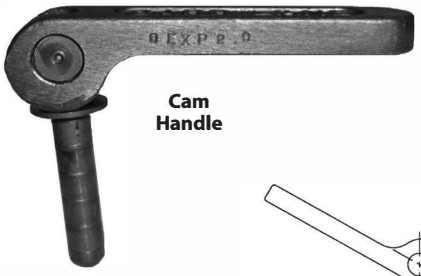
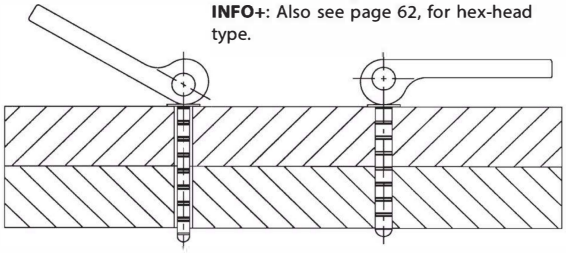
EXPANDING PINS

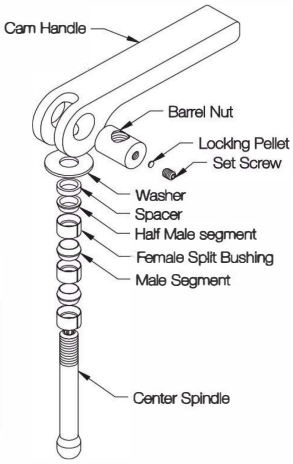
SPLIT BUSHINGS, MALE SEGMENTS, & SPACERS: 17-4PH STAINLESS STEEL, RC 40 MIN, PASSIVATED, DRY FILM LUBE
CENTER SPINDLE: 17-4PH STAINLESS STEEL, RC 36-40, PASSIVATED, DRY FILM LUBE
BARREL NUT & WASHER: 17-4PH STAINLESS STEEL, PASSIVATED, DRY FILM LUBE
HANDLE: ALUMINUM ALLOY, POWDER COATED



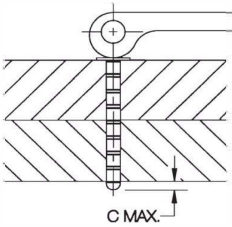
Cam Handle

Precision alignment pin that expands up to .007 inches to tighten up hole clearance. The pin is an assembly of female split bushings separated by male segments, on a center spindle, that expands when drawn together. This assembly provides excellent shear strength, comparable to a solid pin. Diameters from 1/4 to 3/4" are available in several standard lengths. Pins can be installed in through holes or blind holes. **INFO+**: Also see page 62, for hex-head type.

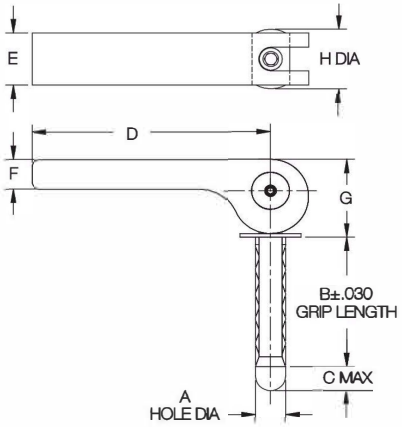




Moving the cam handle expands pin diameter up to .006 inches, to take up slack and secure the pin in place. If additional adjustment is required, remove set screw and turn the cam handle.



Important: Install so that all expanding bushings are contained in the installation hole.



CAM HANDLE

PART NO.	A DIA NOMINAL	A DIA MIN	A DIA MAX	B	C	D	E	F	G	H DIA	DOUBLE-SHEAR STRENGTH (LBS)*
CL-4-EXP-0.50	1/4	.250	.254	.50	1/4	2-3/8	1/2	5/16	.81	5/8	4,000
CL-4-EXP-0.75				.75							
CL-4-EXP-1.00				1.00							
CL-4-EXP-1.50				1.50							
CL-4-EXP-2.00				2.00							
CL-4-EXP-3.00				3.00							
CL-5-EXP-1.00	5/16	.312	.317	1.00	5/16	2-3/8	1/2	5/16	.81	5/8	6,300
CL-5-EXP-2.00				2.00							
CL-5-EXP-3.00				3.00							
CL-6-EXP-1.00	3/8	.375	.380	1.00	3/8	4-1/2	1	1/2	1.12	1	9,000
CL-6-EXP-1.50				1.50							
CL-6-EXP-2.00				2.00							
CL-6-EXP-3.00				3.00							
CL-8-EXP-0.50	1/2	.500	.505	.50	1/2	4-1/2	1	1/2	1.12	1	16,100
CL-8-EXP-1.00	1/2	.500	.505	1.00	1/2	4-1/2	7/8	1/2	1.31	1	16,100
CL-8-EXP-1.50				1.50							
CL-8-EXP-2.00				2.00							
CL-8-EXP-3.00	1/2	.500	.505	3.00	5/8	4-1/2	7/8	1/2	1.31	1	16,100
CL-10-EXP-1.00	5/8	.625	.630	1.00	5/8	4-1/2	1	1/2	1.31	1	25,100
CL-10-EXP-1.50				1.50							
CL-10-EXP-2.00				2.00							
CL-10-EXP-3.00				3.00							
CL-12-EXP-2.00	3/4	.750	.757	2.00	3/4	6	1-1/4	3/4	2.09	1-1/4	36,200
CL-12-EXP-3.00				3.00							
CL-12-EXP-4.00				4.00							

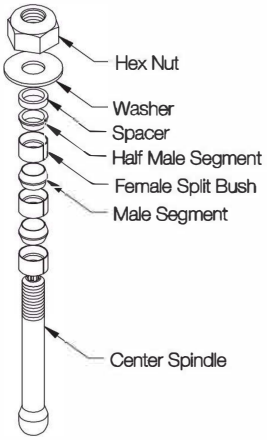
* 2:1 Safety Factor

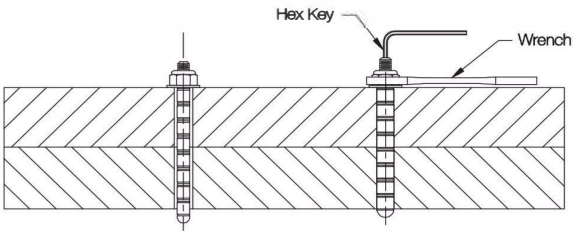
EXPANDING PINS

SPLIT BUSHINGS, MALE SEGMENTS, & SPACERS: 17-4PH STAINLESS STEEL, RC 40 MIN, PASSIVATED, DRY FILM LUBE
CENTER SPINDLE: 17-4PH STAINLESS STEEL, RC 36-40, PASSIVATED, DRY FILM LUBE
WASHER: 17-4PH STAINLESS STEEL, PASSIVATED, DRY FILM LUBE
HEX NUT: 17-4PH STAINLESS STEEL, WITH LOCKING ELEMENT

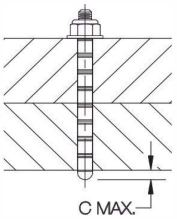
Hex Head

Precision alignment pin that expands up to .006 inches to tighten up hole clearance. The pin is an assembly of female split bushings separated by male segments, on a center spindle, that expands when drawn together. This assembly provides excellent shear strength, comparable to a solid pin. Diameters from 1/4 to 3/4" are available in several standard lengths. Pins can be installed in through holes or blind holes. **INFO+**: Also see page 61, for cam-handle type.

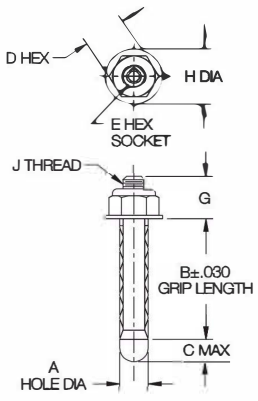




Tightening the hex nut with a wrench expands pin diameter up to .006 inches, to take up slack and secure the pin in place. Hold center spindle stationary with a hex key while tightening.



Important: Install pin so that all split bushings are contained in the installation hole.



HEX HEAD

PART NO.	A DIA NOMINAL	A DIA MIN	A DIA MAX	B	C	D	E	G	H DIA	J	DOUBLE-SHEAR STRENGTH (LBS)*	INSTALLATION TORQUE (FT-LBS)
CL-4-EXPH-0.50	1/4	.250	.254	.50	1/4	3/8	3/32	.39	.67	#10-32	4,000	3
CL-4-EXPH-0.75				.75								
CL-4-EXPH-1.00				1.00								
CL-4-EXPH-1.50				1.50								
CL-4-EXPH-2.00				2.00								
CL-4-EXPH-3.00				3.00								
CL-5-EXPH-1.00	5/16	.312	.317	1.00	5/16	3/8	3/32	.40	.67	#10-32	6,300	3
CL-5-EXPH-2.00				2.00								
CL-5-EXPH-3.00				3.00								
CL-6-EXPH-1.00	3/8	.375	.380	1.00	3/8	7/16	1/8	.49	.67	1/4-28	9,000	7.5
CL-6-EXPH-1.50				1.50								
CL-6-EXPH-2.00				2.00								
CL-6-EXPH-3.00				3.00								
CL-8-EXPH-0.50	1/2	.500	.505	.50	1/2	9/16	3/16	.71	.92	3/8-24	16,100	29
CL-8-EXPH-1.00				1.00								
CL-8-EXPH-1.50				1.50								
CL-8-EXPH-2.00				2.00								
CL-8-EXPH-3.00				3.00								
CL-10-EXPH-1.00	5/8	.625	.630	1.00	5/8	3/4	1/4	.90	1.22	1/2-20	25,100	83
CL-10-EXPH-1.50				1.50								
CL-10-EXPH-2.00				2.00								
CL-10-EXPH-3.00				3.00								
CL-12-EXPH-2.00	3/4	.750	.757	2.00	3/4	7/8	1/4	1.02	1.35	9/16-18	36,200	121
CL-12-EXPH-3.00				3.00								
CL-12-EXPH-4.00				4.00								

* 2:1 Safety Factor