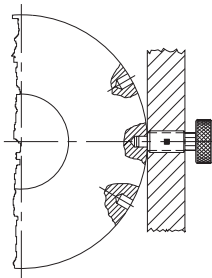
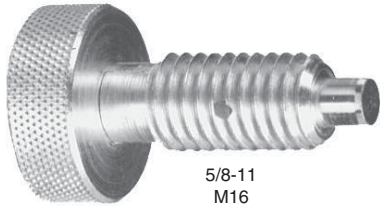
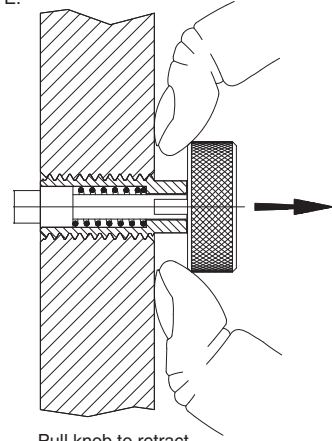


HAND-RETRACTABLE PLUNGERS

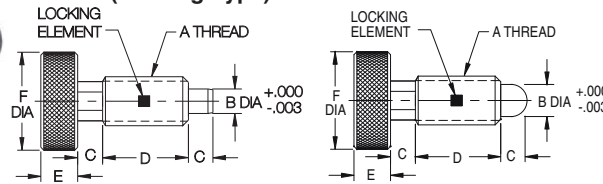
STEEL: 12L14 BODY, 12L14 PLUNGER CARBURIZED-HARDENED (OR DELRIN®, 17-7PH SPRING).
ALL STEEL COMPONENTS ZINC PLATED CLEAR CHROMATE.
STAINLESS STEEL: 300 SERIES



Spring-loaded plunger that locks in retracted position. To lock, pull knurled knob back and turn 90°. Standard plunger has a slight taper on plunger tip for easy alignment. Also available with a radiused Delrin® plunger (slightly larger diameter and lighter spring force). Available in steel or stainless steel. Note: Catalog photos are actual size.



Knurled Head (Locking Type)



Standard Plunger

Radiused Delrin® Plunger

...then turn 90° in either direction to lock.

KNURLED HEAD — STEEL (INCH)

PART NO. STANDARD PLUNGER	PART NO. RADIUS DELRIN PLUNGER	A	STANDARD PLUNGER				RADIUS DELRIN® PLUNGER				C	D	E	F DIA	
			END FORCE (LBS)		B DIA		END FORCE (LBS)		B DIA						
			INITIAL	FINAL	NOMINAL	ACTUAL	INITIAL	FINAL	NOMINAL	ACTUAL					
CL-3-HRP	—	#10-32	1	3.5	7/64	.105	—	—	—	—	—	3/32	13/32	3/16	3/8
CL-4-HRP	CL-4-HRPN	1/4-20	1	5	1/8	.125	.5	2.5	5/32	.145	1/8	1/2	1/4	1/2	
CL-5-HRP	CL-5-HRPN	5/16-18	1.5	6	5/32	.156	.7	3	3/16	.180	3/16	5/8	9/32	5/8	
CL-6-HRP	CL-6-HRPN	3/8-16	1.5	8	3/16	.187	.7	4	7/32	.217	7/32	3/4	5/16	3/4	
CL-8-HRP	CL-8-HRPN	1/2-13	2.5	10	1/4	.250	1.2	5	5/16	.311	1/4	7/8	3/8	1	
CL-10-HRP	CL-10-HRPN	5/8-11	5	10	5/16	.312	3	6	3/8	.374	5/16	1	3/8	1-1/8	

KNURLED HEAD — STAINLESS (INCH)

CL-3-HRP-S	—	#10-32	1	3.5	7/64	.105	—	—	—	—	—	3/32	13/32	3/16	3/8
CL-4-HRP-S	CL-4-HRPN-S	1/4-20	1	5	1/8	.125	.5	2.5	5/32	.145	1/8	1/2	1/4	1/2	
CL-5-HRP-S	CL-5-HRPN-S	5/16-18	1.5	6	5/32	.156	.7	3	3/16	.180	3/16	5/8	9/32	5/8	
CL-6-HRP-S	CL-6-HRPN-S	3/8-16	1.5	8	3/16	.187	.7	4	7/32	.217	7/32	3/4	5/16	3/4	
CL-8-HRP-S	CL-8-HRPN-S	1/2-13	2.5	10	1/4	.250	1.2	5	5/16	.311	1/4	7/8	3/8	1	
CL-10-HRP-S	CL-10-HRPN-S	5/8-11	5	10	5/16	.312	3	6	3/8	.374	5/16	1	3/8	1-1/8	

KNURLED HEAD — STEEL (METRIC)

CLM-6-HRP	—	M6	1	5	3mm	.118	—	—	—	—	—	1/8	1/2	1/4	1/2
CLM-8-HRP	—	M8	1.5	6	4mm	.157	—	—	—	—	—	3/16	5/8	9/32	5/8
CLM-10-HRP	—	M10	1.5	8	5mm	.197	—	—	—	—	—	7/32	3/4	5/16	3/4
CLM-12-HRP	—	M12	2.5	10	6mm	.236	—	—	—	—	—	1/4	7/8	3/8	1
CLM-16-HRP	—	M16	5	10	8mm	.315	—	—	—	—	—	5/16	1	3/8	1-1/8

KNURLED HEAD — STAINLESS (METRIC)

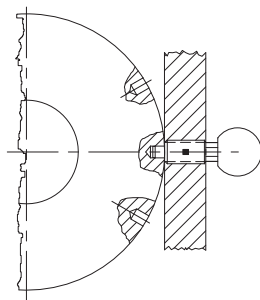
CLM-6-HRP-S	—	M6	1	5	3mm	.118	—	—	—	—	—	1/8	1/2	1/4	1/2
CLM-8-HRP-S	—	M8	1.5	6	4mm	.157	—	—	—	—	—	3/16	5/8	9/32	5/8
CLM-10-HRP-S	—	M10	1.5	8	5mm	.197	—	—	—	—	—	7/32	3/4	5/16	3/4
CLM-12-HRP-S	—	M12	2.5	10	6mm	.236	—	—	—	—	—	1/4	7/8	3/8	1
CLM-16-HRP-S	—	M16	5	10	8mm	.315	—	—	—	—	—	5/16	1	3/8	1-1/8

HAND-RETRACTABLE PLUNGERS

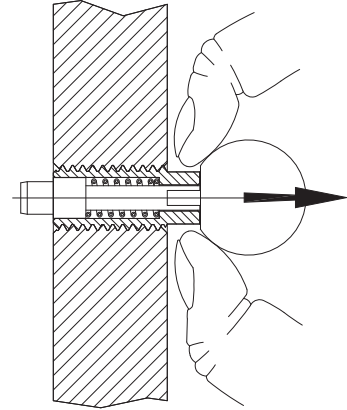
STEEL: 12L14 BODY, 12L14 PLUNGER CARBURIZED-HARDENED, 17-7PH SPRING.
ALL STEEL COMPONENTS ZINC PLATED CLEAR CHROMATE.
STAINLESS STEEL: 300 SERIES



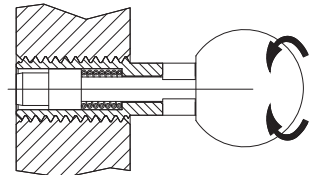
Threaded Stud for Knob Handle (Locking Type)



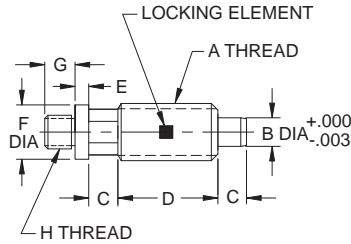
Spring-loaded plunger that locks in retracted position. To lock, pull knob back and turn 90°. Slight taper on plunger tip for easy alignment. Available in steel or stainless steel. The threaded-stud version shown here accepts virtually any type of knob handle (**INFO+**: order separately — available in steel, stainless steel, and several different plastics, see pages 128-135). Knob handles can be permanently secured with thread-locking adhesive if desired. Note: Catalog photos are actual size.



Pull knob to retract...



... then turn 90° in either direction to lock.



THREADED STUD FOR KNOB HANDLE — STEEL (INCH)

PART NO.	A	END FORCE (LBS)		B DIA		C	D	E	F DIA	G	H
		INITIAL	FINAL	NOMINAL	ACTUAL						
CL-3-HRPT	#10-32	1	3	—	.105	3/32	13/32	5/64	5/16	15/64	#10-32
CL-4-HRPT	1/4-20	1	5	1/8	.125	1/8	1/2	3/32	5/16	15/64	#10-32
CL-5-HRPT	5/16-18	1.5	6	5/32	.156	3/16	5/8	3/32	5/16	11/32	1/4-20
CL-6-HRPT	3/8-16	1.5	8	3/16	.187	7/32	3/4	1/8	3/8	13/32	5/16-18
CL-8-HRPT	1/2-13	2.5	10	1/4	.250	1/4	7/8	1/8	1/2	7/16	3/8-16
CL-10-HRPT	5/8-11	5	10	5/16	.312	5/16	1	5/32	5/8	1/2	1/2-13

THREADED STUD FOR KNOB HANDLE — STAINLESS (INCH)

PART NO.	A	END FORCE (LBS)		B DIA		C	D	E	F DIA	G	H
		INITIAL	FINAL	NOMINAL	ACTUAL						
CL-3-HRPT-S	#10-32	1	3	—	.105	3/32	13/32	5/64	5/16	15/64	#10-32
CL-4-HRPT-S	1/4-20	1	5	1/8	.125	1/8	1/2	3/32	5/16	15/64	#10-32
CL-5-HRPT-S	5/16-18	1.5	6	5/32	.156	3/16	5/8	3/32	5/16	11/32	1/4-20
CL-6-HRPT-S	3/8-16	1.5	8	3/16	.187	7/32	3/4	1/8	3/8	13/32	5/16-18
CL-8-HRPT-S	1/2-13	2.5	10	1/4	.250	1/4	7/8	1/8	1/2	7/16	3/8-16
CL-10-HRPT-S	5/8-11	5	10	5/16	.312	5/16	1	5/32	5/8	1/2	1/2-13

THREADED STUD FOR KNOB HANDLE — STEEL (METRIC)

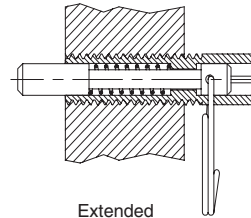
PART NO.	A	END FORCE (LBS)		B DIA	C	D	E	F DIA	G	H	
		INITIAL	FINAL								
CLM-6-HRPT	M6	1	5	3mm	.1181	1/8	1/2	3/32	5/16	15/64	#10-32
CLM-8-HRPT	M8	1.5	6	4mm	.1575	3/16	5/8	3/32	5/16	11/32	1/4-20
CLM-10-HRPT	M10	1.5	8	5mm	.1969	7/32	3/4	1/8	3/8	13/32	5/16-18
CLM-12-HRPT	M12	2.5	10	6mm	.2362	1/4	7/8	1/8	1/2	7/16	3/8-16

HAND-RETRACTABLE PLUNGERS

STEEL: 12L14 BODY, 12L14 PLUNGER CARBURIZED-HARDENED, 17-7PH SPRING
ALL STEEL COMPONENTS ZINC PLATED CLEAR CHROMATE
STAINLESS STEEL: 300 SERIES



1/2-13



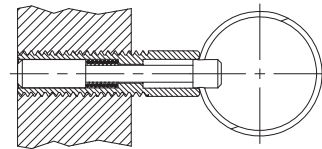
Extended



3/8-16

Spring-loaded plunger that can be withdrawn completely into the body and locked in retracted position. Comfortable pull ring allows quick actuation, yet stays out of the way when not in use. Note: Catalog photos are actual size.

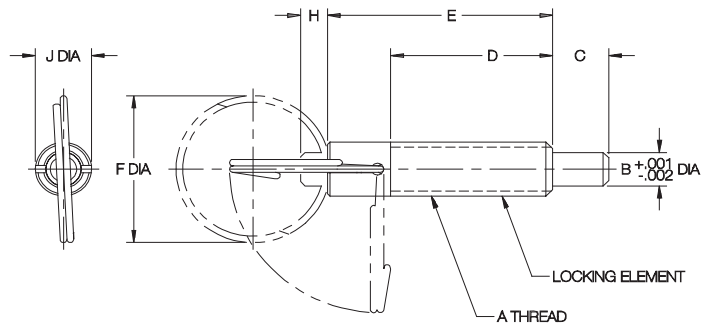
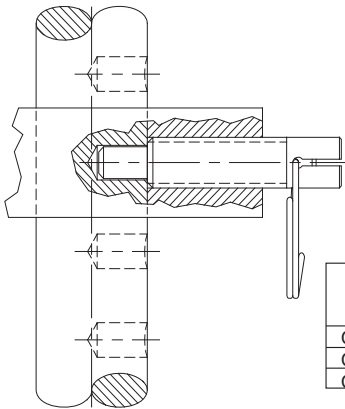
**Pull Ring
(Locking Type)**



Retracted



1/4-20



PULL RING, LOCKING TYPE — STEEL (INCH)

PART NO.	A	END FORCE (LBS)		B DIA	C	D	E	F DIA	H	J DIA
		INITIAL	FINAL							
CL-4-PHRP	1/4-20	1	2.5	.156	1/4	13/16	1-1/8	1	7/64	1/4
CL-6-PHRP	3/8-16	2	4	.250	3/8	1-1/4	1-11/16	1-1/4	3/16	3/8
CL-8-PHRP	1/2-13	2.5	5	.312	1/2	1-7/16	2	1-3/8	1/4	1/2

PULL RING, LOCKING TYPE — STAINLESS STEEL (INCH)

PART NO.	A	END FORCE (LBS)		B DIA	C	D	E	F DIA	H	J DIA
		INITIAL	FINAL							
CL-4-PHRP-S	1/4-20	1	2.5	.156	1/4	13/16	1-1/8	1	7/64	1/4
CL-6-PHRP-S	3/8-16	2	4	.250	3/8	1-1/4	1-11/16	1-1/4	3/16	3/8
CL-8-PHRP-S	1/2-13	2.5	5	.312	1/2	1-7/16	2	1-3/8	1/4	1/2

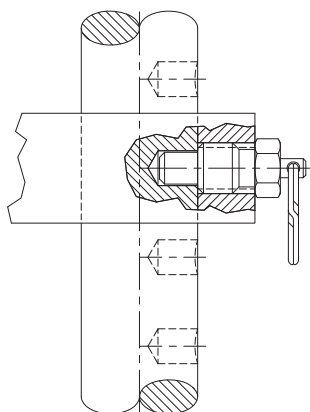
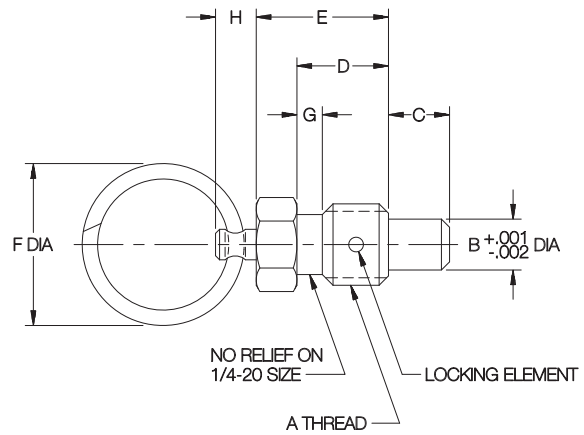
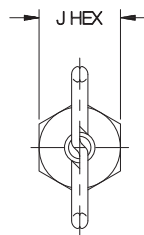
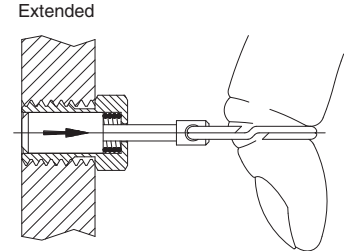
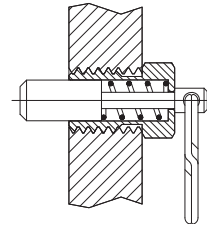
HAND-RETRACTABLE PLUNGERS

STEEL: 12L14 BODY, 12L14 PLUNGER CARBURIZED-HARDENED, 17-7PH SPRING
ALL STEEL COMPONENTS ZINC PLATED CLEAR CHROMATE
STAINLESS STEEL: 300 SERIES



Extremely compact spring-loaded plunger that extends unless manually held in retracted position. Comfortable pull ring allows quick actuation, yet stays out of the way when not in use.
Note: Catalog photos are actual size.

Pull Ring (Non-Locking Type)



PULL RING, NON-LOCKING TYPE — STEEL (INCH)

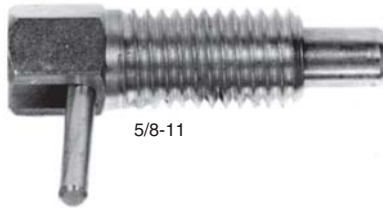
PART NO.	A	END FORCE (LBS)		B DIA	C	D	E	F DIA	G	H	J
		INITIAL	FINAL								
CL-4-RHRP	1/4-20	.5	2	.156	3/16	9/32	7/16	3/4	1/32	5/32	1/4
CL-6-RHRP	3/8-16	.75	3	.250	9/32	7/16	5/8		1/8	3/16	3/8
CL-8-RHRP	1/2-13	1	4	.312	3/8	9/16	13/16	1	5/32	1/4	1/2
CL-10-RHRP	5/8-11	1.25	5	.375	7/16	11/16	1			5/16	5/8

PULL RING, NON-LOCKING TYPE — STAINLESS STEEL (INCH)

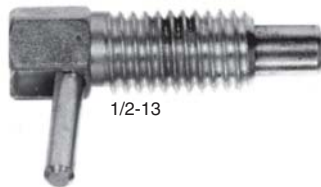
PART NO.	A	END FORCE (LBS)		B DIA	C	D	E	F DIA	G	H	J
		INITIAL	FINAL								
CL-4-RHRP-S	1/4-20	.5	2	.156	3/16	9/32	7/16	3/4	1/32	5/32	1/4
CL-6-RHRP-S	3/8-16	.75	3	.250	9/32	7/16	5/8		1/8	3/16	3/8
CL-8-RHRP-S	1/2-13	1	4	.312	3/8	9/16	13/16	1	5/32	1/4	1/2
CL-10-RHRP-S	5/8-11	1.25	5	.375	7/16	11/16	1			5/16	5/8

HAND-RETRACTABLE PLUNGERS

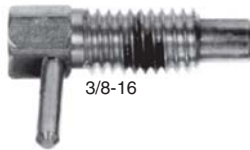
STEEL: 12L14 BODY, 12L14 PLUNGER CARBURIZED-HARDENED, 17-7PH SPRING
ALL STEEL COMPONENTS ZINC PLATED CLEAR CHROMATE
STAINLESS STEEL: 300 SERIES



5/8-11



1/2-13

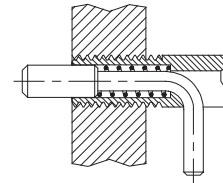
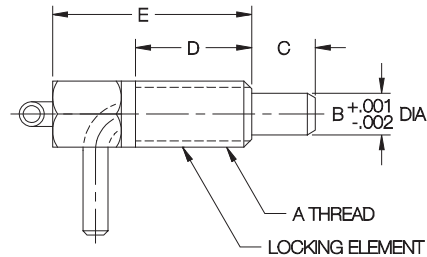
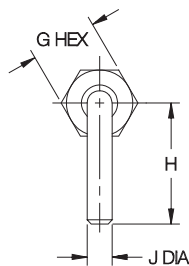


3/8-16

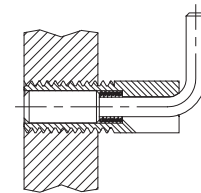


1/4-20

L Handle Short Stroke (Locking Type)



Extended
Position



Retracted
Position

Spring-loaded plunger that locks in retracted position. Convenient L handle for quick retraction and locking. Note: Catalog photos are actual size.

L HANDLE, SHORT STROKE — STEEL (INCH)

PART NO.	A	END FORCE (LBS)		B DIA	C	D	E	G	H	J DIA
		INITIAL	FINAL							
CL-40-LHRP	1/4-20	.12	.5	.156	3/16	7/16	3/4	1/4	9/16	3/32
CL-60-LHRP	3/8-16	.25	1.25	.250	5/16	5/8	1-1/8	3/8	3/4	9/64
CL-80-LHRP	1/2-13	.5	2	.312	13/32	7/8	1-1/2	1/2	1	3/16
CL-100-LHRP	5/8-11	.75	2.5	.375	1/2	1-1/8	1-7/8	5/8	1-3/16	

L HANDLE, SHORT STROKE — STAINLESS STEEL (INCH)

PART NO.	A	END FORCE (LBS)		B DIA	C	D	E	G	H	J DIA
		INITIAL	FINAL							
CL-40-LHRP-S	1/4-20	.12	.5	.156	3/16	7/16	3/4	1/4	9/16	3/32
CL-60-LHRP-S	3/8-16	.25	1.25	.250	5/16	5/8	1-1/8	3/8	3/4	9/64
CL-80-LHRP-S	1/2-13	.5	2	.312	13/32	7/8	1-1/2	1/2	1	3/16
CL-100-LHRP-S	5/8-11	.75	2.5	.375	1/2	1-1/8	1-7/8	5/8	1-3/16	

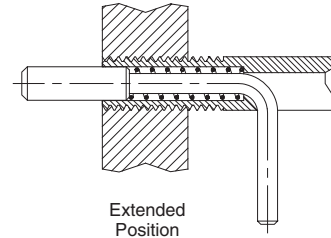
HAND-RETRACTABLE PLUNGERS

STEEL: 12L14 BODY, 12L14 PLUNGER CARBURIZED-HARDENED, 17-7PH SPRING
ALL STEEL COMPONENTS ZINC PLATED CLEAR CHROMATE
STAINLESS STEEL: 300 SERIES



5/8-11

Long-stroke spring-loaded plunger that locks in retracted position. Convenient L handle for quick retraction and locking. Note: Catalog photos are actual size.

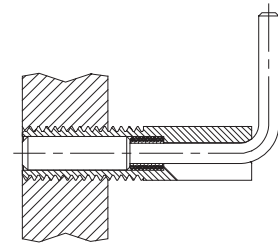


Extended Position



1/2-13

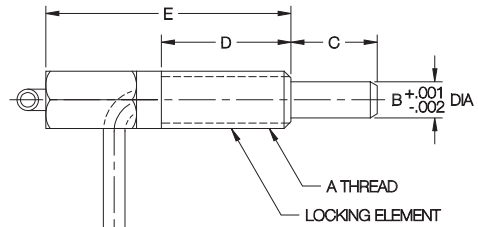
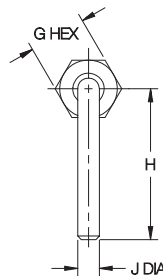
**L Handle
Long Stroke
(Locking Type)**



Retracted Position



3/8-16



1/4-20

L HANDLE, LONG STROKE — STEEL (INCH)

PART NO.	A	END FORCE (LBS)		B DIA	C	D	E	G	H	J DIA
		INITIAL	FINAL							
CL-4-LHRP	1/4-20	.5	2.5	.156	3/8	5/8	1-1/4	1/4	5/8	3/32
CL-6-LHRP	3/8-16	.75	3.75	.250	9/16	1-1/16	2	3/8	15/16	9/64
CL-8-LHRP	1/2-13	1	5	.312	3/4	1-1/8	2-1/8	1/2	1-1/4	3/16
CL-10-LHRP	5/8-11	1	5	.375	1	1-3/4	3	5/8	1-5/16	3/16

L HANDLE, LONG STROKE — STAINLESS (INCH)

PART NO.	A	END FORCE (LBS)		B DIA	C	D	E	G	H	J DIA
		INITIAL	FINAL							
CL-4-LHRP-S	1/4-20	.5	2.5	.156	3/8	5/8	1-1/4	1/4	5/8	3/32
CL-6-LHRP-S	3/8-16	.75	3.75	.250	9/16	1-1/16	2	3/8	15/16	9/64
CL-8-LHRP-S	1/2-13	1	5	.312	3/4	1-1/8	2-1/8	1/2	1-1/4	3/16
CL-10-LHRP-S	5/8-11	1	5	.375	1	1-3/4	3	5/8	1-5/16	3/16

HAND-RETRACTABLE PLUNGERS

Knob: MATTE BLACK FIBER-REINFORCED NYLON THERMOPLASTIC
Plunger: STEEL, HEAT TREATED.
Body: STEEL, BLACK OXIDE FINISH



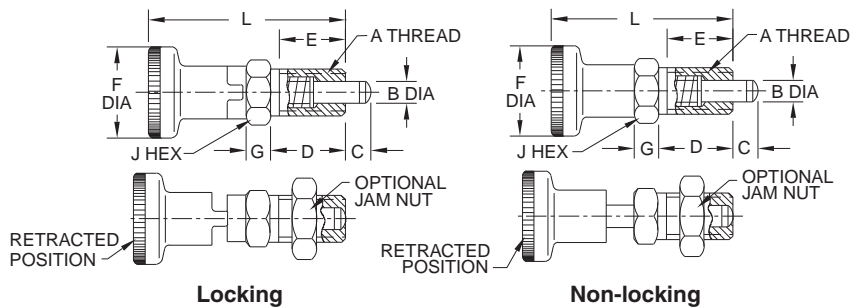
**Knob Handle
(Locking Type)**

**Knob Handle
(Non-Locking Type)**

Precision indexing plunger with a attractive knob handle for convenient retraction. Threaded-body version provides adjustment and can be secured with an optional Jam Nut. High strength and durability in an extremely compact assembly (catalog photos are actual size). Hardened and ground plunger tip has a slight taper for easy alignment. Available in two types, locking and non-locking.

Locking type has a spring-loaded plunger that locks in retracted position. To lock, pull knurled knob back and turn 90°. Body is notched at 90° to keep the knob in its retracted position.

Non-locking type has a spring-loaded plunger that stays extended by spring force except when manually held in retracted position.



LOCKING TYPE (INCH)

PART NO.	A	B DIA		C	D	E	F DIA	G	J	L	END FORCE (LBS)		JAM NUT (OPTIONAL)
		NOMINAL	ACTUAL								INITIAL	FINAL	
CL-6-HRPK-L	3/8-24	5mm	.1961/.1953	.20	.67	.59	.83	.20	12mm	1.73	1.6	3.6	CL-6-FJN
CL-8-HRPK-L	1/2-13	6mm	.2354/.2346	.24	.79	.67	.98	.24	14mm	2.09	1.5	3.4	CL-8-JN
CL-10-HRPK-L	5/8-11	8mm	.3142/.3134	.28	1.02	.91	1.22	.31	19mm	2.62	2.7	7.0	CL-10-JN

NON-LOCKING TYPE (INCH)

CL-6-HRPK-N	3/8-24	5mm	.1961/.1953	.20	.67	.59	.83	.20	12mm	1.73	1.6	3.6	CL-6-FJN
CL-8-HRPK-N	1/2-13	6mm	.2354/.2346	.24	.79	.67	.98	.24	14mm	2.09	1.5	3.4	CL-8-JN
CL-10-HRPK-N	5/8-11	8mm	.3142/.3134	.28	1.02	.91	1.22	.31	19mm	2.62	2.7	7.0	CL-10-JN

HAND-RETRACTABLE PLUNGERS

KNOB: MATTE BLACK FIBER-REINFORCED NYLON THERMOPLASTIC
PLUNGER: STEEL, HEAT TREATED
BODY PLATE: STEEL, ZINC PLATED CLEAR CHROMATE



**Knob Handle
with Mounting Plate
(Locking Type)**

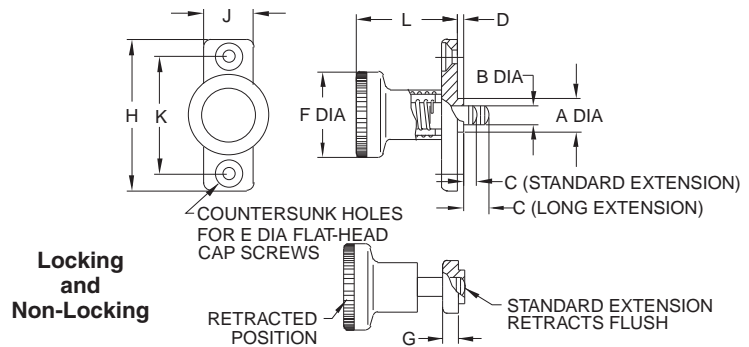


**Knob Handle
with Mounting Plate
(Non-Locking Type)**

Precision indexing plunger with an attractive knob handle for convenient retraction. Mounting-plate version installs in a fixed position with two flat-head screws, and is available with either a short or long plunger extension. High strength and durability in an extremely compact assembly (catalog photos are actual size). Hardened and ground plunger tip has a slight taper for easy alignment. Available in two types, locking and non-locking, each with a choice of short or long plunger extension.

Locking type has a spring-loaded plunger that locks in retracted position. To lock, pull knurled knob back and turn 90°. The body is notched at 90° to keep the knob in its retracted position.

Non-locking type has a spring-loaded plunger that stays extended by spring force except when manually held in retracted position.



**Locking
and
Non-Locking**

LOCKING TYPE

PART NO. STANDARD EXTENSION	PART NO. LONG EXTENSION	A DIA		B DIA		C		D	E DIA	F DIA	G	H	J	K	L	END FORCE (LBS)	
		NOMINAL	ACTUAL	NOMINAL	ACTUAL	STANDARD EXTENSION	LONG EXTENSION									INITIAL	FINAL
CL-8-HRPM-L	CL-8-HRPM-LE	10mm	.393/.390	6mm	.2354/.2346	.24	.55 (24 stroke)	.10	#8 or M4	.98	.18	1.57	.71	1.181	1.12	1.9	4.9
CL-10-HRPM-L	CL-10-HRPM-LE	12mm	.472/.468	8mm	.3142/.3134	.31	.71 (.31 stroke)		#10 or M5	1.22	.22	1.81	.79	1.339	1.32	3.5	6.3

NON-LOCKING TYPE

CL-8-HRPM-N	CL-8-HRPM-NE	10mm	.393/.390	6mm	.2354/.2346	.24	.55 (24 stroke)	.10	#8 or M4	.98	.18	1.57	.71	1.181	1.12	1.9	4.9
CL-10-HRPM-N	CL-10-HRPM-NE	12mm	.472/.468	8mm	.3142/.3134	.31	.71 (.31 stroke)		#10 or M5	1.22	.22	1.81	.79	1.339	1.32	3.5	6.3