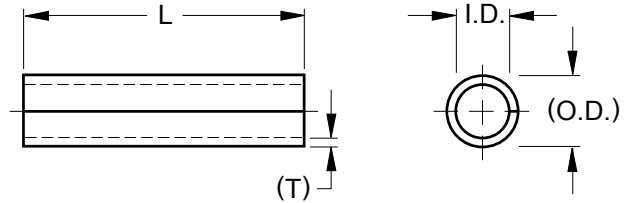




Spacers Series SP100 - Metric

INSPECTION METHODS

I.D. - Go and No Go Plug Gauges
Length - Calipers



DIMENSIONAL DATA

NOMINAL SIZE			3	4	5	6	8	10	12	14	16	20
SP100 STD WALL	I.D.	MIN.	3.15	4.15	5.2	6.2	8.2	10.2	12.25	14.25	16.25	20.4
		MAX.	3.3	4.3	5.4	6.4	8.5	10.5	12.7	14.8	16.8	21
	WALL THICKNESS REF.		0.5	0.7	0.7	0.9	1.1	1.2	1.6	1.6	1.8	2
O.D. REF. ONLY			4.22	5.62	6.7	8.1	10.55	12.75	15.67	17.73	20.12	24.7

AVAILABLE LENGTHS

NOMINAL SIZE		3	4	5	6	8	10	12	14	16	20	
LENGTH	4	*	*									
	5											
	6	*	*	*	*							
	8	*	*	*	*	*						
	10	*	*	*	*	*	*					
	12	*	*	*	*	*	*	*				
	14	*	*	*	*	*	*	*	*			
	16		*	*	*	*	*	*	*	*		
	18										*	
	20		*	*	*	*	*	*	*	*	*	*
	22											
	25				*	*	*	*				
	28											
	30											
	35											
	40											
	45											
	50											
	55											
	60											
65												
70												
75												
80												
85												
90												
95												
100												

- * Generally stocked size
- All dimensions apply prior to the application of any supplemental finish
- Shorter, longer and intermediate lengths are available upon request
- Custom diameters will be evaluated upon request

Contact **SPIROL** for columnar strength and bearing surface requirements for your specific application.

LENGTH TOLERANCES

NOMINAL SIZE	NOMINAL LENGTH	LENGTH TOLERANCE
3 - 6	L ≤ 40	±0.15
	40 < L ≤ 100	±0.25
8 - 12	L ≤ 50	±0.25
	50 < L ≤ 100	±0.40
14 - 20	L ≤ 100	±0.40



FLANGE HINGE

A traditional Spacer application used to eliminate flange collapse when the bolt is torqued during installation to achieve the desired friction fit.

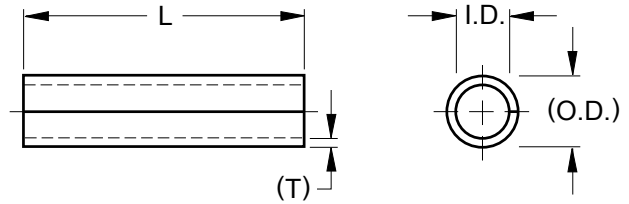
To Order: SPCR Size x Length Material Finish Series
Example: SPCR 6 x 25 FK SP100



Spacers Series SP150 - Metric

INSPECTION METHODS

I.D. - Go and No Go Plug Gauges
Length - Calipers



DIMENSIONAL DATA

NOMINAL SIZE			3	4	5	6	8	10	12	14	16
SP150 HEAVY WALL	I.D.	MIN.	3.1	4.1	5.1	6.1	8.1	10.1	12.15	14.2	16.15
		MAX.	3.3	4.35	5.4	6.4	8.6	10.6	13	15.1	17.1
	WALL THICKNESS REF.	0.7	1.1	1.2	1.5	1.7	2	2.2	2.4	2.6	
O.D. REF. ONLY			4.6	6.42	7.65	9.25	11.75	14.35	16.97	19.5	21.82

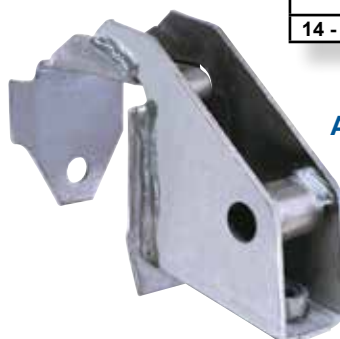
AVAILABLE LENGTHS

NOMINAL SIZE		3	4	5	6	8	10	12	14	16	
LENGTH	4										
	5										
	6			*	*						
	8			*	*	*					
	10			*	*	*	*				
	12			*	*	*	*	*			
	14			*	*	*	*	*	*		
	16			*	*	*	*	*	*	*	
	18										*
	20				*	*	*	*			
	22										
	25				*	*	*	*			
	28				*	*	*	*			
	30										
	35										
	40										
	45										
	50										
	55										
	60										
65											
70											
75											
80											
85											
90											
95											
100											

- * Generally stocked size
- All dimensions apply prior to the application of any supplemental finish
- Shorter, longer and intermediate lengths are available upon request
- Custom diameters will be evaluated upon request

LENGTH TOLERANCES

NOMINAL SIZE	NOMINAL LENGTH	LENGTH TOLERANCE
3 - 6	$L \leq 40$	± 0.20
	$40 < L \leq 100$	± 0.30
8 - 12	$L \leq 50$	± 0.40
	$50 < L \leq 100$	± 0.50
14 - 16	$L \leq 100$	± 0.50



AUTOMOTIVE CHASSIS FRAME BRACKET

Reinforces hollow rectangular frame. Spacer is welded to bracket that fits into frame.

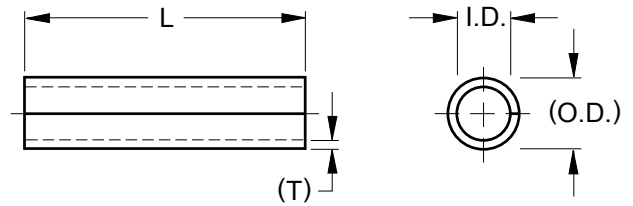
To Order: SPCR Size x Length Material Finish Series
Example: SPCR 8 x 20 FK SP150



Spacers Series SP100 - Inch

INSPECTION METHODS

I.D. - Go and No Go Plug Gauges
Length - Calipers



DIMENSIONAL DATA

NOMINAL SIZE		#4	#6	#8	#10	.250 1/4	.312 5/16	.375 3/8	.437 7/16	.500 1/2	.625 5/8	.750 3/4	
SP100 STD WALL	I.D.	MIN.	.118	.144	.172	.198	.260	.322	.385	.449	.512	.637	.767
		MAX.	.124	.150	.180	.206	.268	.332	.395	.464	.532	.657	.792
	WALL THICKNESS REF.	.021	.021	.027	.027	.036	.042	.048	.048	.062	.072	.078	
O.D. REF. ONLY		.163	.189	.230	.256	.336	.411	.486	.552	.646	.791	.935	

AVAILABLE LENGTHS

NOMINAL SIZE		#4	#6	#8	#10	.250 1/4	.312 5/16	.375 3/8	.437 7/16	.500 1/2	.625 5/8	.750 3/4
LENGTH	.187 3/16											
	.250 1/4	*	*	*	*	*						
	.312 5/16	*	*	*	*	*	*					
	.375 3/8	*	*	*	*	*	*	*				
	.437 7/16	*	*	*	*	*	*	*	*			
	.500 1/2	*	*	*	*	*	*	*	*	*		
	.562 9/16											
	.625 5/8	*	*	*	*	*	*	*	*	*	*	
	.687 11/16											
	.750 3/4	*	*	*	*	*	*	*	*	*	*	
	.812 13/16											
	.875 7/8	*	*	*	*	*	*	*	*	*	*	
	.937 15/16											
	1.000 1	*	*	*	*	*	*	*	*	*	*	*
	1.125 1-1/8	*	*	*	*	*	*	*	*	*	*	*
	1.250 1-1/4	*	*	*	*	*	*	*	*	*	*	*
	1.375 1-3/8											
	1.500 1-1/2	*	*	*	*	*	*	*	*	*	*	*
	1.625 1-5/8											
	1.750 1-3/4					*	*	*	*	*	*	*
1.875 1-7/8												
2.000 2												
2.250 2-1/4												
2.500 2-1/2												
2.750 2-3/4												
3.000 3												
3.250 3-1/4												
3.500 3-1/2												
3.750 3-3/4												
4.000 4												

- * Generally stocked size
- All dimensions apply prior to the application of any supplemental finish
- Shorter, longer and intermediate lengths are available upon request
- Custom diameters will be evaluated upon request

Contact **SPIROL** for columnar strength and bearing surface requirements for your specific application.

LENGTH TOLERANCES

NOMINAL SIZE	NOMINAL LENGTH	LENGTH TOLERANCE
#4 - .250	L ≤ 1.500	±.005
	1.500 < L ≤ 4.000	±.010
.312 - .437	L ≤ 2.000	±.010
	2.000 < L ≤ 4.000	±.015
.500 - .875	L ≤ 4.000	±.015

RAIN GUTTER SPACER

Spacers reinforce rain gutters when being installed on structure.

To Order: SPCR Size x Length Material Finish Series
Example: SPCR .250 x 1.125 FK SP100

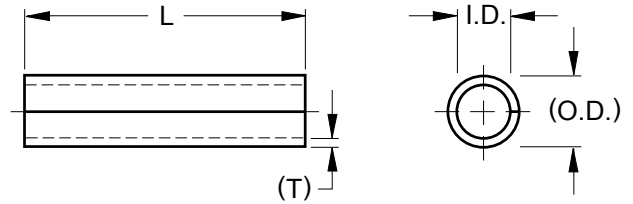




Spacers Series SP150 - Inch

INSPECTION METHODS

I.D. - Go and No Go Plug Gauges
Length - Calipers



DIMENSIONAL DATA

NOMINAL SIZE		#4	#6	#8	#10	.250 1/4	.312 5/16	.375 3/8	.437 7/16	.500 1/2	.625 5/8	.750 3/4	
SP150 HEAVY WALL	I.D.	MIN.	.116	.142	.168	.194	.254	.318	.381	.445	.508	.632	.758
		MAX.	.124	.152	.180	.206	.268	.338	.401	.475	.538	.672	.798
	WALL THICKNESS REF.	.027	.036	.042	.048	.058	.067	.078	.087	.094	.102	.110	
O.D. REF. ONLY		.174	.219	.258	.296	.377	.462	.547	.638	.711	.856	.998	

AVAILABLE LENGTHS

NOMINAL SIZE		#4	#6	#8	#10	.250 1/4	.312 5/16	.375 3/8	.437 7/16	.500 1/2	.625 5/8	.750 3/4
LENGTH	.187 3/16											
	.250 1/4											
	.312 5/16				*	*	*					
	.375 3/8				*	*	*	*				
	.437 7/16				*	*	*	*				
	.500 1/2				*	*	*	*		*		
	.562 9/16											
	.625 5/8				*	*	*	*		*	*	
	.687 11/16											
	.750 3/4				*	*	*	*		*	*	
	.812 13/16											
	.875 7/8				*	*	*	*		*	*	
	.937 15/16											
	1.000 1				*	*	*	*		*	*	
	1.125 1-1/8				*	*	*	*		*	*	
	1.250 1-1/4				*	*	*	*		*	*	
	1.375 1-3/8											
	1.500 1-1/2				*	*	*	*		*	*	
	1.625 1-5/8											
	1.750 1-3/4											
1.875 1-7/8												
2.000 2												
2.250 2-1/4												
2.500 2-1/2												
2.750 2-3/4												
3.000 3												
3.250 3-1/4												
3.500 3-1/2												
3.750 3-3/4												
4.000 4												

- * Generally stocked size
- All dimensions apply prior to the application of any supplemental finish
- Shorter, longer and intermediate lengths are available upon request
- Custom diameters will be evaluated upon request

LENGTH TOLERANCES

NOMINAL SIZE	NOMINAL LENGTH	LENGTH TOLERANCE
#4 - .250	L ≤ 1.500	±.008
	1.500 < L ≤ 4.000	±.012
.312 - .437	L ≤ 2.000	±.015
	2.000 < L ≤ 4.000	±.020
.500 - .875	L ≤ 4.000	±.020

SCISSOR JACK

Eight Spacers (welded into place) are used as distance bushings and reinforcements in the pivot joints.

To Order: SPCR Size x Length Material Finish Series
Example: SPCR .312 x 1.250 FK SP150



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SPIROL Application Engineers will review your application needs and work with you to recommend the optimum solution. One way to start the process is to visit our **Optimal Application Engineering** portal at **SPIROL.com**.

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