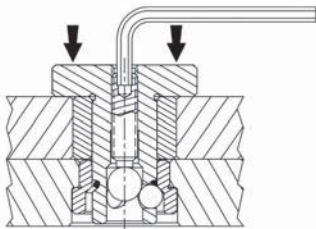


# CARR LOCK® SYSTEM

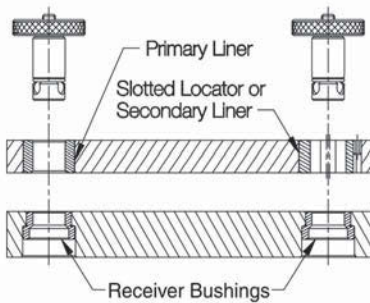
CLAMP BODY: 4340 STEEL, HEAT TREATED RC 40-45, BLACK OXIDE FINISH  
 RECEIVER BUSHINGS: 4340 STEEL, HEAT TREATED RC 50-54, BLACK OXIDE FINISH  
 LINERS: 1144 OR TOOL STEEL, HEAT TREATED RC 58-64, BLACK OXIDE FINISH



Carr Lock® Clamp



Turning the clamping screw with a hex wrench advances the large center ball, pushing the three clamping balls outward. These balls engage the angled ID of the Receiver Bushing, pulling the entire unit firmly downward.

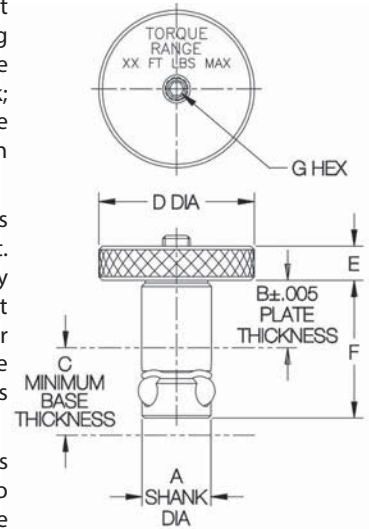


Scan to know more!

The Carr Lock® System allows accurately locating and clamping at the same time, with just the turn of a hex wrench. Ideal for mounting quick-change tooling on a subplate. Each mount consists of three components: (1) a Carr Lock® Clamp with a precisely ground shank; (2) a Liner Bushing in the top plate; (3) a Receiver Bushing in the subplate. This compact assembly provides considerable holddown force, together with an incredible  $\pm .0005$  inches repeatability!

Each top plate should have one Carr Lock® Clamp designated as its primary reference point, and one as its secondary reference point. These two clamps should be as far apart as possible. The secondary reference point should have a relieved liner to avoid redundant location (binding). Additional Carr Lock® Clamps can be used for more clamping force, but these should be installed in clearance holes, not locating liners. Note that the same Carr Lock® Clamp fits any type of liner or a clearance hole.

Carr Lock® Clamps must be used with one of the Receiver Bushings (**INFO+**) on page 339. Plate thickness must be  $\pm .005$  inches to achieve proper clamping force. Special grip lengths for other plate thicknesses are available as specials. Do not exceed maximum screw torque shown. To purchase with a knurled knob, please visit our website [Carrlane.com](http://Carrlane.com)



## CARR LOCK® CLAMPS (INCH)

PART NO.	A SHANK DIA		B		C	D DIA	E	F	G	MAX SCREW TORQUE (FT-LBS)	MAX HOLD DOWN FORCE (LBS)	SPARE PARTS KIT PART NO.*
	NOMINAL	ACTUAL	NOMINAL	ACTUAL								
CL-13-CLC-0.50	13mm	.5116	1/2	.500	.75	7/8	1/4	1.08	3/32	1	750	CL-13-CLPK-0.50
CL-13-CLC-0.75		.5111	3/4	.750				1.33				CL-13-CLPK-0.75
CL-16-CLC-0.50	16mm	.6297	1/2	.500	.75	1-1/2	5/16	1.15	1/8	2	1200	CL-16-CLPK-0.50
CL-16-CLC-0.75		.6292	3/4	.750				1.40				CL-16-CLPK-0.75
CL-20-CLC-0.75	20mm	.7872	3/4	.750	.83	1-3/4	3/8	1.53	1/8	3	3000	CL-20-CLPK-0.75
CL-20-CLC-1.00		.7867	1	1.000				1.78				CL-20-CLPK-1.00
CL-25-CLC-0.75	25mm	.9841	3/4	.750	1.00	2	3/8	1.70	5/32	7	7000	CL-25-CLPK-0.75
CL-25-CLC-1.00		.9836	1	1.000				1.95				CL-25-CLPK-1.00
CL-30-CLC-0.75	30mm	1.1809	3/4	.750	1.23	2-1/4	1/2	1.88	3/16	12	10000	CL-30-CLPK-0.75
CL-30-CLC-1.00		1.1804	1	1.000				2.13				CL-30-CLPK-1.00
CL-35-CLC-0.75	35mm	1.3778	3/4	.750	1.28	2-1/4	1/2	1.97	1/4	19	15500	CL-35-CLPK-0.75
CL-35-CLC-1.00			1	1.000				2.22				CL-35-CLPK-1.00
CL-35-CLC-1.50			1-1/2	1.500				2.72				CL-35-CLPK-1.50
CL-35-CLC-2.00			2	2.000				3.22				CL-35-CLPK-2.00
CL-50-CLC-1.00	50mm	1.9683	1	1.000	1.80	3	3/4	2.70	3/8	38	20000	CL-50-CLPK-1.00
CL-50-CLC-1.50			1-1/2	1.500				3.20				CL-50-CLPK-1.50
CL-50-CLC-2.00			2	2.000				3.70				CL-50-CLPK-2.00

## CARR LOCK® CLAMPS (METRIC)

PART NO.	A SHANK DIA NOMINAL (mm)	A SHANK DIA ACTUAL (mm)	B PLATE THICKNESS (mm)	C (mm)	D DIA (mm)	E (mm)	F (mm)	G (mm)	MAX SCREW TORQUE (Nm)	MAX HOLD-DOWN FORCE (kN)
CLM-13-CLC-13	13mm	12.995/	13mm	20	22	6	28	2.5	1.4	3.3
CLM-13-CLC-20		12.982	20mm				34.5			
CLM-16-CLC-20	16mm	15.995/	20mm	26	38	8	36.5	3	2.7	5.3
CLM-16-CLC-25		15.982	25mm				41.5			
CLM-20-CLC-20	20mm	19.995/	20mm	22	45	10	39.5	4	4.1	13.3
CLM-20-CLC-25		19.982	25mm				44.5			
CLM-25-CLC-20	25mm	24.995/	20mm	26	50	10	44	4	9.5	31.1
CLM-25-CLC-25		24.982	25mm				49			

\* Spare Parts Kit includes screw, center ball, locking balls, and O-ring.