


Middle Deflection Die Spring-Orange

Material	Color	Code					
Equivalent to SWOSC-V	orange	SIMS					
Content	Error						
Load	20%~-10%						
Shape angle	under 3°						
Free length	Tolerance						
20~300	±2%						
Code No.			Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx40%	
Code	Outer Dia. (mm)	Free length (mm)				Max compression F(mm)	Load (kgf)
SIMS	10.5	5.5	20	10.79(1.10)	10	8	87.2 (8.8)
			25	8.63(0.88)	12.5	10	
			30	7.19(0.73)	15	12	
			35	6.16(0.63)	17.5	14	
			40	5.39(0.55)	20	16	
			45	4.79(0.49)	22.5	18	
			50	4.31(0.44)	25	20	
			55	3.92(0.40)	27.5	22	
			60	3.60(0.37)	30	24	
			65	3.32(0.34)	32.5	26	
			70	3.08(0.31)	35	28	
			75	2.88(0.29)	37.5	30	
			80	2.70(0.28)	40	32	
SIMS	12.5	6.5	20	15.20(1.55)	10	8	122 (12.4)
			25	12.16(1.24)	12.5	10	
			30	10.13(1.03)	15	12	
			35	8.69(0.89)	17.5	14	
			40	7.60(0.78)	20	16	
			45	6.76(0.69)	22.5	18	
			50	6.08(0.62)	25	20	
			55	5.53(0.56)	27.5	22	
			60	5.07(0.52)	30	24	
			65	4.68(0.48)	32.5	26	
			70	4.34(0.44)	35	28	
			75	4.05(0.41)	37.5	30	
			80	3.80(0.39)	40	32	

Code No.			Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx40%	
Code	Outer Dia. (mm)	Free length (mm)				Max compression F(mm)	Load (kgf)
SIMS	14.5	20	8.5	24.52(2.50)	10	8	196 (20.0)
		25		19.61(2.00)	12.5	10	
		30		16.34(1.67)	15	12	
		35		14.01(1.43)	17.5	14	
		40		12.26(1.25)	20	16	
		45		10.90(1.11)	22.5	18	
		50		9.81(1.00)	25	20	
		55		8.92(0.91)	27.5	22	
		60		8.17(0.83)	30	24	
		65		7.54(0.77)	32.5	26	
		70		7.00(0.71)	35	28	
		75		6.54(0.67)	37.5	30	
		80		6.13(0.63)	40	32	
		90		5.45(0.56)	45	36	
		100		4.90(0.50)	50	40	
		125		3.92(0.40)	62.5	50	
150	3.27(0.33)	75	60				
SIMS	17	25	10.5	29.42(3.00)	12.5	10	294.2 (30.0)
		30		24.52(2.50)	15	12	
		35		21.01(2.14)	17.5	14	
		40		18.39(1.88)	20	16	
		45		16.34(1.67)	22.5	18	
		50		14.71(1.50)	25	20	
		55		13.37(1.36)	27.5	22	
		60		12.26(1.25)	30	24	
		65		11.32(1.15)	32.5	26	
		70		10.51(1.07)	35	28	
		75		9.81(1.00)	37.5	30	
		80		9.19(0.94)	40	32	
		90		8.17(0.83)	45	36	
		100		7.35(0.75)	50	40	
		125		5.88(0.60)	62.5	50	
		150		4.90(0.50)	75	60	
SIMS	21	30	13.5	35.14(3.58)	15	12	422 (43.0)
		35		30.12(3.07)	17.5	14	
		40		26.36(2.69)	20	16	
		45		23.43(2.39)	22.5	18	
		50		21.08(2.15)	25	20	
		55		19.17(1.95)	27.5	22	
		60		17.57(1.79)	30	24	
		65		16.22(1.65)	32.5	26	
		70		15.06(1.54)	35	28	
		75		14.06(1.43)	37.5	30	
		80		13.18(1.34)	40	32	
		90		11.71(1.19)	45	36	
		100		10.54(1.08)	50	40	
		110		9.58(0.98)	55	44	
		120		8.79(0.90)	60	48	
		125		8.43(0.86)	62.5	50	
		130		8.11(0.83)	65	52	
		140		7.53(0.77)	70	56	
150	7.03(0.72)	75	60				
175	6.02(0.61)	87.5	70				
200	5.27(0.54)	100	80				

Code No.			Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx40%	
Code	Outer Dia. (mm)	Free length (mm)				Max compression F(mm)	Load (kgf)
SIMS	26	30	16.5	47.40(4.83)	15	12	569 (58.0)
		35		40.63(4.14)	17.5	14	
		40		35.55(3.63)	20	16	
		45		31.60(3.22)	22.5	18	
		50		28.44(2.90)	25	20	
		55		25.85(2.64)	27.5	22	
		60		23.70(2.42)	30	24	
		65		21.88(2.23)	32.5	26	
		70		20.31(2.07)	35	28	
		75		18.96(1.93)	37.5	30	
		80		17.77(1.81)	40	32	
		90		15.80(1.61)	45	36	
		100		14.22(1.45)	50	40	
		110		12.93(1.32)	55	44	
		120		11.85(1.21)	60	48	
		125		11.38(1.16)	62.5	50	
		130		10.94(1.12)	65	52	
		140		10.16(1.04)	70	56	
		150		9.48(0.97)	75	60	
		175		8.13(0.83)	87.5	70	
200	7.11(0.73)	100	80				
225	6.32(0.64)	112.5	90				
250	5.70(0.58)	125	100				
SIMS	31	40	21	49.03(5.00)	20	16	784 (80.0)
		45		43.58(4.44)	22.5	18	
		50		39.23(4.00)	25	20	
		55		35.66(3.64)	27.5	22	
		60		32.69(3.33)	30	24	
		65		30.17(3.08)	32.5	26	
		70		28.02(2.86)	35	28	
		75		26.15(2.67)	37.5	30	
		80		24.52(2.50)	40	32	
		90		21.79(2.22)	45	36	
		100		19.61(2.00)	50	40	
		110		17.83(1.82)	55	44	
		120		16.34(1.67)	60	48	
		125		15.69(1.60)	62.5	50	
		130		15.09(1.54)	65	52	
		140		14.01(1.43)	70	56	
		150		13.08(1.33)	75	60	
		160		12.26(1.25)	80	64	
		170		11.54(1.18)	85	68	
		175		11.21(1.14)	87.5	70	
180	10.90(1.11)	90	72				
190	10.32(1.05)	95	76				
200	9.81(1.00)	100	80				
250	7.85(0.80)	125	100				
300	6.54(0.67)	150	120				

Code No.			Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx40%	
Code	Outer Dia. (mm)	Free length (mm)				Max compression F(mm)	Load (kgf)
SIMS	37	40	26	52.10 (5.31)	20	16	834 (85.0)
		45		46.31 (4.72)	22.5	18	
		50		41.68 (4.25)	25	20	
		55		37.89 (3.86)	27.5	22	
		60		34.73 (3.54)	30	24	
		65		32.06 (3.27)	32.5	26	
		70		29.77 (3.04)	35	28	
		75		27.79 (2.83)	37.5	30	
		80		26.05 (2.66)	40	32	
		90		23.15 (2.36)	45	36	
		100		20.84 (2.13)	50	40	
		110		18.94 (1.93)	55	44	
		120		17.37 (1.77)	60	48	
		125		16.67 (1.70)	62.5	50	
		130		16.03 (1.63)	65	52	
		140		14.89 (1.52)	70	56	
		150		13.89 (1.42)	75	60	
		160		13.02 (1.33)	80	64	
		170		12.26 (1.25)	85	68	
		175		11.91 (1.21)	87.5	70	
		180		11.58 (1.18)	90	72	
190	10.97 (1.12)	95	76				
200	10.42 (1.06)	100	80				
250	8.34 (0.85)	125	100				
300	6.95 (0.71)	150	120				
SIMS	44.5	50	31	50.01 (5.10)	25	20	1003 (102.0)
		60		41.68 (4.25)	30	24	
		70		35.72 (3.64)	35	28	
		80		31.26 (3.19)	40	32	
		90		27.79 (2.83)	45	36	
		100		25.01 (2.55)	50	40	
		110		22.73 (2.32)	55	44	
		120		20.84 (2.13)	60	48	
		130		19.24 (1.96)	65	52	
		140		17.86 (1.82)	70	56	
		150		16.67 (1.70)	75	60	
		160		15.63 (1.59)	80	64	
		170		14.71 (1.50)	85	68	
		180		13.89 (1.42)	90	72	
		190		13.16 (1.34)	95	76	
		200		12.50 (1.28)	100	80	
		225		11.11 (1.13)	112.5	90	
250	10.00 (1.02)	125	100				
275	9.09 (0.93)	137.5	110				
300	8.34 (0.85)	150	120				

Code No.			Inner Dia. (mm)	Spring rate N/mm(Kgf/mm)	Soild height (mm)	F=Lx40%	
Code	Outer Dia. (mm)	Free length (mm)				Max compression F(mm)	Load (kgf)
SIMS	46	50	33	63.74 (6.50)	25	20	1275 (130.0)
		60		53.12 (5.42)	30	24	
		70		45.53 (4.64)	35	28	
		80		39.84 (4.06)	40	32	
		90		35.41 (3.61)	45	36	
		100		31.87 (3.25)	50	40	
		110		28.97 (2.95)	55	44	
		120		26.56 (2.71)	60	48	
		125		25.50 (2.60)	62.5	50	
		130		24.52 (2.50)	65	52	
		140		22.77 (2.32)	70	56	
		150		21.25 (2.17)	75	60	
		175		18.21 (1.86)	87.5	70	
		200		15.94 (1.63)	100	80	
		225		14.17 (1.44)	112.5	90	
		250		12.75 (1.30)	125	100	
		275		11.59 (1.18)	137.5	110	
300	10.62 (1.08)	150	120				
SIMS	52	60	37	65.38 (6.67)	30	24	1570 (160.0)
		70		56.04 (5.71)	35	28	
		80		49.03 (5.00)	40	32	
		90		43.58 (4.44)	45	36	
		100		39.23 (4.00)	50	40	
		110		35.66 (3.64)	55	44	
		120		32.69 (3.33)	60	48	
		130		30.17 (3.08)	65	52	
		140		28.02 (2.86)	70	56	
		150		26.15 (2.67)	75	60	
		175		22.42 (2.29)	87.5	70	
		200		19.61 (2.00)	100	80	
		225		17.43 (1.78)	112.5	90	
		250		15.69 (1.60)	125	100	
275	14.26 (1.45)	137.5	110				
300	13.08 (1.33)	150	120				