM75X37L8	3/4	3/8	8"
UniLifter	.500	.406	.187	.500	ULBU50X50L8	1/2	1/2	8"
					ULBU50X50L14	1/2	1/2	14"
					ULBU50X100L8	1/2	1"	8"
					ULBU50X100L14	1/2	1"	14"
					ULBU100X50L8	1"	1/2	8"
					ULBU100X50L14	1"	1/2	14"
				.625	ULBU150X50L8	1 1/2	1/2	8"
					ULBU150X50L14	1 1/2	1/2	14"
					ULBU75X150L8	3/4	1 1/2	8"
					ULBU75X150L14	3/4	1 1/2	14"
					ULBU150X75L8	1 1/2	3/4	8"
					ULBU150X75L14	1 1/2	3/4	14"
XL-Lifter	1.000	.875	.375	1.000	ULBX100X150L10	1"	1 1/2	10"
					ULBX100X150L18	1"	1 1/2	18"
					ULBX100X100L10	1"	1"	10"
					ULBX100X100L18	1"	1"	18"
					ULBX150X100L10	1 1/2	1"	10"
					ULBX150X100L18	1 1/2	1"	18"

FLAT CORE BLADES (METRIC) dimension in mm

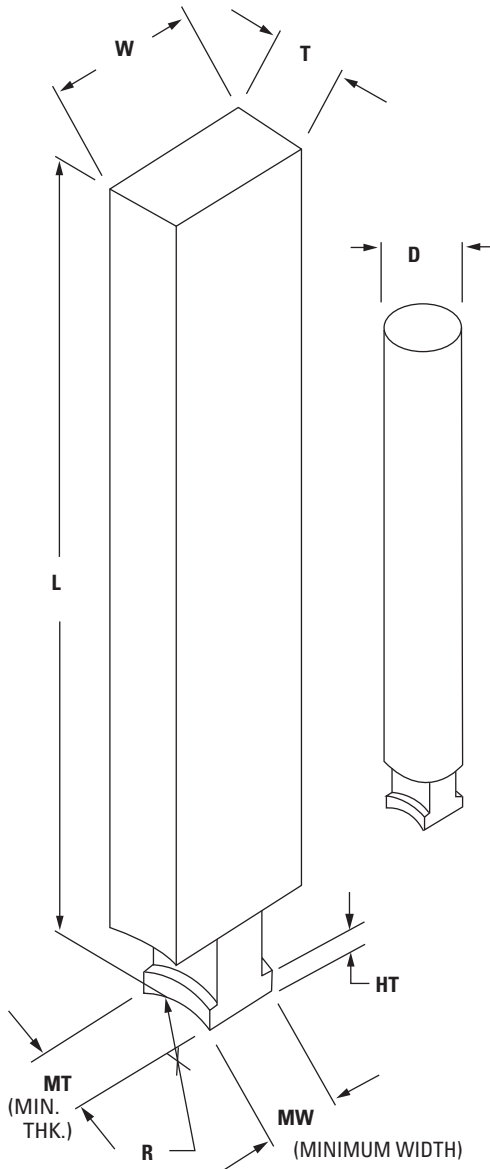
SERIES (MW)	R	HT	MT (MIN. THK.)	ITEM NUMBER	T + .025 - .000	W + .025 - .000	L
10	10	.5	10	ULBMM10X10L250	10	10	250
			15	ULBMM15X15L250	15	15	250
			20	ULBMM20X20X400	20	20	400

ROUND CORE BLADES (INCH)

STYLE	SERIES (MW)	R	HT	MT (MIN. THK.)	ITEM NUMBER	D + .000 - .001	L
MiniLifter	.250	.250	.156	.312	ULBM43DL8	7/16 Dia.	8"
					ULBU75DL8	3/4 Dia.	8"
UniLifter	.500	.406	.187	.500	ULBU75DL14	3/4 Dia.	14"
					ULBU75DL18	3/4 Dia.	18"
					ULBX125DL10	1 1/4 Dia.	10"
XL-Lifter	1.000	.875	.375	1.000	ULBX125DL18	1 1/4 Dia.	18"

ROUND CORE BLADES (METRIC) dimension in mm

SERIES (MW)	R	HT	MT (MIN. THK.)	ITEM NUMBER	D + .000 - .025	L
10	10	5	10	ULBMM15DL250	15 Dia.	250



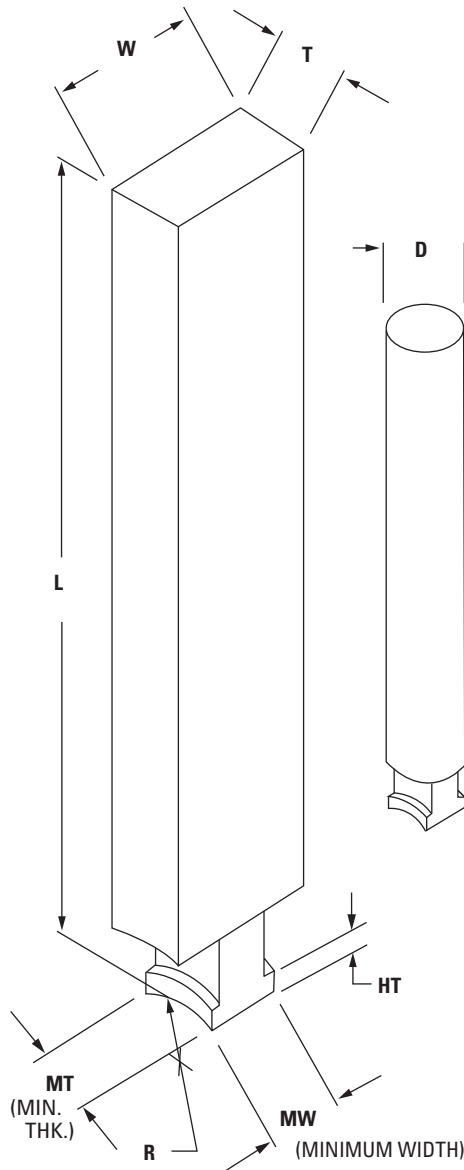
NOTE:

- Thickness (T) and width (W) supplied ground with a maximum of .010" (or .25 mm) additional stock over nominal for fitting to insert pockets and/or to accommodate a nominal size molded detail.
- Diameter (D) of round core blades is supplied +.000/- .001" (or +.000/- .025 mm) for fitting in a bored hole or bushing.

UniLifter™ Core Blades

CORE BLADES

Ampco 21
(29RC)



FLAT CORE BLADES (INCH)

SERIES (MW)	R	HT	MT (MIN. THK.)	ITEM NUMBER	T + .010 - .000	W + .010 - .000	L
.500	.406	.187	.500	ULBUA50X50L8	½	½	8"
				ULBUA50X50L14	½	½	14"
				ULBUA50X100L8	½	1"	8"
				ULBUA50X100L14	½	1"	14"
				ULB UA100X50L8	1"	½	8"
				ULBUA100X50L14	1"	½	14"
			.625	ULB UA150X50L8	1½	½	8"
				ULBUA150X50L14	1½	½	14"
				ULB UA75X150L8	¾	1½	8"
				ULBUA75X150L14	¾	1½	14"
				ULB UA150X75L8	1½	¾	8"
				ULBUA150X75L14	1½	¾	14"
1.000	.875	.375	1.000	ULBX100X100X10	1"	1"	10"
				ULBX100X100X18	1"	1"	18"
				ULBX150X100X10	1½	1"	10"
				ULBX150X100X18	1½	1"	18"

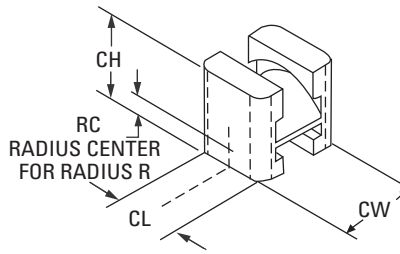
ROUND CORE BLADES (INCH)

SERIES (MW)	R	HT	MT (MIN. THK.)	ITEM NUMBER	D + .000 - .001	L
.500	.406	.187	.500	ULBUA75DL8	¾ Dia.	8"
				ULBUA75DL14	¾ Dia.	14"
				ULBUA75DL18	¾ Dia.	18"

NOTE:

1. Thickness (**T**) and width (**W**) supplied ground with a maximum of .010" (or .25 mm) additional stock over nominal for fitting to insert pockets and/or to accommodate a nominal size molded detail.
2. Diameter (**D**) of round core blades is supplied +.000/-.001" (or +.000/-.025 mm) for fitting in a bored hole or bushing.

UniLifter™ U-Couplings & T-Gibbs



U-COUPPLINGS

(H-13 STEEL, SURFACE 60-70 Rc, CORE 38-42 Rc)

U-COUPPLINGS (INCH)

SERIES	ITEM NUMBER	CW	CL	CH	RC	R
.250	ULCM50	.500	.437	.625	.125	.250
.500	ULCU87	.875	.750	.875	.187	.406
1.000	ULCX175	1.750	1.500	1.656	.125	.875

U-COUPPLINGS (METRIC) dimensions in mm

SERIES	ITEM NUMBER	CW	CL	CH	RC	R
10	ULCMM22	22.00	18.00	25.00	6.00	10

T-GIBS

(4140 PREHARDENED STEEL, SURFACE 60-70 Rc, CORE 38-42 Rc)

T-GIBS (INCH)

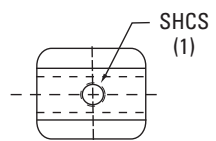
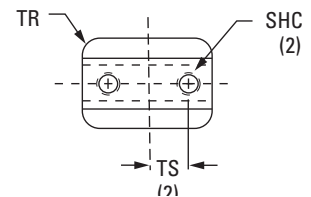
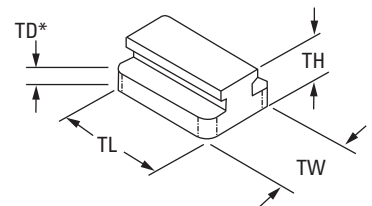
SERIES	TW +.000 -.001	TH +.010 -.000	TD* +.010 -.000	TR	SHCS (INCLUDED)	ITEM NUMBER	TS	TL +.000 -.010	TRAVEL ALLOWED
.250	.500	.500	.344	.094	#10-32x1"	ULGM31	CL	.750	5/16
						ULGM100	.500	1.500	1 1/8
.500	.875	.468	.219	.188	1/4-20x3/4	ULGU25	CL	1.000	1/4
						ULGU50	.375	1.250	1/2
						ULGU100	.625	1.750	1"
						ULGU150	.750	2.250	1 1/2
1.000	1.750	.625	.250	.313	3/8-16x1 1/4	ULGx50	.625	2.000	1/2
						ULGx100	.875	2.500	1"
						ULGx250	1.375	4.000	2 1/2

*NOTE: Thickness TD is provided with an additional .010" (or .25 mm) for final adjustment of entire UniLifter system.

T-GIBS (Metric) dimensions in mm

SERIES	TW +.000 -.025	TH +.25 -.00	TD* +.25 -.00	TR	SHCS	ITEM NUMBER	TS	TL +.00 -.25	TRAVEL ALLOWED
10	22	13	6.00	5	M-5x20	ULGMM10	10	33	10
						ULGMM30	15	52	30

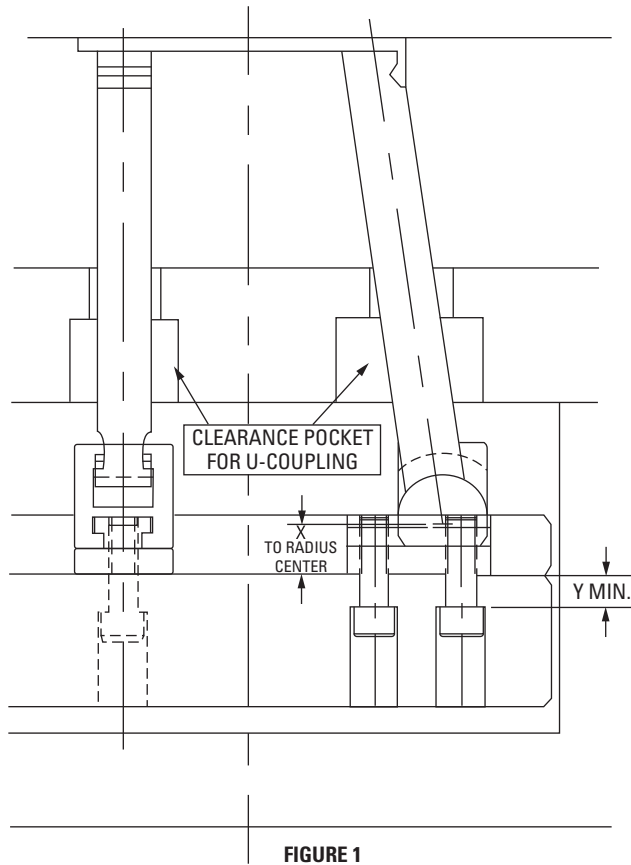
Each UniLifter assembly is comprised of a Core Blade, U-Coupling and T-Gib. Always select components of the same Series (.250, .500, 1.000 or 10) when ordering assemblies.



PLAN VIEW FOR
ULGM31 & ULGU25

UniLifter™ Design Guidelines

DESIGN GUIDELINES



1) GENERAL INSTALLATION

It is recommended that lifters be installed as shown in **FIGURE 1**, with T-Gib mounted to top of ejector plate. The appropriate **X** and **Y** dimensions are as follows (min. Y dimension prevents mounting screws from interfering with U-Coupling travel):

SERIES	X	Y MIN.
.250	.469	.78
.500	.406	.37

SERIES	X	Y MIN.
1.000	.375	71
10	12 mm	11 mm

2) ANGLES

Designs using angles from 5 to 10 degrees will typically yield the best results. Angles up to 15 degrees are permissible by using lifter guides in the bottom of the support plate. (Lifter guides to be made by moldmaker).

3) LIFTER GUIDES

Lifter guides are recommended for designs with angles of 15 degrees (see 2 above) or whenever less than half of the core blade is bearing in the core insert.

4) GUIDED EJECTION

It is recommended that guided ejection be used in all designs.

5) FIT AND FINISH

Recommended clearance for core blade is .001-.0015" (.025-.038 mm) where permissible. Although standard core blades are approximately 10 Rc above P-20 and 10 Rc below hardened tool steel, additional performance can be obtained by treating after finish machining (TiN coating, chrome flash, etc).

6) LOCKING ANGLES

Locking angles (see **FIGURE 2**) may be designed in if required to provide a locking surface to counter against molding pressure.

7) NON-STANDARD SHAPES/MATERIALS

L-shaped core blades as shown in **FIGURE 3** may be machined by removing stock from thicker core blades. Material from the heel area should not be removed. The bearing dimension **T-1** should be on the same center as radius **R**.

L-shaped core blades, or blades made from other materials can also be supplied on special order. Contact D-M-E for details.

