

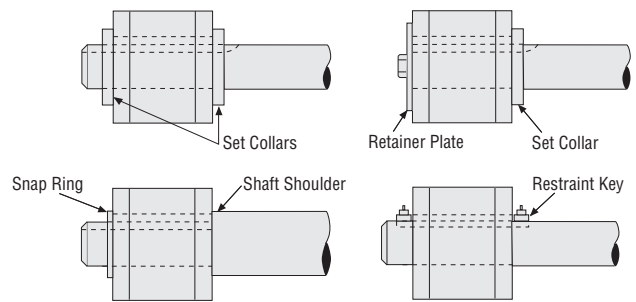
# Axial Restraint Set Collars

## Axial Restraint

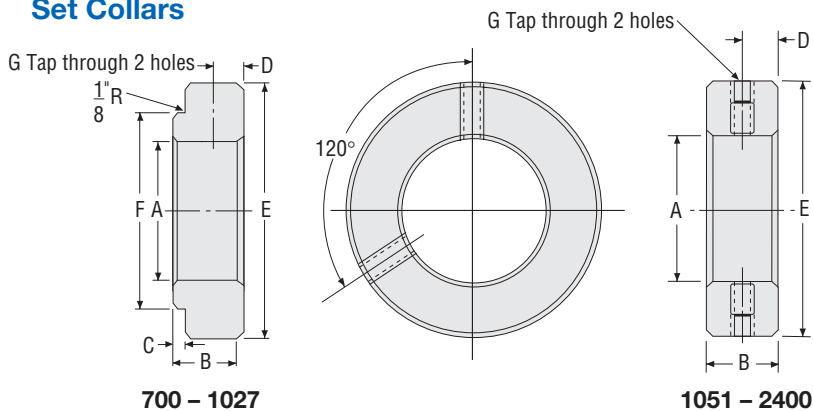
Formsprag requires that all clutches and holdbacks be axially restrained when mounted. Our recommended bore to shaft fits are loose to facilitate installation and removal, therefore, axial restraint must be provided by set collars, shoulders, restraining keys, retaining snap rings, retainer plates, or some other axial restraint device approved by Formsprag.

Holdback axial restraint is required to prevent the reaction end of the torque arm from imposing biasing loads on the bearings. Holdbacks installed without axial restraint can shift on the shaft, causing bearing loads which can significantly reduce bearing B-10 life.

For customers wishing to have a tolerance gap between the axial restraining device and the holdback inner race, a maximum gap of 1/8" per side is recommended.



## Set Collars



Shaft Length Required to Mount LLH with Two Set Collars

Model	Required Shaft Length	
	in.	mm
700	8.67	220.22
750	9.64	244.86
800	9.91	251.49
900	10.28	261.11
1027	11.03	280.16
1051	12.13	308.10
1250	13.25	336.55
1300	13.25	336.55
1375	14.50	368.30
2000	14.13	358.90
2400	14.88	377.95
3500	22.00	558.80
5000	22.00	558.80

## Dimensions inches (mm)

Size	Part No.	A Bore	B	C	D	E	F	G Bore	Screw
700	CL32136-1	1.938 to 2.938 (49.23 to 74.63)	1.625 (41.28)	.625 (15.88)	.500 (12.70)	4.000 (101.60)	3.500 (88.90)	.500-20	SC2206-N
750	CL32136-2	2.438 to 3.438 (61.93 to 87.33)	1.565 (39.70)	.563 (14.30)	.500 (12.70)	4.500 (114.30)	4.000 (101.60)	.500-20	SC2206-N
800	CL32136-3	2.938 to 4.438 (74.63 to 112.73)	1.688 (42.88)	.688 (17.48)	.500 (12.70)	5.500 (139.70)	5.000 (127.00)	.500-20	SC2206-N
900	CL32136-4	3.938 to 5.438 (100.03 to 138.13)	1.688 (42.88)	.688 (17.48)	.500 (12.70)	6.500 (165.10)	6.000 (152.40)	.500-20	SC2206-N
1027	CL32136-5	4.938 to 7.000 (125.43 to 177.80)	1.938 (49.23)	.688 (17.48)	.625 (15.88)	8.000 (203.20)	7.625 (193.68)	.500-20	SC2206-N
1051	CL32136-6	4.938 to 7.000 (125.43 to 177.80)	1.250 (31.75)	—	.625 (15.88)	8.000 (203.20)	—	.500-20	SC2206-N
1250	CL32136-8	6.750 to 9.000 (171.45 to 228.60)	1.500 (38.10)	—	.750 (19.05)	10.000 (254.00)	—	.625-18	SC2608-N
1300	CL32136-9	7.938 to 10.000 (201.64 to 254.00)	1.500 (38.10)	—	.750 (19.05)	11.250 (285.75)	—	.625-18	SC2608-N
1375	CL32136-15	8.938 to 11.000 (227.03 to 279.40)	1.750 (44.45)	—	.875 (22.23)	13.000 (330.20)	—	.750-10	SC2711-N
2000	CL32136-12	11.000 to 13.250 (279.40 to 336.55)	1.750 (44.45)	—	.875 (22.23)	15.500 (393.70)	—	.750-10	SC2711-N
2400	CL32136-13	13.250 to 15.500 (336.55 to 393.70)	2.000 (50.80)	—	1.000 (25.40)	19.563 (496.90)	—	.750-10	SC2711-N
3500									Built-in Set Collar
5000									Built-in Set Collar

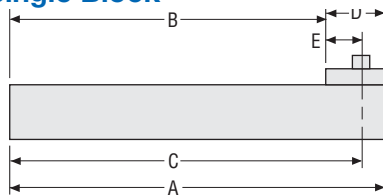
# Axial Restraint Set Collars

## Axial Restraint Keys Introduction

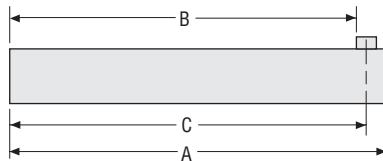
Restraint keys are a cost effective method of providing axial restraint for clutches and holdbacks. The restraint key is longer than the clutch through bore length or clutch width. The single block key will prevent axial movement in only one direction and must be used with some other means to prevent movement in the other direction such as a set collar or a step in the shaft.

The double block key will prevent axial movement of the clutch in either direction. All restraint keys must be secured in the shaft key seat. This can usually be accomplished by cutting the keyseat with an end mill without breaking out at the end of the shaft.

### Single Block

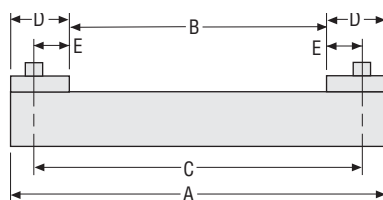


LLH-700 thru LLH-1027

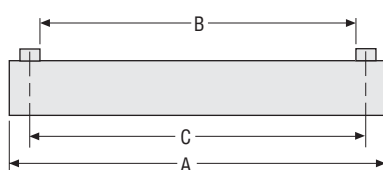


LLH-1051 thru LLH-5000

### Double Block



LLH-700 thru LLH-1027



LLH-1051 thru LLH-5000

### Single Block Style inches (mm)

Size	A	B	C	D	E	Screw Series
700	6.312 (160.32)	5.062 (128.57)	6.000 (152.40)	1.250 (31.75)	.937 (23.80)	SC1000
750	7.500 (190.50)	6.062 (153.97)	7.062 (179.37)	1.437 (36.50)	1.000 (25.40)	SC1000
800	7.625 (193.68)	6.062 (153.97)	7.187 (182.44)	1.562 (39.67)	1.125 (28.58)	SC1300
900	8.062 (204.77)	6.437 (163.50)	7.625 (193.68)	1.625 (41.28)	1.187 (30.15)	SC1500
1027	8.312 (211.12)	6.687 (169.85)	7.875 (200.03)	1.625 (41.28)	1.187 (30.15)	SC1500
1051	10.625 (269.88)	9.687 (246.05)	9.968 (253.19)	—	—	SC1700
1250	11.187 (284.15)	10.312 (261.92)	10.593 (269.06)	—	—	SC1700
1300	11.187 (284.15)	10.312 (261.92)	10.593 (269.06)	—	—	SC1700
1375	12.187 (309.55)	11.062 (280.97)	11.437 (290.50)	—	—	SC2100
2000	11.625 (295.28)	10.687 (271.45)	11.062 (280.97)	—	—	SC2100
2400	11.875 (301.63)	10.937 (277.80)	11.687 (296.85)	—	—	SC2100

### Double Block Style inches (mm)

Size	A	B	C	D	E	Screw Series
700	7.625 (193.68)	5.125 (130.18)	7.000 (177.80)	1.250 (31.75)	.938 (23.83)	SC1000
750	9.000 (228.60)	6.125 (155.58)	8.125 (206.38)	1.438 (36.53)	1.000 (25.40)	SC1000
800	9.250 (234.95)	6.125 (155.58)	8.375 (212.73)	1.563 (39.70)	1.125 (28.58)	SC1300
900	9.750 (247.65)	6.500 (165.10)	8.875 (225.43)	1.625 (41.28)	1.188 (30.18)	SC1500
1027	10.000 (254.00)	6.750 (171.45)	9.125 (231.78)	1.625 (41.28)	1.188 (30.18)	SC1500
1051	11.625 (295.28)	9.750 (247.65)	10.313 (261.95)	—	—	SC1700
1250	12.062 (306.37)	10.375 (263.53)	10.938 (277.83)	—	—	SC1700
1300	12.062 (306.37)	10.375 (263.53)	10.938 (277.83)	—	—	SC1700
1375	13.375 (339.73)	11.125 (282.58)	11.875 (301.63)	—	—	SC2100
2000	12.625 (320.68)	10.750 (273.05)	11.500 (292.10)	—	—	SC2100
2400	13.000 (330.20)	11.000 (279.40)	11.750 (298.45)	—	—	SC2100

3500 to 5000 as required

**Note:** Restraint keys must be secured in shaft keyseat.