

Lightest Load Die Spring-Yellow



Material	Color	Code									
Equivalent to SWOSC-V	yellow	SIMF									
Content	Error										
Load	±10%										
Shape angle	under 2°										
Free length	Tolerance	The method of load calculation: Load=Spring rate x compression N=N/mm x Fmm(kgf=N x 0.101972) Soild height is the reference									
6~60	0 -0.7										
70	0 -1.0										
			Cycle life			1 million		0.5 million		0.3 million	
Code No.			Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx40%		F=Lx45%		F=Lx50%	
Code	Outer Dia. (mm)	Free length (mm)				Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)
SIMF	6	15	3	7.8(0.80)	7.1	6	47 (4.8)	6.8	53 (5.4)	7.5	59 (6.0)
		20		5.9(0.60)	9.5	8		9		10	
		25		4.7(0.48)	11.9	10		11.3		12.5	
		30		3.9(0.40)	14.2	12		13.5		15	
		35		3.4(0.34)	16.6	14		15.8		17.5	
		40		2.9(0.30)	19	16		18		20	

			Cycle life			1 million		0.5 million		0.3 million	
Code No.			Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx40%		F=Lx45%		F=Lx50%	
Code	Outer Dia. (mm)	Free length (mm)				Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)
SIMF	8	10	4	15.7(1.60)	4.5	4	63 (6.4)	4.5	71 (7.2)	5	79 (8.0)
		15		10.5(1.07)	6.8	6		6.8		7.5	
		20		7.8(0.80)	9	8		9		10	
		25		6.3(0.64)	11.3	10		11.2		12.5	
		30		5.2(0.53)	13.5	12		13.5		15	
		35		4.5(0.46)	15.8	14		15.7		17.5	
		40		3.9(0.40)	18	16		18		20	
		45		3.5(0.36)	20.3	18		20.2		22.5	
		50		3.1(0.32)	22.5	20		22.5		25	
		55		2.9(0.29)	24.8	22		24.7		27.5	
		60		2.6(0.27)	27	24		27		30	
		65		2.4(0.25)	30.8	26		29.3		32.5	
		70		2.2(0.23)	33.2	28		31.5		35	
		75		2.1(0.21)	35.6	30		33.8		37.5	
		80		2.0(0.20)	37.9	32		36		40	
SIMF	10	10	5	19.6(2.00)	4.5	4	78 (8.0)	4.5	88 (9.0)	5	98 (10.0)
		15		13.1(1.33)	6.8	6		6.8		7.5	
		20		9.8(1.00)	9	8		9		10	
		25		7.8(0.80)	11.3	10		11.2		12.5	
		30		6.5(0.67)	13.5	12		13.5		15	
		35		5.6(0.57)	15.8	14		15.7		17.5	
		40		4.9(0.50)	18	16		18		20	
		45		4.4(0.44)	20.3	18		20.2		22.5	
		50		3.9(0.40)	22.5	20		22.5		25	
		55		3.6(0.36)	24.8	22		24.7		27.5	
		60		3.3(0.33)	27	24		27		30	
		65		3.0(0.31)	29.3	26		29.2		32.5	
		70		2.8(0.29)	31.5	28		31.5		35	
		75		2.6(0.27)	33.8	30		33.7		37.5	
		80		2.5(0.25)	36	32		36		40	
90	2.2(0.22)	40.5	36	40.5	45						

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=Lx40%		F=Lx45%		F=Lx50%	
						Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)
SIMF	12	15	6	18.3(1.87)	6.8	110 (11.2)	124 (12.6)	6.8	137 (14.0)		
		20		13.7(1.40)	9			8		9	10
		25		11.0(1.12)	11.3			10		11.2	12.5
		30		9.2(0.93)	13.5			12		13.5	15
		35		7.8(0.80)	15.8			14		15.7	17.5
		40		6.9(0.70)	18			16		18	20
		45		6.1(0.62)	20.3			18		20.2	22.5
		50		5.5(0.56)	22.5			20		22.5	25
		55		5.0(0.51)	24.8			22		24.7	27.5
		60		4.6(0.47)	27			24		27	30
		65		4.2(0.43)	29.3			26		29.2	32.5
		70		3.9(0.40)	31.5			28		31.5	35
		75		3.7(0.37)	33.8			30		33.7	37.5
		80		3.4(0.35)	36			32		36	40
		90		3.1(0.31)	40.5			36		40.5	45
SIMF	14	20	7	17.7(1.80)	9	141 (14.4)	159 (16.2)	9	177 (18.0)		
		25		14.1(1.44)	11.3			10		11.2	12.5
		30		11.8(1.20)	13.5			12		13.5	15
		35		10.1(1.03)	15.8			14		15.7	17.5
		40		8.8(0.90)	18			16		18	20
		45		7.8(0.80)	20.3			18		20.2	22.5
		50		7.1(0.72)	22.5			20		22.5	25
		55		6.4(0.65)	24.8			22		24.7	27.5
		60		5.9(0.60)	27			24		27	30
		65		5.4(0.55)	29.3			26		29.2	32.5
		70		5.0(0.51)	31.5			28		31.5	35
		75		4.7(0.48)	33.8			30		33.7	37.5
		80		4.4(0.45)	36			32		36	40
		90		3.9(0.40)	40.5			36		40.5	45
		100		3.5(0.36)	45			40		45	50

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=Lx40%		F=Lx45%		F=Lx50%				
						Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)			
SIMF	16	20	8	20.6 (2.10)	9	165 (17.0)	8	9	185 (19.0)	10	206 (21.0)			
		25		16.5(1.68)	11.3							10	11.2	12.5
		30		13.7(1.40)	13.5							12	13.5	15
		35		11.8(1.20)	15.8							14	15.7	17.5
		40		10.3(1.05)	18							16	18	20
		45		9.2(0.93)	20.3							18	20.2	22.5
		50		8.2(0.84)	22.5							20	22.5	25
		55		7.5(0.76)	24.8							22	24.7	27.5
		60		6.9(0.70)	27							24	27	30
		65		6.3(0.65)	29.3							26	29.2	32.5
		70		5.9(0.60)	31.5							28	31.5	35
		75		5.5(0.56)	33.8							30	33.7	37.5
		80		5.1(0.53)	36							32	36	40
		90		4.6(0.47)	40.5							36	40.5	45
		100		4.1(0.42)	45							40	45	50
125	3.3(0.34)	56.3	50	56.3	62.5									
SIMF	18	20	9	25.5(2.60)	9	204 (20.8)	8	9	229 (23.4)	10	255 (26.0)			
		25		20.4(2.08)	11.3							10	11.2	12.5
		30		17.0(17.3)	13.5							12	13.5	15
		35		14.6(1.49)	15.8							14	15.7	17.5
		40		12.7(1.30)	18							16	18	20
		45		11.3(1.16)	20.3							18	20.2	22.5
		50		10.2(1.04)	22.5							20	22.5	25
		55		9.3(0.95)	24.8							22	24.7	27.5
		60		8.5(0.87)	27							24	27	30
		65		7.8(0.80)	29.3							26	29.2	32.5
		70		7.3(0.74)	31.5							28	31.5	35
		75		6.8(0.69)	33.8							30	33.7	37.5
		80		6.4(0.65)	36							32	36	40
		90		5.7(0.58)	40.5							36	40.5	45
		100		5.1(0.52)	45							40	45	50
125	4.1(0.42)	56.3	50	56.3	62.5									

			Cycle life			1 million		0.5 million		0.3 million	
Code No.			Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx40%		F=Lx45%		F=Lx50%	
Code	Outer Dia. (mm)	Free length (mm)				Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)
SIMF	20	20	11	31.4(3.20)	9	8	251 (25.6)	9	282 (28.8)	10	314 (32.0)
		25		25.1(2.56)	11.3	10		11.2		12.5	
		30		20.9(2.13)	13.5	12		13.5		15	
		35		17.9(1.83)	15.8	14		15.7		17.5	
		40		15.7(1.60)	18	16		18		20	
		45		13.9(1.42)	20.3	18		20.2		22.5	
		50		12.6(1.28)	22.5	20		22.5		25	
		55		11.4(1.16)	24.8	22		24.7		27.5	
		60		10.5(1.07)	27	24		27		30	
		65		9.7(0.98)	29.3	26		29.2		32.5	
		70		9.0(0.91)	31.5	28		31.5		35	
		75		8.4(0.85)	33.8	30		33.7		37.5	
		80		7.8(0.80)	36	32		36		40	
		90		7.0(0.71)	40.5	36		40.5		45	
		100		6.3(0.64)	45	40		45		50	
125	5.0(0.51)	56.3	50	56.2	62.5						
150	4.2(0.43)	67.5	60	67.5	75						
SIMF	22	25	11	31.4(3.20)	11.3	10	314 (32.0)	11.2	353 (36.0)	12.5	392 (40.0)
		30		26.2(2.67)	13.5	12		13.5		15	
		35		22.4(2.29)	15.8	14		15.7		17.5	
		40		19.6(2.00)	18	16		18		20	
		45		17.4(1.78)	20.3	18		20.2		22.5	
		50		15.7(1.60)	22.5	20		22.5		25	
		55		14.3(1.45)	24.8	22		24.7		27.5	
		60		13.1(1.33)	27	24		27		30	
		65		12.1(1.23)	29.3	26		29.2		32.5	
		70		11.2(1.14)	31.5	28		31.5		35	
		75		10.5(1.07)	33.8	30		33.7		37.5	
		80		9.8(1.00)	36	32		36		40	
		90		8.7(0.89)	40.5	36		40.5		45	
		100		7.8(0.80)	45	40		45		50	
		125		6.3(0.64)	56.3	50		56.2		62.5	
150	5.2(0.53)	67.5	60	67.5	75						

			Cycle life			1 million		0.5 million		0.3 million	
Code No.			Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx40%		F=Lx45%		F=Lx50%	
Code	Outer Dia. (mm)	Free length (mm)				Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)
SIMF	25	25	13.5	39.2(4.00)	11.3	10	392 (40.0)	11.2	441 (45.0)	12.5	490 (50.0)
		30		32.7(3.33)	13.5	12		13.5			
		35		28.0(2.86)	15.8	14		15.7			
		40		24.5(2.50)	18	16		18			
		45		21.8(2.22)	20.3	18		20.2			
		50		19.6(2.00)	22.5	20		22.5			
		55		17.8(1.82)	24.8	22		24.7			
		60		16.3(1.67)	27	24		27			
		65		15.1(1.54)	29.3	26		29.2			
		70		14.0(1.43)	31.5	28		31.5			
		75		13.1(1.33)	33.8	30		33.7			
		80		12.3(1.25)	36	32		36			
		90		10.9(1.11)	40.5	36		40.5			
		100		9.8(1.00)	45	40		45			
		125		7.8(0.80)	56.3	50		56.2			
		150		6.5(0.67)	67.5	60		67.5			
175	5.6(0.57)	78.8	70	78.7							
200	4.9(0.50)	90	80	90							
SIMF	27	25	13.5	47.1(4.80)	11.3	10	471 (48.0)	11.2	530 (54.0)	12.5	588 (60.0)
		30		39.2(4.00)	13.5	12		13.5			
		35		33.6(3.43)	15.8	14		15.7			
		40		29.4(3.00)	18	16		18			
		45		26.2(2.67)	20.3	18		20.2			
		50		23.5(2.40)	22.5	20		22.5			
		55		21.4(2.18)	24.8	22		24.7			
		60		19.6(2.00)	27	24		27			
		65		18.1(1.85)	29.3	26		29.2			
		70		16.8(1.71)	31.5	28		31.5			
		75		15.7(1.60)	33.8	30		33.7			
		80		14.7(1.50)	36	32		36			
		90		13.1(1.33)	40.5	36		40.5			
100	11.8(1.20)	45	40	45							

		125		9.4(0.96)	56.3	50		56.2		62.5	
		150		7.8(0.80)	67.5	60		67.5		75	
		175		6.7(0.69)	78.8	70		78.7		87.5	
		200		5.9(0.60)	90	80		90		100	
			Cycle life			1 million		0.5 million		0.3 million	
Code No.						F=Lx40%		F=Lx45%		F=Lx50%	
Code	Outer Dia. (mm)	Free length (mm)	Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)
SIMF	30	25	16	56.5(5.76)	11.3	10	565 (57.6)	11.2	635 (64.8)	12.5	706 (72.0)
		30		47.1(4.80)	13.5	12		13.5		15	
		35		40.3(4.11)	15.8	14		15.7		17.5	
		40		35.3(3.60)	18	16		18		20	
		45		31.4(3.20)	20.3	18		20.2		22.5	
		50		28.2(2.88)	22.5	20		22.5		25	
		55		25.7(2.62)	24.8	22		24.7		27.5	
		60		23.5(2.40)	27	24		27		30	
		65		21.7(2.22)	29.3	26		29.2		32.5	
		70		20.2(2.06)	31.5	28		31.5		35	
		75		18.8(1.92)	33.8	30		33.7		37.5	
		80		17.7(1.80)	36	32		36		40	
		90		15.7(1.60)	40.5	36		40.5		45	
		100		14.1(1.44)	45	40		45		50	
		125		11.3(1.15)	56.3	50		56.2		62.5	
		150		9.4(0.96)	67.5	60		67.5		75	
175	8.1(0.82)	78.8	70	78.7	87.5						
200	7.1(0.72)	90	80	90	100						

			Cycle life			1 million		0.5 million		0.3 million		
Code No.			Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx40%		F=Lx45%		F=Lx50%		
Code	Outer Dia. (mm)	Free length (mm)				Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)	
SIMF	35	40	19	48.1(4.90)	18	768 (78.0)	16	18	864 (88.0)	20	960 (98.0)	
		45		42.7(4.36)	20.3							18
		50		38.4(3.92)	22.5							20
		55		34.9(3.56)	24.8							22
		60		32.0(3.27)	27							24
		65		29.6(3.02)	29.3							26
		70		27.5(2.80)	31.5							28
		75		25.6(2.61)	33.8							30
		80		24.0(2.45)	36							32
		90		21.4(2.18)	40.5							36
		100		19.2(1.96)	45							40
		125		15.4(1.57)	56.3							50
		150		12.8(1.31)	67.5							60
		175		11.0(1.12)	78.8							70
200	9.6(0.98)	90	80									
SIMF	40	40	22	62.8(6.40)	18	1003 (102.0)	16	18	1129 (115.0)	20	1254 (128.0)	
		45		55.8(5.69)	21.3							18
		50		50.2(5.12)	22.5							20
		55		45.6(4.65)	26.1							22
		60		41.8(4.27)	27							24
		65		38.6(3.94)	30.8							26
		70		35.9(3.66)	31.5							28
		75		33.5(3.41)	35.6							30
		80		31.4(3.20)	36							32
		90		27.9(2.84)	40.5							36
		100		25.1(2.56)	45							40
		125		20.1(2.05)	56.3							50
		150		16.7(1.71)	67.5							60
		175		14.3(1.46)	78.8							70
200	12.6(1.28)	90	80									
225	11.2(1.14)	101	90									

		250		10.0(1.02)	112.5	100		112.5		125	
		275		9.1(0.93)	124	110		123.8		137.5	
		300		8.4(0.85)	142.2	120		135		150	
			Cycle life			1 million		0.5 million		0.3 million	
Code No.			Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx40%		F=Lx45%		F=Lx50%	
Code	Outer Dia. (mm)	Free length (mm)				Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)
SIMF	50	50	27.5	75.8(8.00)	22.5	20	1568 (160.0)	22.5	1764 (180.0)	25	1960 (200.0)
		55		71.3(7.27)	24.8	22		24.8		27.5	
		60		65.4(6.67)	27	24		27		30	
		65		60.3(6.15)	29.3	26		29.3		32.5	
		70		56.0(5.71)	31.5	28		31.5		35	
		75		52.3(5.33)	33.8	30		33.8		37.5	
		80		49.0(5.00)	36	32		36		40	
		90		43.6(4.44)	40.35	36		40.5		45	
		100		39.2(4.00)	45	40		45		50	
		125		31.4(3.20)	56.3	50		56.2		62.5	
		150		26.2(2.67)	67.5	60		67.5		75	
		175		22.4(2.29)	78.8	70		78.7		87.5	
		200		19.6(2.00)	90	80		90		100	
		225		17.4(1.78)	101	90		101.3		112.5	
		250		15.7(1.60)	112.5	100		112.5		125	
		275		14.3(1.45)	124	110		123.8		137.5	
		300		13.1(1.33)	135	120		135		150	
		350		11.2(1.14)	165.9	140		157.5		175	
		400		9.8(1.00)	189.6	160		180		200	
		450		8.7(0.89)	213.3	180		202.5		225	
500	7.8(0.80)	237	200	225	250						

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=Lx40%		F=Lx45%		F=Lx50%			
						Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)	Max compression F(mm)	Load (kgf)		
SIMF	60	60	33	94.1(9.60)	27	2256 (230.0)	24	27	2538 (259.0)	30	2820 (288.0)		
		70		80.7(8.23)	31.5			28				31.5	35
		80		70.6(7.20)	36			32				36	40
		90		62.8(6.40)	40.5			36				40	45
		100		56.5(5.76)	45			40				45	50
		125		45.2(4.61)	56.3			50				56.2	62.5
		150		37.7(3.84)	67.5			60				67.5	75
		175		32.3(3.29)	78.8			70				78.7	87.5
		200		28.2(2.88)	90			80				90	100
		225		25.1(2.56)	101.3			90				101.3	112.5
		250		22.6(2.30)	112.5			100				112.5	125
		275		20.5(2.09)	123.8			110				123.8	137.5
		300		18.8(1.92)	135			120				135	150
		350		16.1(1.65)	165.9			140				157.5	175
		400		14.1(1.44)	189.6			160				180	200
		450		12.6(1.28)	213.3			180				202.5	225
500	11.3(1.15)	237	200	225	250								
SIMF	70	70	38.5	112.1(11.4)	33.2	3136 (320.0)	28	28	3528 (360.0)	35	3920 (400.0)		
		80		98.1(10.0)	37.9			32				32	40
		90		87.2(8.9)	42.7			36				36	45
		100		78.5(8.0)	47.4			40				40	50
		125		62.8(6.4)	59.3			50				50	62.5
		150		52.3(5.3)	71.1			60				60	75
		175		44.8(4.6)	83			70				70	87.5
		200		39.2(4.0)	94.8			80				80	100
		250		31.4(3.2)	118.5			100				100	125
		300		26.2(2.7)	142.2			120				120	150
350	22.4(2.3)	165.9	140	140	175								