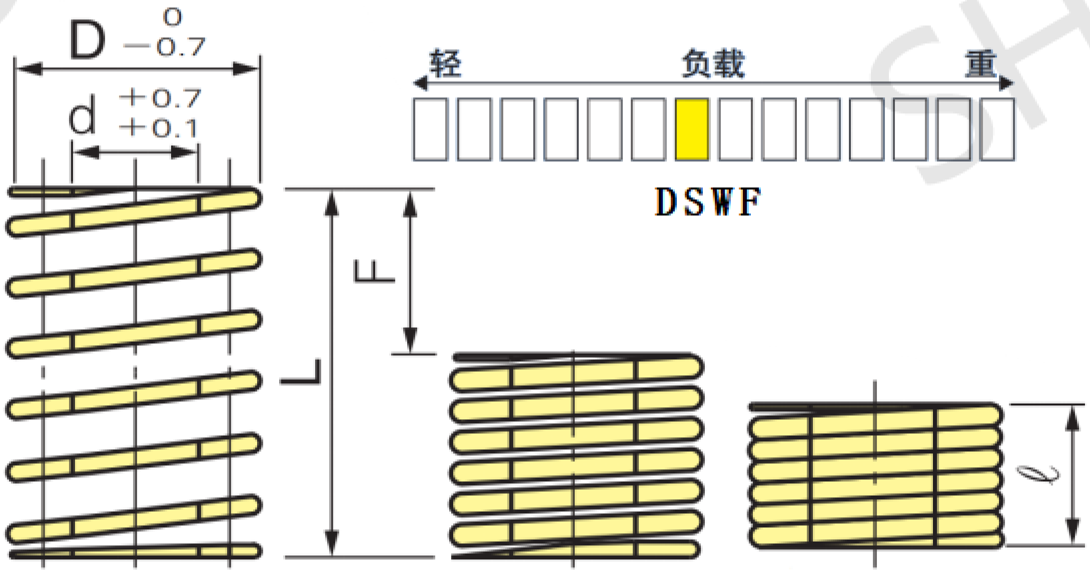
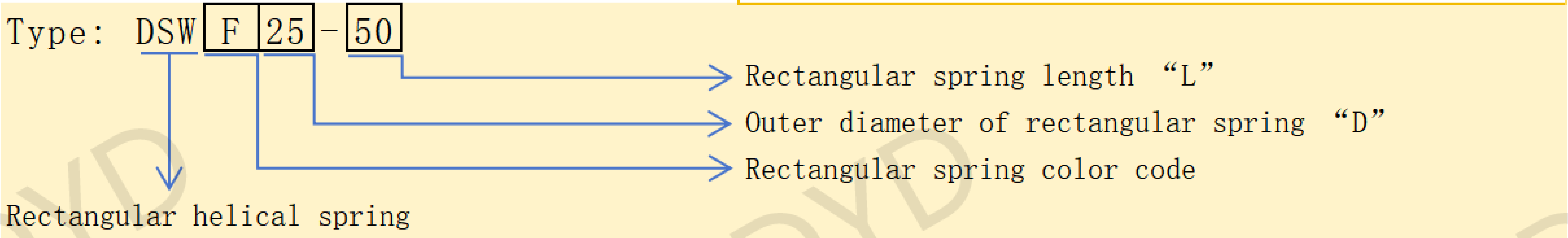


Outer diameter tolerance:−0.7~0mm when D=6~60;
D=70,−1.0~0mm
Inner diameter tolerance: d+0.1~+0.7 mm
Load tolerance:±10%
Verticality:below 2°
Free length tolerance:±0.5mm when L<=50;L>=55,1%
Winding direction:Right winding



Type: DSW F 25 - 50

Rectangular spring length “L”

Outer diameter of rectangular spring “D”

Rectangular spring color code

Rectangular helical spring

D	d	L	Spring constant N/mm {kgf/mm}	Limit deformation ℓ min	F=L*40%		F=L*45%		F=L*50%		Catalog No.			
					Fmm	N (kgf)	Fmm	N (kgf)	Fmm	N (kgf)	Type	D	-	L
Frequency of use:					1000000 times		500,000 times		300,000 times					
6	3	15	7.8 {0.80}	7.1	6.0	47 {4.8}	6.8	53 {5.4}	7.5	59 {6.0}	DSWF	6	-	15
		20	5.9 {0.60}	9.5	8.0		9.0		10.0					20
		25	4.7 {0.48}	11.9	10.0		11.3		12.5					25
		30	3.9 {0.40}	14.2	12.0		13.5		15.0					30
		35	3.4 {0.34}	16.6	14.0		15.9		17.5					35
		40	2.9 {0.30}	19.0	16.0		18.0		20.0					40
8	4	10	15.7 {1.60}	4.5	4.0	63 {6.4}	4.5	71 {7.2}	5.0	79 {8.0}	DSWF	8	-	10
		15	10.5 {1.07}	6.8	6.0		6.8		7.5					15
		20	7.8 {0.80}	9.0	8.0		9.0		10.0					20
		25	6.3 {0.64}	11.3	10.0		11.2		12.5					25
		30	5.2 {0.53}	13.5	12.0		13.5		15.0					30
		35	4.5 {0.46}	15.8	14.0		15.7		17.5					35
		40	3.9 {0.40}	18	16.0		18.0		20.0					40
		45	3.5 {0.36}	20.3	18.0		20.2		22.5					45
		50	3.1 {0.32}	22.5	20.0		22.5		25.0					50
		55	2.9 {0.29}	24.8	22.0		24.7		27.5					55
		60	2.6 {0.27}	27.0	24.0		27.0		30.0					60
		65	2.4 {0.25}	30.8	26.0		29.3		32.5					65
		70	2.2 {0.23}	33.2	28.0		31.5		35.0					70
		75	2.1 {0.21}	35.6	30.0		33.8		37.5					75
		80	2.0 {0.20}	37.9	32.0		36.0		40.0					80
10	5	10	19.6 {2.00}	4.5	4.0	78 {8.0}	4.5	88 {9.0}	5.0	98 {10}	DSWF	10	-	10
		15	13.1 {1.33}	6.8	6.0		6.8		7.5					15
		20	9.8 {1.00}	9.0	8.0		9.0		10.0					20
		25	7.8 {0.80}	11.3	10.0		11.2		12.5					25
		30	6.5 {0.67}	13.5	12.0		13.5		15.0					30
		35	5.9 {0.57}	15.8	14.0		15.7		17.5					35
		40	4.9 {0.50}	18	16.0		18.0		20.0					40
		45	4.4 {0.44}	20.3	18.0		20.2		22.5					45
		50	3.9 {0.40}	22.5	20.0		22.5		25.0					50
		55	3.6 {0.36}	24.8	22.0		24.7		27.5					55
		60	3.3 {0.33}	27	24.0		27.0		30.0					60
		65	3.0 {0.31}	29.3	26.0		29.2		32.5					65
		70	2.8 {0.29}	31.5	28.0		31.5		35.0					70
		75	2.6 {0.27}	33.8	30.0		33.7		37.5					75
		80	2.5 {0.25}	36	32.0		36.0		40.0					80
		90	2.2 {0.22}	40.5	36.0		40.5		45.0					90
12	6	15	18.3 {1.87}	6.8	6.0	110 {11}	6.8	124 {13}	7.5	137 {14}	DSWF	16	-	15
		20	13.7 {1.40}	9	8.0		9.0		10.0					20
		25	11.0 {1.12}	11.3	10.0		11.2		12.5					25
		30	9.2 {0.93}	13.5	12.0		13.5		15.0					30
		35	7.8 {0.80}	15.8	14.0		15.7		17.5					35
		40	6.9 {0.70}	18	16.0		18.0		20.0					40
		45	6.1 {0.62}	20.3	18.0		20.2		22.5					45
		50	5.5 {0.56}	22.5	20.0		22.5		25.0					50
		55	5.0 {0.51}	24.8	22.0		24.7		27.5					55
		60	4.6 {0.47}	27.0	24.0		27.0		30.0					60
		65	4.2 {0.43}	29.3	26.0		29.2		32.5					65
		70	3.9 {0.40}	31.5	28.0		31.5		35.0					70
		75	3.7 {0.37}	33.8	30.0		33.7		37.5					75
		80	3.4 {0.35}	36.0	32.0		36.0		40.0					80
		90	3.1 {0.31}	40.5	36.0		40.5		45.0					90
14	7	20	17.7 {1.80}	9.0	8.0	141 {14}	9.0	159 {16}	10.0	177 {18}	DSWF	14	-	20
		25	14.1 {1.44}	11.3	10.0		11.2		12.5					25
		30	11.8 {1.20}	13.5	12.0		13.5		15					30
		35	10.1 {1.03}	15.8	14.0		15.7		17.5					35
		40	8.8 {0.90}	18.0	16.0		18.0		20.0					40
		45	7.8 {0.80}	20.3	18.0		20.2		22.5					45
		50	7.1 {0.72}	22.5	20.0		22.5		25.0					50
		55	6.4 {0.65}	24.8	22.0		24.7		27.5					55
		60	5.9 {0.60}	27.0	24.0		27.0		30.0					60
		65	5.4 {0.55}	29.3	26.0		29.2		32.5					65
		70	5.0 {0.51}	31.5	28.0		31.5		35.0					70
		75	4.7 {0.48}	33.8	30.0		33.7		37.5					75
		80	4.4 {0.45}	36.0	32.0		36.0		40.0					80
		90	3.9 {0.40}	40.5	36.0		40.5		45.0					90
		100	3.5 {0.36}	45.0	40.0		45.0		50.0					100
16	8	20	20.6 {2.10}	9.0	8.0	165 {17}	9.0	185 {19}	10.0	206 {21}	DSWF	16	-	20
		25	16.5 {1.68}	11.3	10.0		11.2		12.5					25
		30	13.7 {1.40}	13.5	12.0		13.5		15.0					30
		35	11.8 {1.20}	15.8	14.0		15.7		17.5					35
		40	10.3 {1.05}	18.0	16.0		18.0		20.0					40
		45	9.2 {0.93}	20.3	18.0		20.2		22.5					45
		50	8.2 {0.84}	22.5	20.0		22.5		25.0					50
		55	7.5 {0.76}	24.8	22.0		24.7		27.5					55
		60	6.9 {0.70}	27.0	24.0		27.0		30.0					60
		65	6.3 {0.65}	29.3	26.0		29.2		32.5					65
		70	5.9 {0.60}	31.5	28.0		31.5		35.0					70
		75	5.5 {0.56}	33.8	30.0		33.7		37.5					75
		80	5.1 {0.53}	36.0	32.0		36.0		40.0					80
		90	4.6 {0.47}	40.5	36.0		40.5		45.0					90
		100	4.1 {0.42}	45.0	40.0		45.0		50.0					100
		125	3.3 {0.34}	56.3	50.0		56.3		62.5					125
18	9	20	25.5 {2.60}	9.0	8.0	204 {21}	9.0	229 {23}	10.0	255 {26}	DSWF	18	-	20
		25	20.4 {2.08}	11.3	10.0		11.2		12.5					25
		30	17.0 {1.73}	13.5	12.0		13.5		15.0					30
		35	14.6 {1.49}	15.8	14.0		15.7		17.5					35
		40	12.7 {1.30}	18.0	16.0		18.0		20.0					40
		45	11.3 {1.16}	20.3	18.0		20.2		22.5					45
		50	10.2 {1.04}	22.5	20.0		22.5		25.0					50
		55	9.3 {0.95}	24.8	22.0		24.7		27.5					55
		60	8.5 {0.87}	27.0	24.0		27.0		30.0					60
		65	7.8 {0.80}	29.3	26.0		29.2		32.5					65
		70	7.3 {0.74}	31.5	28.0		31.5		35.0					70
		75	6.8 {0.69}	33.8	30.0		33.7		37.5					75
		80	6.4 {0.65}	36.0	32.0		36.0		40.0					80
		90	5.7 {0.58}	40.5	36.0		40.5		45.0					90
		100	5.1 {0.52}	45.0	40.0		45.0		50.0					100
		125	4.1 {0.42}	56.3	50.0		56.3		62.5					125
20	11	20	31.4 {3.20}	9.0	8.0	251 {26}	9.0	282 {29}	10.0	314 {32}	DSWF	20	-	20
		25	25.1 {2.56}	11.3	10.0		11.2		12.5					25
		30	20.9 {2.13}	13.5	12.0		13.5		15.0					30
		35	17.9 {1.83}	15.8	14.0		15.7		17.5					35
		40	15.7 {1.60}	18.0	16.0		18.0		20.0					40
		45	13.9 {1.42}	20.3	18.0		20.2		22.5					45
		50	12.6 {1.28}	22.5	20.0		22.5		25.0					50
		55	11.4 {1.16}	24.8	22.0		24.7		27.5					55
		60	10.5 {1.07}	27.0	24.0		27.0		30.0					60
		65	9.7 {0.98}	29.3	26.0		29.2		32.5					65
		70	9.0 {0.91}	31.5	28.0		31.5		35.0					70
		75	8.4 {0.85}	33.8	30.0		33.7		37.5					75
		80	7.8 {0.80}	36.0	32.0		36.0		40.0					80
		90	7.0 {0.71}	40.5	36.0		40.5		45.0					90
		100	6.3 {0.64}	45.0	40.0		45.0		50.0					100
		125	5.0 {0.51}	56.3	50.0		56.2		62.5					125
		150	4.2 {0.43}	67.5	60.0		67.5		75.0					150
22	11	25	31.4 {3.20}	11.3	10.0	314 {32}	11.2	353 {36}	12.5	392 {40}	DSWF	22	-	25
		30	26.2 {2.67}	13.5	12.0		13.5		15					30
		35	22.4 {2.29}	15.8	14.0		15.7		17.5					35
		40	19.6 {2.00}	18.0	16.0		18		20					40
		45	17.4 {1.78}	20.3	18.0		20.2		22.5					45
		50	15.7 {1.60}	22.5	20.0		22.5		25					50
		55	14.3 {1.45}	24.8	22.0		24.7		27.5					55
		60	13.1 {1.33}	27.0	24.0		27		30					60
		65	12.1 {1.23}	29.3	26.0		29.2		32.5					65
		70	11.2 {1.14}	31.5	28.0		31.5		35					70
		75	10.5 {1.07}	33.8	30.0		33.7		37.5					75
		80	9.8 {1.00}	36.0	32.0		36		40					80
		90	8.7 {0.89}	40.5	36.0		40.5		45					90
		100	7.8 {0.80}	45.0	40.0		45		50					100
		125	6.3 {0.64}	56.3	50.0		56.2		62.5					125
		150	5.2 {0.53}	67.5	60.0		67.5		75					
25	13.5	25	39.2 {4.00}	11.3	10.0	392 {40}	11.2	441 {45}	12.5	490 {50}	DSWF	25	-	25
		30	32.7 {3.33}	13.5	12.0		13.5		15.0					30
		35	28.0 {2.86}	15.8	14.0		15.7		17.5					35
		40	24.5 {2.50}	18.0	16.0		18.0		20.0					40
		45	21.8 {2.22}	20.3	18.0		20.2		22.5					45
		50	19.6 {2.00}	22.5	20.0		22.5		25.0					50
		55	17.8 {1.82}	24.8	22.0		24.7		27.5					55
		60	16.3 {1.67}	27.0	24.0		27.0		30.0					60
		65	15.1 {1.54}	29.3	26.0		29.2		32.5					65
		70	14.0 {1.43}	31.5	28.0		31.5		35.0					70
		75	13.1 {1.33}	33.8	30.0		33.7		37.5					75
		80	12.3 {1.25}	36.0	32.0		36.0		40.0					80
		90	10.9 {1.11}	40.5	36.0		40.5		45.0					90
		100	9.8 {1.00}	45.0	40.0		45.0		50.0					100
		125	7.8 {0.80}	56.3	50.0		56.2		62.5					125
		150	6.5 {0.67}	67.5	60.0		67.5		75.0					150
		175	5.6 {0.57}	78.8	70.0		78.7		87.5					175
		200	4.9 {0.50}	90.0	80.0		90.0		100.0					200
27	13.5	25	47.1 {4.80}	11.3	10.0	471 {48}	11.2	530 {54}	12.5	588 {60}	DSWF	27	-	25
		30	39.2 {4.00}	13.5	12.0		13.5		15.0					30
		35	33.6 {3.43}	15.8	14.0		15.7		17.5					35
		40	29.4 {3.00}	18.0	16.0		18.0		20.0					40
		45	26.2 {2.67}	20.3	18.0		20.2		22.5					45
		50	23.5 {2.40}	22.5	20.0		22.5		25.0					50
		55	21.4 {2.18}	24.8	22.0		24.7		27.5					55
		60	19.6 {2.00}	27.0	24.0		27.0		30.0					60
		65	18.1 {1.85}	29.3	26.0		29.2		32.5					65
		70	16.8 {1.71}	31.5	28.0		31.5		35.0					70
		75	15.7 {1.60}	33.8	30.0		33.7		37.5					75
		80	14.7 {1.50}	36.0	32.0		36.0		40.0					80
		90	13.1 {1.33}	40.5	36.0		40.5		45.0					90
		100	11.8 {1.20}	45.0	40.0		45.0		50.0					100
		125	9.4 {0.96}	56.3	50.0		56.2		62.5					125
		150	7.8 {0.80}	67.5	60.0		67.5		75.0					150
		175	6.7 {0.69}	78.8	70.0		78.7		87.5					175
		200	5.9 {0.60}	90.0	80.0		90.0		100.0					200
30	16	25	56.5 {5.76}	11.3	10.0	565 {58}	11.2	635 {65}	12.5	706 {72}	DSWF	30	-	25
		30	47.1 {4.80}	13.5	12.0		13.5		15.0					30
		35	40.3 {4.11}	15.8	14.0		15.7		17.5					35
		40	35.3 {3.60}	18.0	16.0		18.0		20.0					40
		45	31.4 {3.20}	20.3	18.0		20.2		22.5					45
		50	28.2 {2.88}	22.5	20.0		22.5		25.0					50
		55	25.7 {2.62}	24.8	22.0		24.7		27.5					55
		60	23.5 {2.40}	27.0	24.0		27.0		30.0					60
		65	21.7 {2.22}	29.3	26.0		29.2		32.5					65
		70	20.2 {2.06}	31.5	28.0		31.5		35.0					70
		75	18.8 {1.92}	33.8	30.0		33.7		37.5					75
		80	17.7 {1.80}	36.0	32.0		36.0		40.0					80
		90	15.7 {1.60}	40.5	36.0		40.5		45.0					90
		100	14.1 {1.44}	45.0	40.0		45.0		50.0					100
		125	11.3 {1.15}	56.3	50.0		56.2		62.5					125
		150	9.4 {0.96}	67.5	60.0		67.5		75.0					150
		175	8.1 {0.82}	78.8	70.0		78.7		87.5					175
		200	7.1 {0.72}	90.0	80.0		90.0		100.0					200
35	19	40	48.0 {4.89}	18.0	16.0	768 {78}	18.0	864 {88}	20.0	960 {98}	DSWF	35	-	40
		45	42.7 {4.35}	20.3	18.0		20.2		22.5					45
		50	38.4 {3.92}	22.5	20.0		22.5		25.0					50
		55	34.9 {3.56}	24.8	22.0		24.7		27.5					55
		60	32.0 {3.26}	27.0	24.0		27.0		30.0					60
		65	29.5 {3.01}	29.3	26.0		29.2		32.5					65
		70	27.4 {2.80}	31.5	28.0		31.5		35.0					70
		75	25.6 {2.61}	33.8	30.0		33.7		37.5					75
		80	24.0 {2.45}	36.0	32.0		36.0		40.0					80
		90	21.3 {2.18}	40.5	36.0		40.5		45.0					90
		100	19.2 {1.96}	45.0	40.0		45.0		50.0					100
		125	15.4 {1.57}	56.3	50.0		56.2		62.5					125
		150	12.8 {1.31}	67.5	60.0		67.5		75.0					150
		175	11.0 {1.12}	78.8	70.0		78.7		87.5					175
		200	9.6 {0.98}	90.0	80.0		90.0		100.0					200
40	22	40	62.7 {6.39}	18.0	16.0	1003 {102}	18.0	1129 {115}	20.0	1254 {128}	DSWF	40	-	40
		45	55.7 {5.68}	20.3	18.0		20.2		22.5					45
		50	50.2 {5.11}	22.5	20.0		22.5		25.0					50
		55	45.6 {4.65}	24.8	22.0		24.7		27.5					55
		60	41.8 {4.26}	27.0	24.0		27.0		30.0					60
		65	38.6 {3.93}	29.3	26.0		29.2		32.5					65
		70	35.8 {3.65}	31.5	28.0		31.5		35.0					70
		75	33.4 {3.41}	33.8	30.0		33.7		37.5					75
		80	31.4 {3.20}	36.0	32.0		36.0		40.0					80
		90	27.9 {2.84}	40.5	36.0		40.5		45.0					90
		100	25.1 {2.56}	45.0	40.0		45.0		50.0					100
		125	20.1 {2.05}	56.3	50.0		56.2		62.5					125
		150	16.7 {1.70}	67.5	60.0		67.5		75.0					150
		175	14.3 {1.46}	78.8	70.0		78.7		87.5					175
		200	12.5 {1.28}	90.0	80.0		90.0		100.0					200
		225	11.1 {1.14}	101.0	90.0		101.3		112.5					225
		250	10.0 {1.02}	112.5	100.0		112.5		125.0					250
		275	9.1 {0.93}	124.0	110.0		123.8		137.5					275
		300	8.4 {0.85}	142.2	120.0		135.0		150.0					300
50	27.5	50	78.4 {7.99}	22.5	20.0	1568 {160}	22.5	1764 {180}	25	1960 {200}	DSWF	50	-	50
		55	71.3 {7.27}	24.8	22		24.7		27.5					55
		60	65.3 {6.66}	27	24		27		30					60
		65	60.3 {6.15}	29.3	26		29.2		32.5					65
		70	56.0 {5.71}	31.5	28		31.5		35					70
		75	52.3 {5.33}	33.8	30		33.7		37.5					75
		80	49.0 {5.00}	36	32		36		40					80
		90	43.6 {4.44}	40.5	36		40.5		45					90
		100	39.2 {4.00}	45	40		45		50					100
		125	31.4 {3.20}	56.3	50		56.2		62.5					125
		150	26.1 {2.66}	67.5	60		67.5		75					150
		175	22.4 {2.28}	78.8	70		78.7		87.5					175
		200	19.6 {2.00}	90	80		90		100					200
		225	17.4 {1.78}	101	90		101.3		112.5					225
		250	15.7 {1.60}	112.5	100		112.5		125					250
		275	14.3 {1.45}	124	110		123.8		137.5					275
		300	13.1 {1.33}	142.2	120		135		150					300
		350	11.2 {1.14}	165.9	140		157.5		175					350
		400	9.8 {1.00}	189.6	160		180		200					400
		450	8.7 {0.89}	213.3	180		202.5		225					450
		500	7.8 {0.80}	237	200		225		250					500
60	33	60	94.0 {9.59}	27	24	2256 {230}	27	2538 {259}	30	2820 {288}	DSWF	60	-	60
		70	80.6 {8.22}	31.5	28		31.5		35					70
		80	70.5 {7.19}	36	32		36		40					80
		90	62.7 {6.39}	40.5	36		40.5		45					90
		100	56.4 {5.75}	45	40		45		50					100
		125	45.1 {4.60}	56.3	50		56.2		62.5					125
		150	37.6 {3.83}	67.5	60		67.5		75					150
		175	32.2 {3.29}	78.8	70		78.7		87.5					175
		200	28.2 {2.88}	90	80		90		100					200
		225	25.1 {2.56}	101	90		101.3		112.5					225
		250	22.6 {2.30}	112.5	100		112.5		125					250
		275	20.5 {2.09}	124	110		123.8		137.5					275
		300	18.8 {1.92}	142.2	120		135		150					300
		350	16.1 {1.64}	165.9	140		157.5		175					350
		400	14.1 {1.44}	189.6	160		180		200					400
		450	12.5 {1.28}	213.3	180		202.5		225					450
		500	11.3 {1.15}	237	200		225		250					500
70	38.5	70	112 {11.4}	31.5	28	3136 {320}	31.5	3528 {360}	35	3920 {400}	DSWF	70	-	70
		80	98.0 {9.99}	36	32		36		40					80
		90	87.1 {8.88}	40.5	36		40.5		45					90
		100	78.4 {7.99}	45	40		45		50					100
		125	62.7 {6.40}	56.3	50		56.2		62.5					125
		150	52.3 {5.33}	67.5	60		67.5		75					150
		175	44.8 {4.57}	78.8	70		78.7		87.5					175
		200	39.2 {4.00}	90	80		90		100					200
		250	31.4 {3.20}	112.5	100		112.5		125					250
		300	26.1 {2.66}	142.2	120		135		150					300
		350	22.4 {2.28}	165.9	140		157.5		175					350