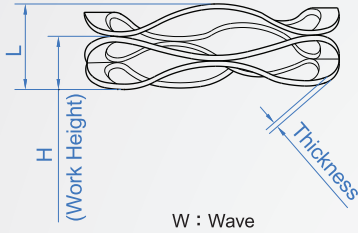
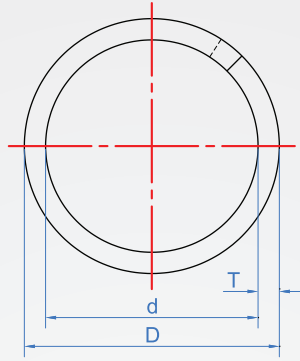
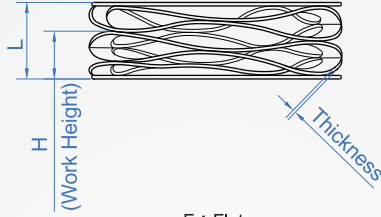


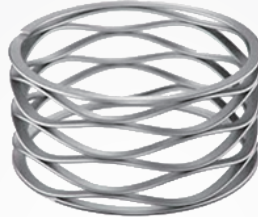
Crest-to-crest wave springs  
**CD161**



W : Wave



F : Flat



Material	Shape	Load	No.	Stock
Carbon steel	(W) Wave	Light	WL	Plenty
		Median	WM	
		Heavy	WH	
Stainless steel	(F) Flat	Light	FL	Less
		Median	FM	
		Heavy	FH	

※This series is importation, 2 to 3 weeks to ship.

How to order

CD161 - WH - 6 - 5 -   
TYPE No. D Number of coils

Material

Carbon steel.....  
 Stainless steel.....

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D	Number of coils	d	L Height	Light Load : L					Median Load : M				
				Load	T	Thickness	H	Modulus N/mm	Load	T	Thickness	H	Modulus N/mm
				Unit : mm									
6	3	4	1.52	6 N	0.51	0.13	0.61	6.59	12 N	0.61	0.15	0.74	15.38
	4		2.03				0.81	4.92				0.97	11.32
	5		2.54				1.02	3.95				1.22	9.09
	6		3.05				1.22	3.28				1.47	7.59
	7		3.56				1.42	2.8				1.7	6.45
	8		4.06				1.63	2.47				1.96	5.71
	9		4.57				1.83	2.19				2.18	5.02
	11		5.59				2.24	1.79				2.69	4.14
	13		6.6				2.64	1.52				3.18	3.51
	8		3				5	2.82				15 N	0.81
4		3.76	2.39	10.95	2.54	24.59							
5		4.7	2.74	7.65	3.05	18.18							
6		5.64	3.56	7.21	3.81	16.39							
7		6.58	4.01	5.84	4.32	13.27							
8		7.52	4.57	5.08	4.95	11.67							
9		8.46	5.26	4.69	5.59	10.45							
11		10.34	6.35	3.76	6.86	8.62							
13		12.22	7.37	3.09	7.87	6.9							
10		3	7	3.96	18 N	0.81		0.2	1.91	8.78	35 N		
	4	5.28		2.54			6.57		2.79	14.06			
	5	6.6		3.15			5.22		3.56	11.51			
	6	7.92		3.78			4.35		4.32	9.72			
	7	9.25		4.42			3.73		5.08	8.39			
	8	10.57		5.05			3.26		5.84	7.4			
	9	11.89		5.69			2.9		6.6	6.62			
	10	13.21		6.32			2.61		7.37	5.99			
	11	14.53		6.96			2.38		8.13	5.47			



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D	Number of coils	d	L Height	Light Load : L					Median Load : M					Heavy Load : H					Unit : mm										
				Load	T	Thickness	H	Modulus N/mm	Load	T	Thickness	H	Modulus N/mm	Load	T	Thickness	H	Modulus N/mm											
12	3	9	4.34	20 N	1.02	0.2	1.47	6.97	40 N	1.17	0.28	2.36	20.2	60 N	1.14	0.3	1.98	25.42											
	4		5.79				1.98	5.25				3.18	15.33				2.64	19.05											
	5		7.24				2.46	4.18				3.96	12.2				3.3	15.23											
	6		8.69				2.95	3.48				4.75	10.15				3.99	12.77											
	7		10.13				3.45	2.99				5.54	8.71				4.65	10.95											
	8		11.58				3.94	2.62				6.32	7.6				5.31	9.57											
	9		13.03				4.45	2.33				7.11	6.76				5.97	8.5											
	10		14.48				4.93	2.09				7.92	6.1				6.63	7.64											
	11		15.93				5.44	1.91				8.71	5.54				7.29	6.94											
	14		3				10	4.95				22 N	1.47				0.23	2.18	7.94	50 N	1.52	0.3	2.18	18.05	80 N	1.52	0.38	3.15	44.44
			4					6.6										2.95	6.03				2.95	13.7				4.19	33.2
5		8.26	3.71	4.84	3.71	10.99		5.26	26.67																				
6		9.91	4.52	4.08	4.52	9.28		6.3	22.16																				
7		11.56	5.33	3.53	5.33	8.03		7.34	18.96																				
8		13.21	6.17	3.13	6.17	7.1		8.41	16.67																				
9		14.86	7.01	2.8	7.01	6.37		9.45	14.79																				
10		16.51	7.85	2.54	7.85	5.77		10.49	13.29																				
11		18.16	8.71	2.33	8.71	5.29		11.56	12.12																				
15		3	11	5.18	25 N	1.47		0.25	2.57	9.58	50 N			1.47	0.23	3.43		28.57	80 N				1.47	0.25				3.2	40.4
		4		6.91					3.43	7.18						4.57		21.37										4.19	29.41
	5	8.64		4.27			5.72		5.72	17.12		5.26	23.46																
	6	10.36		5.13			4.78		6.86	14.29		6.27	19.56																
	7	12.09		5.99			4.1		8	12.22		7.32	16.77																
	8	13.82		6.83			3.58		9.14	10.68		8.36	14.65																
	9	15.54		7.7			3.19		10.29	9.52		9.4	13.03																
	10	17.27		8.53			2.86		11.43	8.56		10.46	11.75																
	11	19		9.4			2.6		12.57	7.78		11.51	10.68																
	16	3		11			5.41		25 N	1.52		0.25	2.11			7.58	55 N	1.47		0.25	3.63	30.9			90 N	1.52	0.3	3.3	42.65
		4					7.21						2.79			5.66					4.83	23.11						4.57	34.09
5		9.02	3.51		4.54	6.05	18.52	5.59			26.24																		
6		10.82	4.19		3.77	7.24	15.36	6.86			22.73																		
7		12.62	4.9		3.24	8.46	13.22	7.87			18.95																		
8		14.42	5.63		2.86	9.66	11.17	9.0			15.4																		
9		16.23	6.3		2.52	10.87	10.26	10.16			14.83																		
10		18.04	7.01		2.23	12.08	9.45	11.3			13.8																		
11		19.84	7.7		2.06	13.28	8.78	12.45			12.8																		
12		21.64	8.39		1.86	14.49	8.2	13.6			11.9																		
13		23.44	9.01		1.74	15.7	7.71	14.73			11.33																		
18	3	13	5.72	30 N	1.8	0.2	3.63	14.35	55 N	1.83	0.25	3.68	26.96	90 N	1.83	0.3	3.84	47.87											
	4		7.62				4.75	10.45				4.98	20.83				5.13	36.14											
	5		9.53				5.94	8.36				6.22	16.62				6.4	28.75											
	6		11.43				7.14	6.99				7.47	13.89				7.7	24.13											
	7		13.34				8.31	5.96				8.47	11.96				8.97	20.59											
	8		15.24				9.46	5.1				9.46	10.3				10.3	17.6											
	9		17.15				10.69	4.64				11.23	9.29				11.53	16.01											
	10		19.06				12.01	4.17				12.99	8.37				12.77	14.5											
	11		20.97				13.33	3.7				14.76	7.64				14.02	13.02											
	12		22.88				14.65	3.23				16.53	7.06				15.27	11.59											
	13		24.79				15.93	2.76				18.3	6.52				16.52	10.26											
20	3	15	6.32	35 N	1.8	0.2	2.72	9.27	70 N	1.98	0.25	3.05	21.41	100 N	2.01	0.33	4.24	48.08											
	4		8.43				3.61	7.26				4.06	16.02				5.66	36.1											
	5		10.54				4.52	5.81				5.08	12.82				7.06	28.74											
	6		12.65				5.41	4.83				6.27	10.97				8.48	23.98											
	7		14.76				6.32	4.15				7.32	9.41				9.91	20.62											
	8		16.87				7.19	3.58				8.37	8.06				11.34	17.76											
	9		18.97				8.03	3.03				9.41	6.91				12.73	16.03											
	10		21.08				8.85	2.57				10.44	5.96				14.16	14.4											
	11		23.19				9.66	2.19				11.47	5.19				15.63	12.87											
	12		25.3				10.46	1.81				12.5	4.56				17.14	11.44											
	13		27.41				11.25	1.43				13.53	4.04				18.69	10.11											
25	3	19	6.63	50 N	2.18	0.25	2.06	10.94	80 N	2.39	0.3	2.95	21.74	110 N	2.39	0.38	4.04	42.47											
	4		8.84				2.74	8.2				3.9	16.33				5.38	31.79											
	5		11.05				3.43	6.56				4.9	13.01				6.73	25.46											
	6		13.26				4.11	5.46				5.89	10.85				8.08	21.24											
	7		15.47				4.8	4.69				6.88	9.31				9.4	18.12											
	8		17.68				5.47	3.98				7.87	7.94				10.81	15.2											
	9		19.89				6.14	3.27				8.86	6.74				12.22	13.46											
	10		22.1				6.81	2.56				9.85	5.74				13.67	11.81											
	11		24.31				7.48	1.85				10.84	4.87				15.12	10.26											
	12		26.52				8.15	1.14				11.83	4.11				16.61	8.81											
	13		28.73				8.82	0.43				12.82	3.46				18.14	7.46											
28	3	22	7.24	50 N	2.39	0.3	3.76	14.37	80 N	2.39	0.38	4.39	28.07	130 N	2.39	0.46	4.57	48.69											
	4		9.65				5	10.75				5.84	21				6.07	36.31											
	5		12.07				6.27	8.62				7.32	16.84				7.59	29.02											
	6		14.48				7.52	7.18				8.79	14.06				9.12	24.25											
	7		16.89				8.79	6.17				10.24	12.03				10.64	20.8											
	8		19.3				10.03	5.39				11.71	10.54				12.17	18.23											
	9		21.72				11.28	4.79				13.18	9.37				13.69	16.19											
	10		24.13				12.53	4.22				14.65	8.41				15.24	14.34											
	11		26.54				13.79	3.92				16.1	7.66				16.71	13.22											
	12		28.95				15.04	3.63				17.57	7.06				18.18	12.19											
	13		31.37				16.29	3.33				19.02	6.48				19.66	11.2											
30	3	24	7.62	50 N	2.39	0.3	3.18	11.26	90 N	2.39	0.38	7.62	21.9	130 N	2.39	0.46	7.62	37.9											
	4		10.16				4.22	8.42				10.16	16.48				10.16	28.45											
	5		12.7				5.28	6.74				12.7	13.18				12.7	22.77											
	6		15.24				6.32	5.61				15.24	10.98				15.24	18.95											
	7		17.78				7.39	4.81				17.78	9.39				17.78	16.25											
	8		20.32				8.46	4.21				20.32	8.22				20.32	14.22											
	9		22.86				9.53	3.74				22.86	7.31				22.86	12.63											
	10		25.4				10.6	3.27				25.4	6.52				25.4	11.2											
	11		27.94				11.67	2.8				27.94	5.98				27.94	10.34											
	12		30.48				12.74	2.33				30.48	5.56				30.48	9.57											
	13		33.02				13.81	1.86				33.02	5.06				33.02	8.75											

D	Number of coils	d	L Height	Light Load : L					Median Load : M					Heavy Load : H															
				Load	T	Thickness	H	Modulus N/mm	Load	T	Thickness	H	Modulus N/mm	Load	T	Thickness	H	Modulus N/mm											
35	3	27	8.38	70 N	3.18	0.36	3.94	15.77	110 N	3.38	0.41	4.14	25.94	160 N	3.38	0.46	4.04	36.87											
	4		11.18				5.23	11.76				5.51	19.40				5.38	27.59											
	5		13.97				6.55	9.43				6.88	15.51				6.73	22.10											
	6		16.76				7.87	7.87				8.26	12.94				8.08	18.43											
	7		19.56				9.17	6.74				9.63	11.08				9.42	15.78											
	8		22.35				10.49	5.90				11.02	9.71				10.77	13.82											
	9		25.15				11.81	5.25				12.40	8.63				12.12	12.28											
	11		30.73				14.43	4.29				15.14	7.06				14.81	10.05											
	13		36.32				17.04	3.63				17.91	5.98				17.50	8.50											
	40		3				30	9.14				100 N	3.38				0.41	2.90	16.03	150 N	3.63	0.53	5.44	40.54	300 N	3.38	0.46	5.66	86.21
			4					12.19										3.86	12.00				7.24	30.30				7.54	64.52
			5					15.24										4.80	9.58				9.04	24.19				9.42	51.55
			6					18.29										5.77	7.99				10.85	20.16				11.33	43.10
7		21.34	6.73	6.84	12.65	17.26		13.21	36.90																				
8		24.38	7.70	6.00	14.48	15.15		15.09	32.29																				
9		27.43	8.66	5.33	16.28	13.45		16.97	28.68																				
11		33.53	10.59	4.36	19.89	11.00		20.75	23.47																				
13		39.62	12.52	3.69	23.50	9.31		24.54	19.89																				
45		3	35	9.91	110 N	3.63		0.46	3.38	16.85	225 N			3.63	0.46	5.33		49.13	400 N				3.76	0.61				6.43	114.94
		4		13.21					4.52	12.66						6.99		36.17										8.38	82.82
		5		16.51					5.64	10.12						9.14		30.53										11.20	75.33
		6		19.81					6.76	8.43						10.80		24.97										12.95	58.31
	7	23.11		7.90			7.23		12.70	21.61		15.37	51.68																
	8	26.42		9.02			6.32		14.48	18.84		17.27	43.72																
	9	29.72		10.16			5.62		16.26	16.72		19.68	39.88																
	11	36.32		12.40			4.60		19.81	13.63		24.26	33.17																
	13	42.93		14.66			3.89		23.37	11.50		28.45	27.62																
	50	3		40			10.29		110 N	3.63		0.53	4.83			20.15	225 N	3.63		0.46	4.62	39.68			400 N	3.76	0.61	5.92	91.53
		4					13.72						6.10			14.44					6.35	30.53						7.80	67.57
		5					17.15						7.87			11.85					7.49	23.29						10.16	57.22
		6					20.57						9.40			9.85					8.89	19.26						11.79	45.56
7		24.00	11.30		8.66	10.54	16.72	14.15			40.61																		
8		27.43	12.70		7.47	11.89	14.48	15.62			33.87																		
9		30.86	14.99		6.93	13.59	13.03	17.91			30.89																		
11		37.72	18.16		5.62	16.71	10.71	21.54			24.72																		
13		44.58	21.34		4.73	19.61	9.01	25.65			21.13																		
15		51.44	24.64		4.10	22.48	7.77	29.21			17.99																		
55		3	45		11.05	125 N	3.76	0.61			5.59		22.89	250 N	3.63	0.46			3.10		31.45	400 N	3.76	0.61				5.31	69.69
		4			14.73						7.72		17.83						4.11		23.54							7.24	53.40
		5			18.41						9.68		14.30						5.16		18.85							9.09	42.87
	6	22.10		11.48	11.77				6.20	15.72	10.64	34.90																	
	7	25.78		13.92	10.54				7.21	13.46	12.24	29.54																	
	8	29.46		15.52	8.97				8.26	11.79	14.10	26.04																	
	9	33.15		18.41	8.49				9.27	10.47	15.82	23.08																	
	11	40.51		21.67	6.63				11.33	8.57	19.30	18.86																	
	13	47.88		25.65	5.62				13.41	7.25	23.11	16.15																	
	15	55.25		29.77	4.91				15.47	6.28	26.54	13.93																	
	60	3		50	11.43				135 N	3.63	0.46	5.59	23.12				275 N	3.76	0.61	6.65	57.53				450 N	4.01	0.76	7.75	122.28
		4			15.24							7.47	17.37							8.86	43.10							10.31	91.28
		5			19.05							9.32	13.87							11.07	34.46							12.90	73.17
6		22.86	11.20		11.58	13.28	28.71	15.47				60.89																	
7		26.67	13.06		9.92	15.49	24.60	18.06				52.26																	
8		30.48	14.94		8.69	17.70	21.52	20.62				45.64																	
9		34.29	16.79		7.71	19.94	19.16	23.22				40.65																	
11		41.91	20.52		6.31	24.36	15.67	28.37				33.23																	
13		49.53	24.26		5.34	28.78	13.25	33.53				28.13																	
15		57.15	27.99		4.63	33.22	11.49	38.68				24.36																	

Product performance

The corrugated spring material is a pre-tempered wire with a rounded-ended round head. Its smooth appearance and circularly wound sinusoidal wave shape make the product performance better than traditional stamping parts; if the load and spring coefficient are more accurate and more It is expected to save 50% space compared to stampings. Wave springs provide users with greater reliability and better performance. Since the spring is made of cold-rolled pre-tempered wire, there is no deformation during the hardening heat treatment. Overall, the mechanical properties and dimensional stability of the wave springs are ideal for applications requiring precision quality. The top wave spring is continuously wound and stacked by a coil of wire, and the elastic coefficient and the spring ring.

Flat end to top wave spring

The top wave spring is also offered with a flat end option. The flat end-to-top wave spring has a 360-degree annular contact surface. When the spring is in close contact with the fitting under the force, the force distribution of the flat end to the top wave spring is more uniform, and can also be stacked to meet the matching with the spare parts.

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