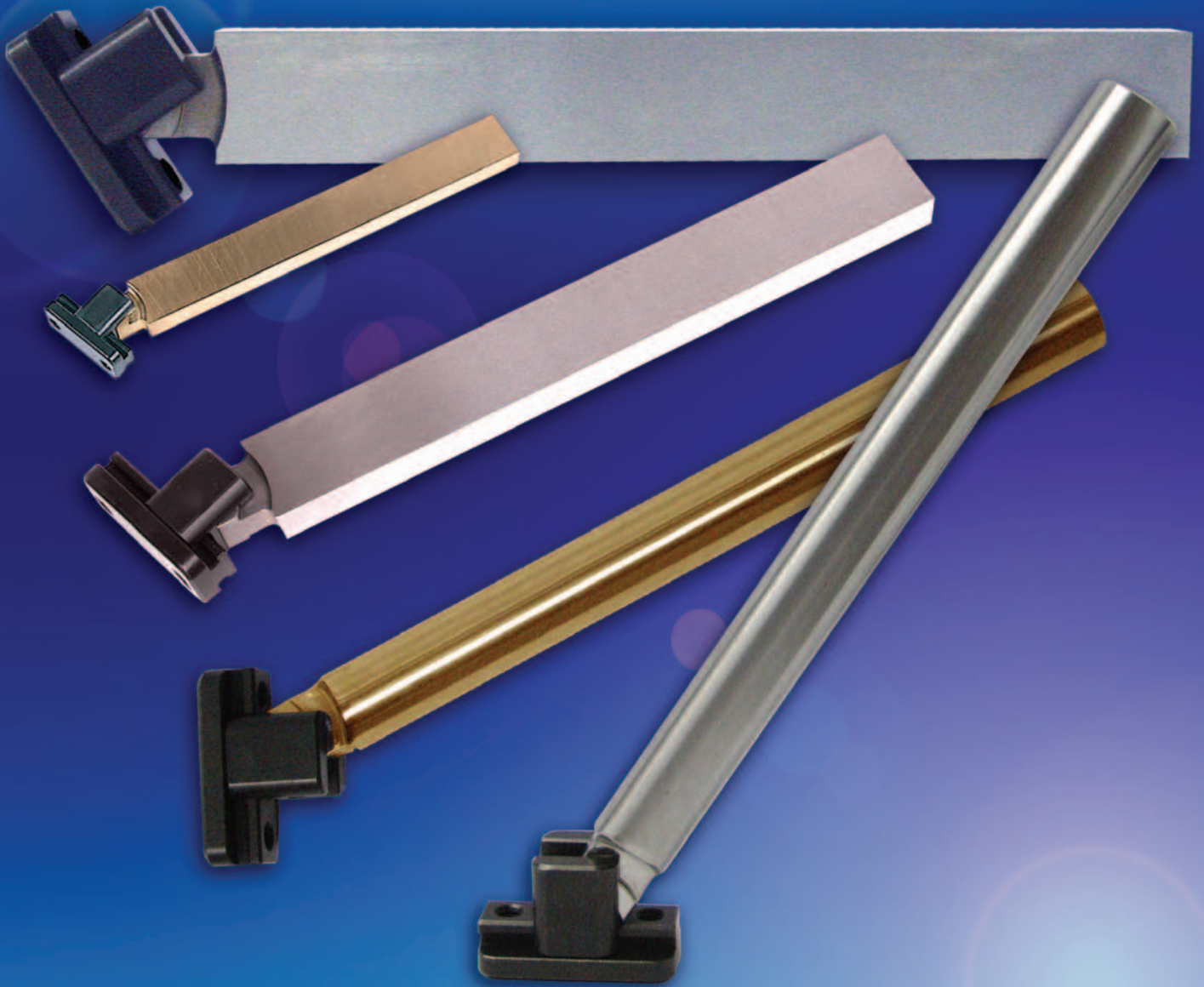


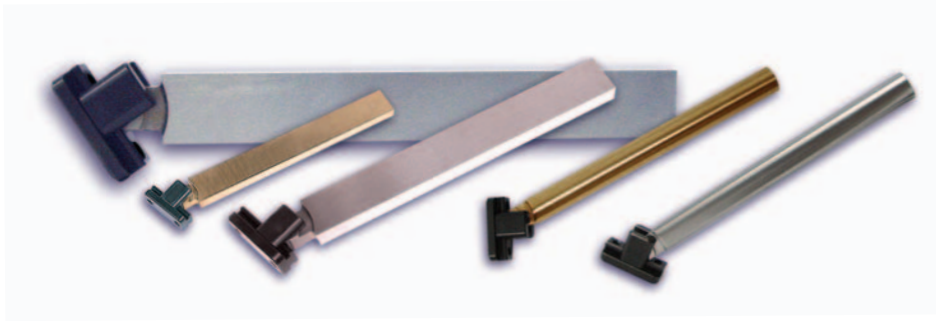
D-M-E UniLifter®

Efficient undercut releasing systems offering simplified mold design and construction

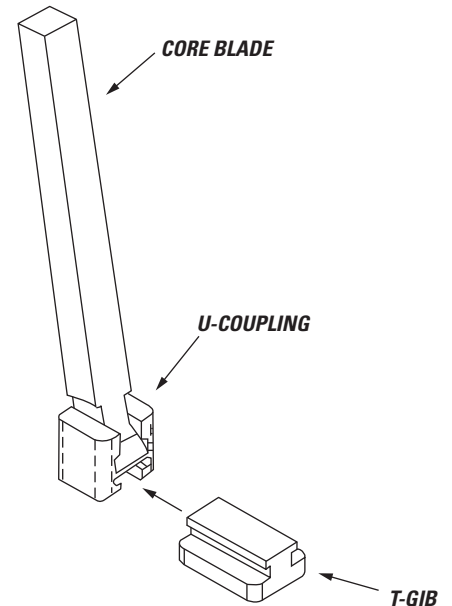


D-M-E
Every step of the way

D-M-E UniLifter[®] UNDERCUT RELEASING SYSTEM

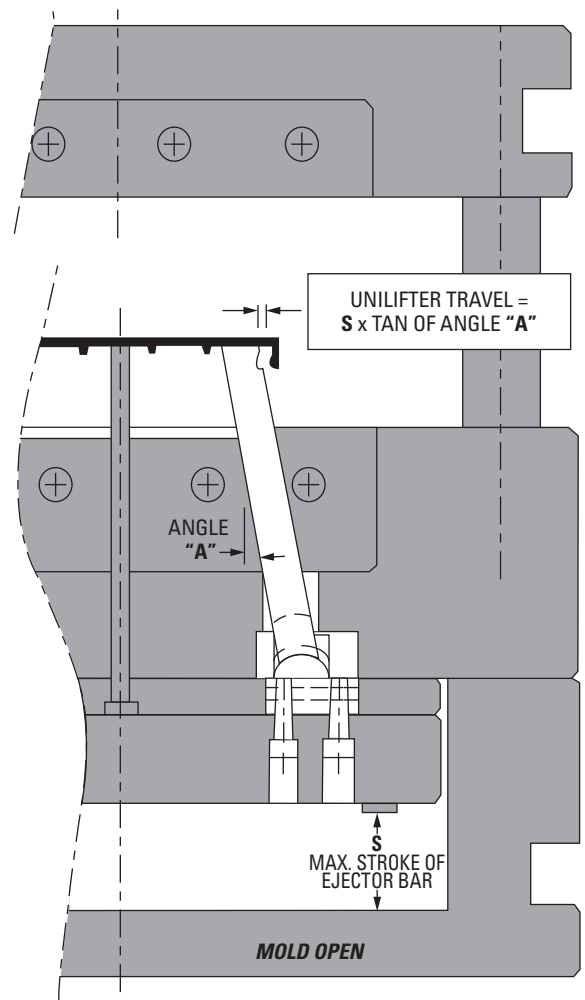
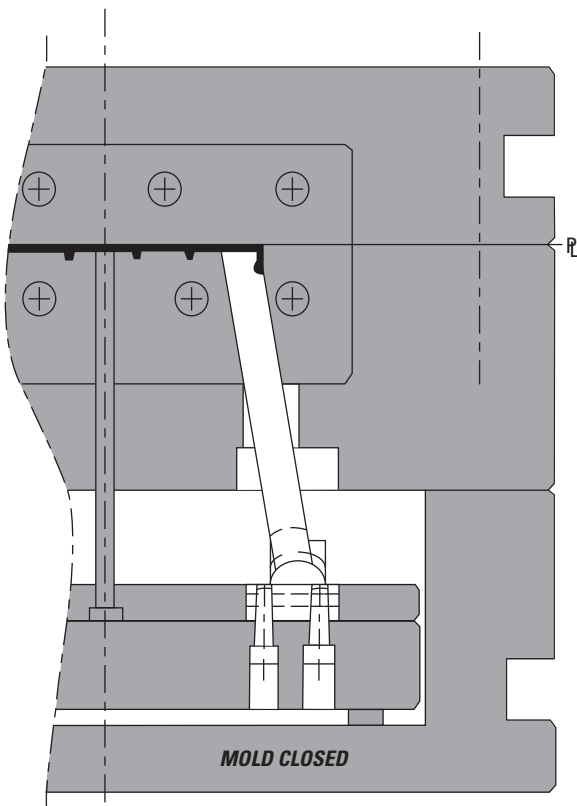


- Standard components simplify mold design and construction for release of molded undercuts
- Radiused dovetail design lets core blade seat automatically at the required angle
- Smooth travel of U-Coupling in T-Gib eliminates heel binding often encountered in other fixed angle designs
- Wide size selection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



TYPICAL APPLICATION:

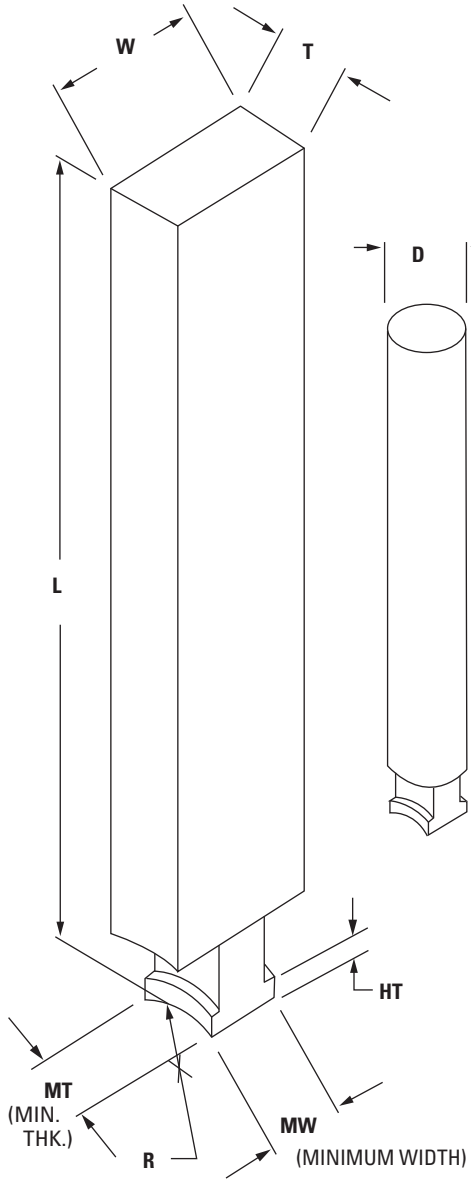
MOLD AND RELEASE INTERNAL UNDERCUT



D-M-E UniLifter® UNDERCUT RELEASING SYSTEM

CORE BLADES

H-13 STEEL
PRE-HARDENED
38-42 RC



FLAT CORE BLADES (INCH)

STYLE	SERIES (MW)	R	HT	MT (MIN. THK.)	ITEM NUMBER	T		L
						+ .010 - .000	+ .010 - .000	
MiniLifter	.250	.250	.156	.25	ULBM37X25L8	.375	.25	8"
					ULBM50X25L8	.50	.25	8"
					ULBM75X37L8	.75	.375	8"
UniLifter	.500	.406	.187	.50	ULBU50X50L8	.50	.50	8"
					ULBU50X50L14	.50	.50	14"
					ULBU50X100L8	.50	1"	8"
					ULBU50X100L14	.50	1"	14"
					ULBU50X150L14	.50	.50	14"
					ULBU75X50L14	.75	.50	14"
				.62	ULBU100X50L8	1"	.50	8"
					ULBU100X50L14	1"	.50	14"
					ULBU150X50L8	1.50	.50	8"
					ULBU150X50L14	1.50	.50	14"
					ULBU75X150L8	.75	1.50	8"
					ULBU75X150L14	.75	1.50	14"
XL-Lifter	1.000	.875	.375	1.0	ULBU150X75L8	1.50	.75	8"
					ULBU150X75L14	1.50	.75	14"
					ULBX100X150L10	1"	1.50	10"
					ULBX100X150L18	1"	1.50	18"
					ULBX100X100L10	1"	1"	10"
					ULBX150X100L10	1.50	1"	10"
ULBX150X100L18	1.50	1"	18"					

FLAT CORE BLADES (METRIC) dimension in mm

SERIES (MW)	R	HT	MT (MIN. THK.)	ITEM NUMBER	T		L
					+ .025 - .000	+ .025 - .000	
10	10	.5	10	ULBMM10X10L250	10	10	250
				ULBMM15X15L250	15	15	250
				ULBMM10X20L250	10	10	250
				ULBMM20X10L250	20	20	250
				ULBMM15X30L400	30	15	400
				ULBMM30X15L400	15	30	400
				ULBMM20X20L400	20	20	400

ROUND CORE BLADES (INCH)

(MW) STYLE	R	HT	MT (MIN. THK.)	ITEM NUMBER	D + .000 - .001	L
MiniLifter	.250	.250	.156	ULBM43DL8	.4375 Dia.	8"
				ULBU75DL8	.75 Dia.	8"
UniLifter	.500	.406	.187	ULBU75DL14	.75 Dia.	14"
				ULBU75DL18	.75 Dia.	18"
XL-Lifter	1.000	.875	.375	ULBX125DL10	1.25 Dia.	10"
				ULBX125DL18	1.25 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
10	10		10	ULBMM10DL250	10 Dia.	250

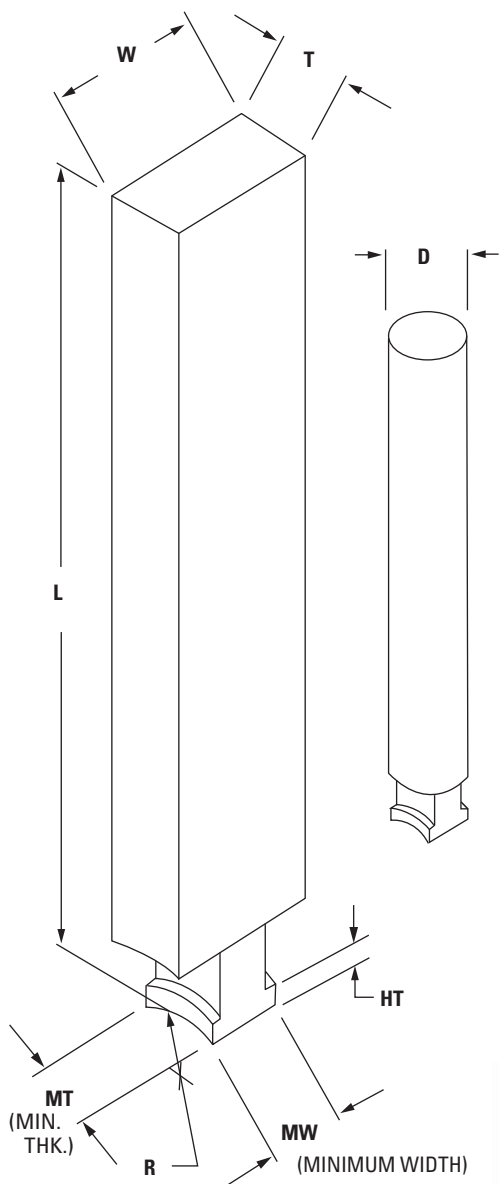
NOTE:

- 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.

D-M-E UniLifter® UNDERCUT RELEASING SYSTEM

CORE BLADES

Aluminum Bronze
(28-30 Rc)



FLAT CORE BLADES (INCH)

SERIES (MW)	R	HT	MT (MIN. THK.)	ITEM NUMBER	T +.010 -.000	W +.010 -.000	L
.500	.406	.187	.50	ULBUA50X50L8	.50	.50	8"
				ULBUA50X50L14	.50	.50	14"
				ULBUA50X100L8	.50	1"	8"
				ULBUA50X100L14	.50	1"	14"
				ULBUA50X150L14	.50	1.5	14"
				ULB UA100X50L8	1"	.50	8"
			ULBUA100X50L14	1"	.50	14"	
			ULB UA150X50L8	1.5	.50	8"	
			ULBUA150X50L14	1.5	.50	14"	
			ULBUA75X50L14	.75	.50	14"	
			ULB UA75X150L8	.75	1.5	8"	
			ULBUA75X150L14	.75	1.5	14"	
			ULB UA150X75L8	1.5	.75	8"	
			ULBUA150X75L14	1.5	.75	14"	
ULBUA50X150L14	.50	1.5	14"				
ULBUA75X50L14	.75	.50	14"				



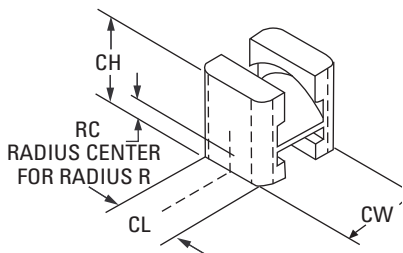
ROUND CORE BLADES (INCH)

SERIES (MW)	R	HT	MT (MIN. THK.)	ITEM NUMBER	D +.000 -.001	L
.500	.406	.187	.62	ULBUA75DL8	.75 Dia.	8"
				ULBUA75DL14	.75 Dia.	14"
				ULBUA75DL18	.75 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.

D-M-E UniLifter® UNDERCUT RELEASING SYSTEM



U-COUPLINGS

(H-13 STEEL, SURFACE 60-70 Rc, CORE 38-42 Rc)
U-COUPLINGS (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-COUPLINGS (METRIC) dimensions in mm

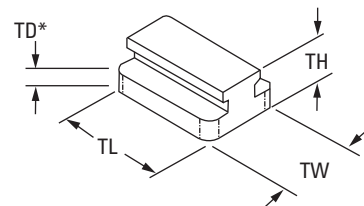
SERIES	ITEM NUMBER	CW	CL	CH	RC	R
10	ULCMM22	22.00	18.00	25.00	6.00	10

T-GIBS

SURFACE H-13, 40-44 Rc, Black Oxide

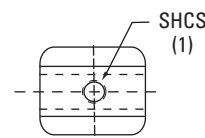
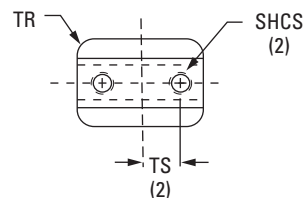
SERIES	TW +.000 -.001	TH +.010 -.000	TD* +.010 -.000	TR	SHCS (INCLUDED)	ITEM NUMBER	TS	TL +.000 -.010	TRAVEL ALLOWED
.250	.500	.500	.344	.094	#10-32x1"	ULGM31	CL	.750	.3125
						ULGM100	.500	1.500	1.0625
						ULGU25	CL	1.000	.25
.500	.875	.468	.219	.188	.25-20x.75	ULGU50	.375	1.250	.50
						ULGU100	.625	1.750	1"
						ULGU150	.750	2.250	1.5
						ULG×50	.625	2.000	.50
1.000	1.750	.625	.250	.313	.375-16x1¼"	ULG×100	.875	2.500	1"
						ULG×250	1.375	4.000	2.5

*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



PLAN VIEW FOR
ULGM31 & ULGU25

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.

UniLifter® and MiniLifter® are registered trademarks of Progressive Components International Corporation. US Patent No. 5,137,442, EPO No. EP498102
Others outside the U.S. granted.

D-M-E UniLifter® UNDERCUT RELEASING SYSTEM

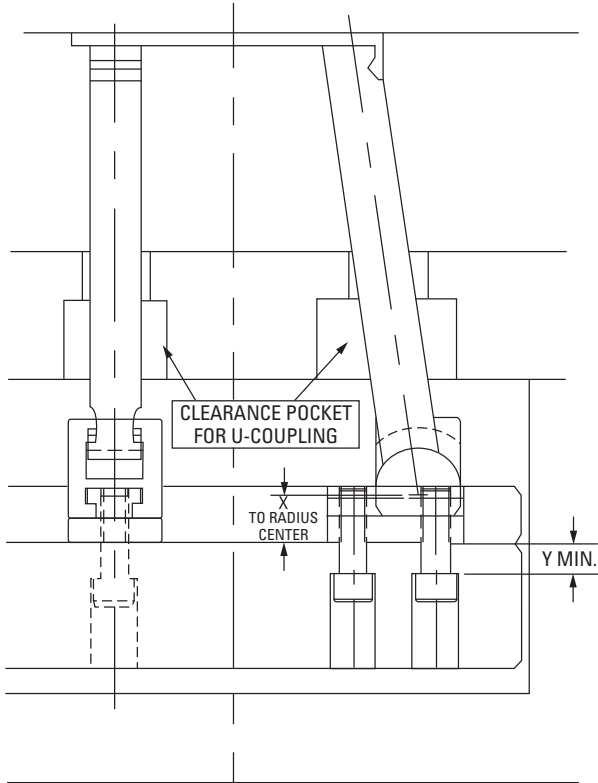


FIGURE 1

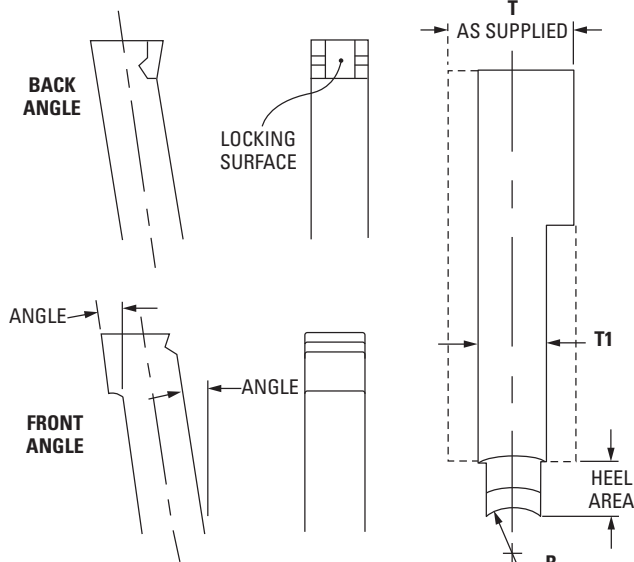


FIGURE 2

FIGURE 3

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):

2) ANGLES

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

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

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.



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