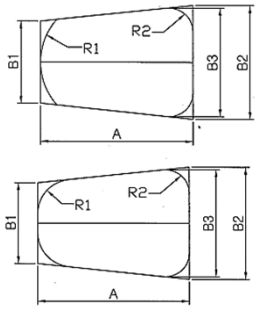





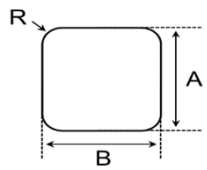


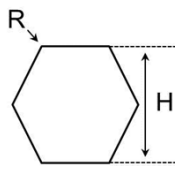
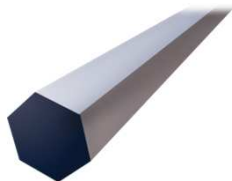



DEFORMED SPRING WIRE

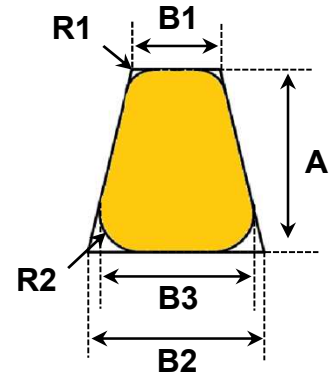
Item	Shape	Size (mm)	Image	Application
Trapezoid		<p>A : 7.5 ~ 15.0</p> <p>B3 : 3.5 ~ 10.5</p> <p>R : Natural R or Customer</p>		
Flat		<p>W : 8.0 ~ 16.0</p> <p>T : 3.0 ~ 8.0</p> <p>R : Natural R or Customer</p>		
Square		<p>A : 5.0 ~ 12.0</p> <p>B : 5.0 ~ 12.0</p> <p>R : Natural R or Customer</p>		
Hexagon		<p>H : 5.0 ~ 15.0</p> <p>R : Natural R or Customer</p>		

DEFORMED SPRING WIRE

◆ TRAPEZOID SHAPED WIRE

1. SIZE RANGE

Item	Size (mm)	Tolerance (mm)	Edge
Trapezoid	A : 7.5 ~ 15.0 B3 : 3.5 ~ 10.5	A : ± 0.10 B3 : ± 0.10	Natural R or Customer



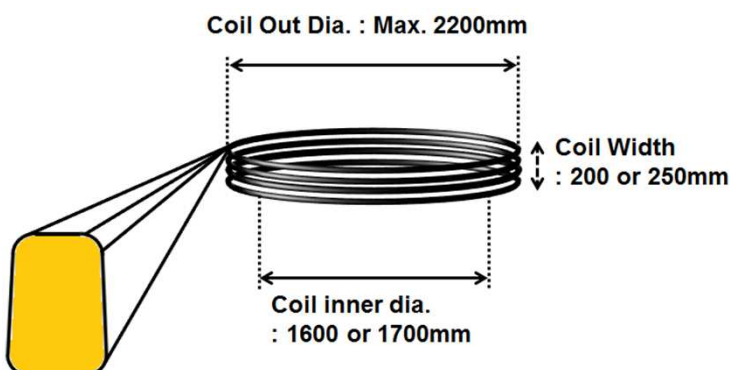
2. CHEMICAL COMPOSITION

Type	Element (wt.%)						
	C	Si	Mn	P	S	Cr	V
Carbon	0.59 ~ 0.66	0.15 ~ 0.35	0.60 ~ 0.90	Max. 0.040	Max. 0.040	-	-
Cr-Si Alloy	0.51 ~ 0.59	1.20 ~ 1.60	0.50 ~ 0.80	Max. 0.035	Max. 0.040	0.50 ~ 0.80	-
Cr-Si-V Alloy	0.51 ~ 0.68	1.20 ~ 1.65	0.55 ~ 0.80	Max. 0.020	Max. 0.015	0.60 ~ 0.80	0.08 ~ 0.25

3. MECHANICAL PROPERTIES

Type	Grade	Size (Round Base)	Tensile Strength (N/mm ²)	Reduction of Area (%)
Carbon	DSW - 150 ~ 165	Min. Φ 6mm	1,420 ~ 1,715	Min.35
Cr-Si Alloy	DSW - 175 ~ 210	Min. Φ 6mm	1,670 ~ 2,110	Min.35
Cr-Si-V Alloy	DSW - 200 ~ 220	Min. Φ 6mm	1,910 ~ 2,205	Min.30

4. COIL DIMENSION



5. APPLICATION

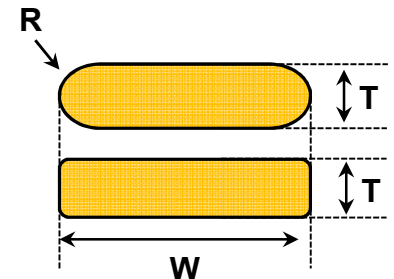


DEFORMED SPRING WIRE

◆ FLAT SHAPED WIRE

1. SIZE RANGE

Item	Size (mm)	Tolerance (mm)	Edge
Flat	W : 8.0 ~ 16.0 T : 3.0 ~ 8.0	W : ± 0.10 T : ± 0.05	Natural R or Customer



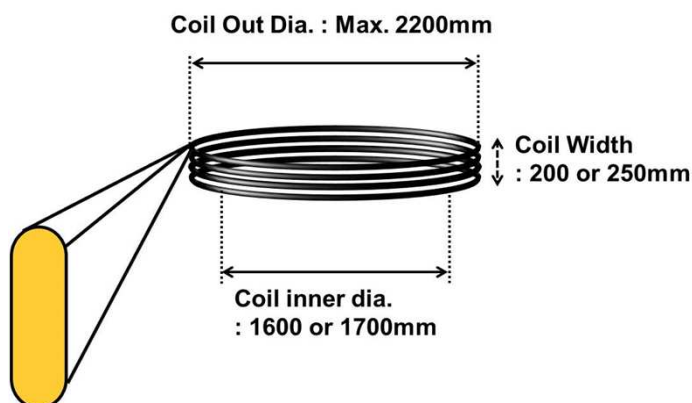
2. CHEMICAL COMPOSITION

Type	Element (wt.%)						
	C	Si	Mn	P	S	Cr	V
Carbon	0.59 ~ 0.66	0.15 ~ 0.35	0.60 ~ 0.90	Max. 0.040	Max. 0.040	-	-
Cr-Si Alloy	0.51 ~ 0.59	1.20 ~ 1.60	0.50 ~ 0.80	Max. 0.035	Max. 0.040	0.50 ~ 0.80	-
Cr-Si-V Alloy	0.51 ~ 0.68	1.20 ~ 1.65	0.55 ~ 0.80	Max. 0.020	Max. 0.015	0.60 ~ 0.80	0.08 ~ 0.25

3. MECHANICAL PROPERTIES

Type	Grade	Size (Round Base)	Tensile Strength (N/mm ²)	Reduction of Area (%)
Carbon	DSW - 150 ~ 165	Min. Φ 6mm	1,420 ~ 1,715	Min.35
Cr-Si Alloy	DSW - 175 ~ 210	Min. Φ 6mm	1,670 ~ 2,110	Min.35
Cr-Si-V Alloy	DSW - 200 ~ 220	Min. Φ 6mm	1,910 ~ 2,205	Min.30

4. COIL DIMENSION



5. APPLICATION

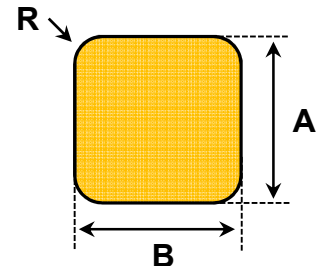


DEFORMED SPRING WIRE

◆ SQUARE SHAPED WIRE

1. SIZE RANGE

Item	Size (mm)	Tolerance (mm)	Edge
Square	A : 5.0 ~ 12.0 B : 5.0 ~ 12.0	A, B : ± 0.05	Natural R or Customer



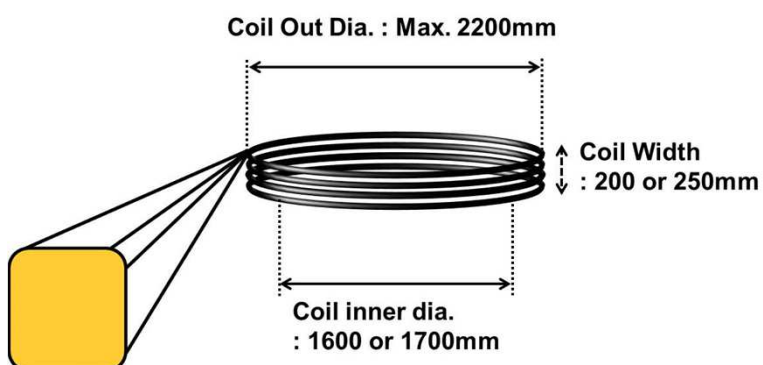
2. CHEMICAL COMPOSITION

Type	Element (wt.%)						
	C	Si	Mn	P	S	Cr	V
Carbon	0.59 ~ 0.66	0.15 ~ 0.35	0.60 ~ 0.90	Max. 0.040	Max. 0.040	-	-
Cr-Si Alloy	0.51 ~ 0.59	1.20 ~ 1.60	0.50 ~ 0.80	Max. 0.035	Max. 0.040	0.50 ~ 0.80	-
Cr-Si-V Alloy	0.51 ~ 0.68	1.20 ~ 1.65	0.55 ~ 0.80	Max. 0.020	Max. 0.015	0.60 ~ 0.80	0.08 ~ 0.25

3. MECHANICAL PROPERTIES

Type	Grade	Size (Round Base)	Tensile Strength (N/mm ²)	Reduction of Area (%)
Carbon	DSW - 150 ~ 165	Min. Φ 6mm	1,420 ~ 1,715	Min.35
Cr-Si Alloy	DSW - 175 ~ 210	Min. Φ 6mm	1,670 ~ 2,110	Min.35
Cr-Si-V Alloy	DSW - 200 ~ 220	Min. Φ 6mm	1,910 ~ 2,205	Min.30

4. COIL DIMENSION



5. APPLICATION

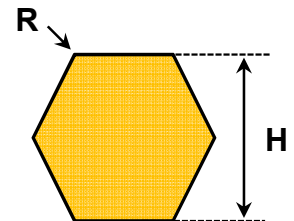


DEFORMED SPRING WIRE

◆ HEXAGON SHAPED WIRE

1. SIZE RANGE

Item	Size (mm)	Tolerance (mm)	Edge
Hexagon	H : 6.0 ~ 15.0	H : ± 0.05	Natural R or Customer



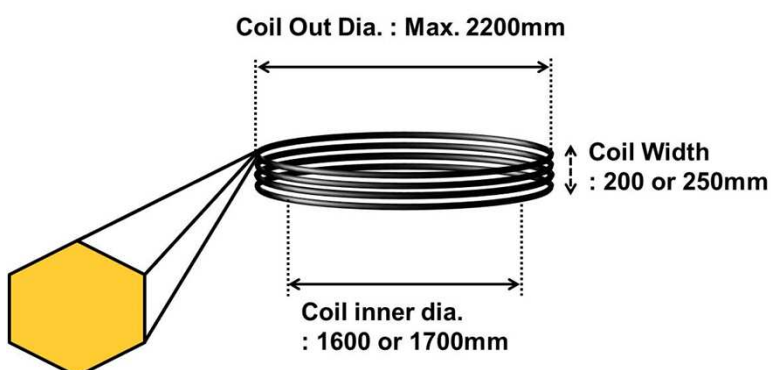
2. CHEMICAL COMPOSITION

Type	Element (wt.%)						
	C	Si	Mn	P	S	Cr	V
Carbon	0.59 ~ 0.66	0.15 ~ 0.35	0.60 ~ 0.90	Max. 0.040	Max. 0.040	-	-
Cr-Si Alloy	0.51 ~ 0.59	1.20 ~ 1.60	0.50 ~ 0.80	Max. 0.035	Max. 0.040	0.50 ~ 0.80	-
Cr-Si-V Alloy	0.51 ~ 0.68	1.20 ~ 1.65	0.55 ~ 0.80	Max. 0.020	Max. 0.015	0.60 ~ 0.80	0.08 ~ 0.25

3. MECHANICAL PROPERTIES

Type	Grade	Size (Round Base)	Tensile Strength (N/mm ²)	Reduction of Area (%)
Carbon	DSW - 150 ~ 165	Min. Φ 6mm	1,420 ~ 1,715	Min.35
Cr-Si Alloy	DSW - 175 ~ 210	Min. Φ 6mm	1,670 ~ 2,110	Min.35
Cr-Si-V Alloy	DSW - 200 ~ 220	Min. Φ 6mm	1,910 ~ 2,205	Min.30

4. COIL DIMENSION



5. APPLICATION

