



# Heavy Load Die Spring-Green

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<b>Material</b>	<b>Color</b>	<b>Code</b>		
Equivalent to SWOSC-V	Green	<b>SIMH</b>		
<b>Content</b>	<b>Error</b>			
Load	±10%			
Shape angle	Below 2°			
<b>Free length</b>	<b>Tolerance</b>			
10~50	±0.5			
55~350	±1%			
<b>Outer Dia.</b>	<b>Tolerance</b>			
6~60	0 -0.7			
70	0 -1.0			

Code No.			Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Solid height (mm)	1 million		0.5 million		0.3 million	
Code	Outer Dia. (mm)	Free length (mm)				F=Lx19.2%		F=Lx21.6%		F=Lx24%	
					Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)	
SIMH	6	15	3	38.1(3.89)	11	2.9	110 (11.2)	3.2	123 (12.6)	3.6	137 (14.0)
		20		28.6(2.92)	14.7	3.8		4.3		4.8	
		25		22.9(2.33)	18.4	4.8		5.4		6	
		30		19.1(1.94)	22	5.8		6.5		7.2	
		35		16.3(1.67)	25.7	6.7		7.6		8.4	
		40		14.3(1.46)	29.4	7.7		8.6		9.6	
		45		12.7(1.30)	33	8.6		9.7		10.8	
		50		11.4(1.17)	36.7	9.6		10.8		12	
		55		10.4(1.06)	40.4	10.6		11.9		13.2	
		60		9.5(0.97)	44	11.5		13		14.4	

Code No.			Inner Dia. (mm)	cycle life		1 million		0.5 million		0.3 million	
Code	Outer Dia. (mm)	Free length (mm)		Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx19.2%		F=Lx21.6%		F=Lx24%	
						Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)
SIMH	8	10	4	85.8(8.75)	7.4	1.9	165 (17.0)	2.2	185 (19.0)	2.4	206 (21.0)
		15		57.2(5.83)	10.8	2.9		3.2		3.6	
		20		42.9(4.38)	14.4	3.8		4.3		4.8	
		25		34.3(3.50)	18	4.8		5.4		6	
		30		28.6(2.92)	21.6	5.8		6.5		7.2	
		35		24.5(2.50)	25.2	6.7		7.6		8.4	
		40		21.5(2.19)	28.8	7.7		8.6		9.6	
		45		19.1(1.94)	32.4	8.6		9.7		10.8	
		50		17.2(1.75)	36	9.6		10.8		12	
		55		15.6(1.59)	39.6	10.6		11.9		13.2	
		60		14.3(1.46)	43.2	11.5		13		14.4	
		65		13.2(1.35)	47.7	12.5		14		15.6	
		70		12.3(1.25)	51.4	13.4		15.1		16.8	
		75		11.4(1.17)	55.1	14.4		16.2		18	
		80		10.7(1.09)	58.7	15.4		17.3		19.2	
SIMH	10	10	5	122.6(12.50)	7.4	1.9	235 (24.0)	2.2	265 (27.0)	2.4	294 (30.0)
		15		81.7(8.33)	11	2.9		3.2		3.6	
		20		61.3(6.25)	14.4	3.8		4.3		4.8	
		25		49.0(5.00)	18	4.8		5.4		6	
		30		40.9(4.17)	21.6	5.8		6.5		7.2	
		35		35.0(3.57)	25.2	6.7		7.6		8.4	
		40		30.6(3.13)	28.8	7.7		8.6		9.6	
		45		27.2(2.78)	32.4	8.6		9.7		10.8	
		50		24.5(2.50)	36	9.6		10.8		12	
		55		22.3(2.27)	39.6	10.6		11.9		13.2	
		60		20.4(2.08)	43.2	11.5		13		14.4	
		65		18.9(1.92)	46.8	12.5		14		15.6	
		70		17.5(1.79)	50.4	13.4		15.1		16.8	
		75		16.3(1.67)	54	14.4		16.2		18	
		80		15.3(1.56)	57.6	15.4		17.3		19.2	
90	13.6(1.39)	64.8	17.3	19.4	21.6						

Code No.			cycle life			1 million		0.5 million		0.3 million	
Code	Outer Dia. (mm)	Free length (mm)	Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx19.2%		F=Lx21.6%		F=Lx24%	
						Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)
SIMH	12	15	6	117.1(11.94)	11	2.9	337 (34.4)	3.2	379 (38.7)	3.6	421 (43.0)
		20		87.9(8.96)	14.4	3.8		4.3		4.8	
		25		70.3(7.17)	18	4.8		5.4		6	
		30		58.6(5.97)	21.6	5.8		6.5		7.2	
		35		50.2(5.12)	25.2	6.7		7.6		8.4	
		40		43.9(4.48)	28.8	7.7		8.6		9.6	
		45		39.0(3.98)	32.4	8.6		9.7		10.8	
		50		35.1(3.58)	36	9.6		10.8		12	
		55		31.9(3.26)	39.6	10.6		11.9		13.2	
		60		29.3(2.99)	43.2	11.5		13		14.4	
		65		27.0(2.76)	46.8	12.5		14		15.6	
		70		25.1(2.56)	50.4	13.4		15.1		16.8	
		75		23.4(2.39)	54	14.4		16.2		18	
		80		22.0(2.24)	57.6	15.4		17.3		19.2	
		90		19.5(1.99)	64.8	17.3		19.4		21.6	
SIMH	14	20	7	120.5(12.29)	14.7	3.8	462 (47.0)	4.3	520 (53.0)	4.8	578 (59.0)
		25		96.4(9.83)	18	4.8		5.4		6	
		30		80.4(8.19)	21.6	5.8		6.5		7.2	
		35		68.9(7.02)	25.2	6.7		7.6		8.4	
		40		60.3(6.15)	28.8	7.7		8.6		9.6	
		45		53.6(5.46)	32.4	8.6		9.7		10.8	
		50		48.2(4.92)	36	9.6		10.8		12	
		55		43.8(4.47)	39.6	10.6		11.9		13.2	
		60		40.2(4.10)	43.2	11.5		13		14.4	
		65		37.1(3.78)	46.8	12.5		14		15.6	
		70		34.4(3.51)	50.4	13.4		15.1		16.8	
		75		32.1(3.28)	54	14.4		16.2		18	
		80		30.1(3.07)	57.6	15.4		17.3		19.2	
		90		26.8(2.73)	64.8	17.3		19.4		21.6	
		100		24.1(2.46)	72	19.2		21.6		24	

Code No.			cycle life			1 million		0.5 million		0.3 million		
Code	Outer Dia. (mm)	Free length (mm)	Inner Dia. (mm)	Spring rate N/mm(Kgf/m)	Soild height (mm)	F=Lx19.2%		F=Lx21.6%		F=Lx24%		
						Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)	
SIMH	16	20	8	157.3 (16.04)	14.7	604 (61.6)	680 (69.3)	755 (77.0)	4.3	4.8		
		25		125.9 (12.83)	18				4.8	5.4		6
		30		104.9 (10.69)	21.6				5.8	6.5		7.2
		35		89.9 (9.17)	25.2				6.7	7.5		8.4
		40		78.7 (8.02)	28.8				7.7	8.6		9.6
		45		69.9 (7.13)	32.4				8.6	9.7		10.8
		50		62.9 (6.42)	36				9.6	10.8		12
		55		57.2 (5.83)	39.6				10.6	11.8		13.2
		60		52.4 (5.35)	43.2				11.5	13		14.4
		65		48.4 (4.94)	46.8				12.5	14		15.6
		70		44.9 (4.58)	50.4				13.4	15.1		16.8
		75		42.0 (4.28)	54				14.4	16.2		18
		80		39.3 (4.01)	57.6				15.4	17.3		19.2
		90		35.0 (3.56)	64.8				17.3	19.4		21.6
		100		31.5 (3.21)	72				19.2	21.6		24
SIMH	18	20	9	198.2 (20.21)	14.7	761 (77.6)	856 (87.3)	951 (97.0)	4.3	4.8		
		25		158.5 (16.17)	18				4.8	5.4		6
		30		132.1 (13.47)	21.6				5.8	6.5		7.2
		35		113.2 (11.55)	25.2				6.7	7.5		8.4
		40		99.1 (10.10)	28.8				7.7	8.6		9.6
		45		88.1 (8.98)	32.4				8.6	9.7		10.8
		50		79.3 (8.08)	36				9.6	10.8		12
		55		72.1 (7.35)	39.6				10.6	11.8		13.2
		60		66.1 (6.74)	43.2				11.5	13		14.4
		65		61.0 (6.22)	46.8				12.5	14		15.6
		70		56.6 (5.77)	50.4				13.4	15.1		16.8
		75		52.8 (5.39)	54				14.4	16.2		18
		80		49.5 (5.05)	57.6				15.4	17.3		19.2
		90		44.0 (4.49)	64.8				17.3	19.4		21.6
		100		39.6 (4.04)	72				19.2	21.6		24

Code No.			Inner Dia. (mm)	cycle life		1 million		0.5 million		0.3 million	
Code	Outer Dia. (mm)	Free length (mm)		Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx19.2%		F=Lx21.6%		F=Lx24%	
						Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)
SIMH	20	20	10	245.2 (25.00)	14.7	3.8	941 (96.0)	4.3	1058 (108.0)	4.8	1176 (120.0)
		25		196.1 (20.00)	18	4.8		5.4		6	
		30		163.4 (16.67)	21.6	5.8		6.5		7.2	
		35		140.1 (14.29)	25.2	6.7		7.5		8.4	
		40		122.6 (12.50)	28.8	7.7		8.6		9.6	
		45		109.0 (11.11)	32.4	8.6		9.7		10.8	
		50		98.1 (10.00)	36	9.6		10.8		12	
		55		89.2 (9.09)	39.6	10.6		11.8		13.2	
		60		81.7 (8.33)	43.2	11.5		13		14.4	
		65		75.4 (7.69)	46.8	12.5		14		15.6	
		70		70.0 (7.14)	50.4	13.4		15.1		16.8	
		75		65.4 (6.67)	54	14.4		16.2		18	
		80		61.3 (6.25)	57.6	15.4		17.3		19.2	
		90		54.5 (5.56)	64.8	17.3		19.4		21.6	
		100		49.0 (5.00)	72	19.2		21.6		24	
		125		39.2 (4.00)	90	24		27		30	
150	32.7 (3.33)	108	28.8	32.4	36						
SIMH	22	25	11	237.0 (24.17)	18	4.8	1137 (116.0)	5.4	1279 (130.5)	6	1421 (145.0)
		30		197.5 (20.14)	21.6	5.8		6.5		7.2	
		35		169.3 (17.26)	25.2	6.7		7.5		8.4	
		40		148.1 (15.10)	28.8	7.7		8.6		9.6	
		45		131.7 (13.43)	32.4	8.6		9.7		10.8	
		50		118.5 (12.08)	36	9.6		10.8		12	
		55		107.7 (10.98)	39.6	10.6		11.8		13.2	
		60		98.7 (10.07)	43.2	11.5		13		14.4	
		65		91.2 (9.29)	46.8	12.5		14		15.6	
		70		84.6 (8.63)	50.4	13.4		15.1		16.8	
		75		79.0 (8.06)	54	14.4		16.2		18	
		80		74.1 (7.55)	57.6	15.4		17.3		19.2	
		90		65.8 (6.71)	64.8	17.3		19.4		21.6	
		100		59.2 (6.04)	72	19.2		21.6		24	
		125		47.4 (4.83)	90	24		27		30	
		150		39.5 (4.03)	108	28.8		32.4		36	

Code No.			cycle life			1 million		0.5 million		0.3 million	
Code	Outer Dia. (mm)	Free length (mm)	Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx19.2%		F=Lx21.6%		F=Lx24%	
						Max compression F(mm)	Load N (kaf)	Max compression F(mm)	Load N (kaf)	Max compression F(mm)	Load N (kaf)
SIMH	25	25	12.5	305.6 (31.17)	18	4.8	1466 (149.5)	5.4	1650 (168.3)	6	1833 (187.0)
		30		254.7 (25.97)	21.6	5.8		6.5		7.2	
		35		218.3 (22.26)	25.2	6.7		7.6		8.4	
		40		191.0 (19.48)	28.8	7.7		8.6		9.6	
		45		169.8 (17.31)	32.4	8.6		9.7		10.8	
		50		152.8 (15.58)	36	9.6		10.8		12	
		55		138.9 (14.17)	39.6	10.6		11.9		13.2	
		60		127.3 (12.99)	43.2	11.5		13		14.4	
		65		117.6 (11.99)	46.8	12.5		14		15.6	
		70		109.2 (11.13)	50.4	13.4		15.1		16.8	
		75		101.9 (10.39)	54	14.4		16.2		18	
		80		95.5 (9.74)	57.6	15.4		17.3		19.2	
		90		84.9 (8.66)	64.8	17.3		19.4		21.6	
		100		76.4 (7.79)	72	19.2		21.6		24	
		125		61.1 (6.23)	90	24		27		30	
		150		50.9 (5.19)	108	28.8		32.4		36	
175	43.7 (4.45)	126	33.6	37.8	42						
SIMH	27	25	13.5	357.9 (36.50)	18	4.8	1717 (175.0)	5.4	1931 (197.0)	6	2146 (219.0)
		30		298.3 (30.42)	21.6	5.8		6.5		7.2	
		35		255.7 (26.07)	25.2	6.7		7.6		8.4	
		40		223.7 (22.81)	28.8	7.7		8.6		9.6	
		45		198.9 (20.28)	32.4	8.6		9.7		10.8	
		50		179.0 (18.25)	36	9.6		10.8		12	
		55		162.7 (16.59)	39.6	10.6		11.9		13.2	
		60		149.1 (15.21)	43.2	11.5		13		14.4	
		65		137.7 (14.04)	46.8	12.5		14		15.6	
		70		127.8 (13.04)	50.4	13.4		15.1		16.8	
		75		119.3 (12.17)	54	14.4		16.2		18	
		80		111.9 (11.41)	57.6	15.4		17.3		19.2	
		90		99.4 (10.14)	64.8	17.3		19.4		21.6	
		100		89.5 (9.13)	72	19.2		21.6		24	
		125		71.6 (7.30)	90	24		27		30	
		150		59.7 (6.08)	108	28.8		32.4		36	
175	51.1 (5.21)	126	33.6	37.8	42						

Code No.			Inner Dia. (mm)	cycle life		1 million		0.5 million		0.3 million	
Code	Outer Dia. (mm)	Free length (mm)		Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx19.2%		F=Lx21.6%		F=Lx24%	
						Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)
SIMH	30	25	15	441.3 (45.00)	18	4.8	2117 (216.0)	5.4	2381 (243.0)	6	2646 (270.0)
		30		367.7 (37.50)	21.6	5.8		6.5		7.2	
		35		315.2 (32.14)	25.2	6.7		7.6		8.4	
		40		275.8 (28.13)	28.8	7.7		8.6		9.6	
		45		245.2 (25.00)	32.4	8.6		9.7		10.8	
		50		220.6 (22.50)	36	9.6		10.8		12	
		55		200.6 (20.45)	39.6	10.6		11.9		13.2	
		60		183.9 (18.75)	43.2	11.5		13		14.4	
		65		169.7 (17.31)	46.8	12.5		14		15.6	
		70		157.6 (16.07)	50.4	13.4		15.1		16.8	
		75		147.1 (15.00)	54	14.4		16.2		18	
		80		137.9 (14.06)	57.6	15.4		17.3		19.2	
		90		122.6 (12.50)	64.8	17.3		19.4		21.6	
		100		110.3 (11.25)	72	19.2		21.6		24	
		125		88.3 (9.00)	90	24		27		30	
		150		73.5 (7.50)	108	28.8		32.4		36	
		175		63.0 (6.43)	126	33.6		37.8		42	
200	55.2 (5.63)	144	38.4	43.2	48						
SIMH	35	40	17.5	374.9 (38.23)	28.8	7.7	2878 (294.0)	8.6	3237 (330.0)	9.6	3597 (367.0)
		45		333.2 (33.98)	32.4	8.6		9.7		10.8	
		50		299.9 (30.58)	36	9.6		10.8		12	
		55		272.7 (27.80)	39.6	10.6		11.9		13.2	
		60		249.9 (25.49)	43.2	11.5		13		14.4	
		65		230.7 (23.53)	46.8	12.5		14		15.6	
		70		214.2 (21.85)	50.4	13.4		15.1		16.8	
		75		199.9 (20.39)	54	14.4		16.2		18	
		80		187.4 (19.11)	57.6	15.4		17.3		19.2	
		90		166.6 (16.99)	64.8	17.3		19.4		21.6	
		100		150.0 (15.29)	72	19.2		21.6		24	
		125		120.0 (12.23)	90	24		27		30	
		150		100.0 (10.19)	108	28.8		32.4		36	
		175		85.7 (8.74)	126	33.6		37.8		42	
200	75.0 (7.65)	144	38.4	43.2	48						

Code No.			cycle life			1 million		0.5 million		0.3 million	
Code	Outer Dia. (mm)	Free length (mm)	Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx19.2%		F=Lx21.6%		F=Lx24%	
						Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)
SIMH	40	40	20	490.3 (50.00)	28.8	7.7	3763 (384.0)	8.6	4234 (432.0)	9.6	4704 (480.0)
		45		435.8 (44.44)	33	8.6		9.7		10.8	
		50		392.3 (40.00)	36	9.6		10.8		12	
		55		356.6 (36.36)	40.4	10.6		11.9		13.2	
		60		326.9 (33.33)	43.2	11.5		13		14.4	
		65		301.7 (30.77)	47.7	12.5		14		15.6	
		70		280.2 (28.57)	50.4	13.4		15.1		16.8	
		75		261.5 (26.67)	55.1	14.4		16.2		18	
		80		245.2 (25.00)	57.6	15.4		17.3		19.2	
		90		217.9 (22.22)	64.8	17.3		19.4		21.6	
		100		196.1 (20.00)	72	19.2		21.6		24	
		125		156.9 (16.00)	90	24		27		30	
		150		130.8 (13.33)	108	28.8		32.4		36	
		175		112.1 (11.43)	126	33.6		37.8		42	
		200		98.1 (10.00)	144	38.4		43.2		48	
		225		87.2 (8.89)	162	43.2		48.6		54	
		250		78.5 (8.00)	180	48		54		60	
275	71.3 (7.27)	198	52.8	59.4	66						
300	65.4 (6.67)	220.2	57.6	64.8	72						
SIMH	50	50	25	612.9 (62.50)	36	9.6	5880 (600.0)	10.8	6615 (675.0)	12	7350 (750.0)
		55		557.2 (56.82)	39.6	10.6		11.9		13.2	
		60		510.8 (52.08)	43.2	11.5		13		14.4	
		65		471.5 (48.08)	46.8	12.5		14		15.6	
		70		437.8 (44.64)	50.4	13.4		15.1		16.8	
		75		408.6 (41.67)	54	14.4		16.2		18	
		80		383.1 (39.06)	57.6	15.4		17.3		19.2	
		90		340.5 (34.72)	64.8	17.3		19.4		21.6	
		100		306.5 (31.25)	72	19.2		21.6		24	
		125		245.2 (25.00)	90	24		27		30	
		150		204.3 (20.83)	108	28.8		32.4		36	
		175		175.1 (17.86)	126	33.6		37.8		42	
		200		153.2 (15.63)	144	38.4		43.2		48	



		225		136.2 (13.89)	162	43.2		48.6		54	
		250		122.6 (12.50)	180	48		54		60	
		275		111.4 (11.36)	198	52.8		59.4		66	
		300		102.2 (10.42)	216	57.6		64.8		72	
		350		87.6 (8.93)	256.9	67.2		75.6		84	
			cycle life			1 million		0.5 million		0.3 million	
Code No.						F=Lx19.2%		F=Lx21.6%		F=Lx24%	
Code	Outer Dia. (mm)	Free length (mm)	Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)	Max compression F(mm)	Load N (kgf)
SIMH	60	60	30	735.5 (75.00)	43.2	11.5	8467 (964.0)	13	9526 (971.0)	14.4	10584 (1080.0)
		70		630.4 (64.29)	50.4	13.4		15.1		16.8	
		80		551.6 (56.25)	57.6	15.4		17.3		19.2	
		90		490.3 (50.00)	64.8	17.3		19.4		21.6	
		100		441.3 (45.00)	72	19.2		21.6		24	
		125		353.0 (36.00)	90	24		27		30	
		150		294.2 (30.00)	108	28.8		32.4		36	
		175		252.2 (25.71)	126	33.6		37.8		42	
		200		220.6 (22.50)	144	38.4		43.2		48	
		225		196.1 (20.00)	162	43.2		48.6		54	
		250		176.5 (18.00)	180	48		54		60	
		275		160.5 (16.36)	198	52.8		59.4		66	
		300		147.1 (15.00)	216	57.6		64.8		72	
		350		126.1 (12.86)	256.9	67.2		75.6		84	
SIMH	70	70	38.5	747.2 (76.2)	51.4	13.4	10046 (1024.0)	15.1	11301 (1152.0)	16.8	12557 (1280.0)
		80		653.8 (66.7)	58.7	15.4		17.3		19.2	
		90		581.1 (59.3)	66.1	17.3		19.4		21.6	
		100		523.0 (53.3)	72	19.2		21.6		24	
		125		418.4 (42.7)	90	24		27		30	
		150		348.7 (35.6)	108	28.8		32.4		36	
		175		298.9 (30.5)	126	33.6		37.8		42	
		200		261.5 (26.7)	144	38.4		43.2		48	
		250		209.2 (21.3)	180	48		54		60	
		300		174.3 (17.8)	216	57.6		64.8		72	
		350		149.4 (15.2)	252	67.2		75.6		84	