

## JIS G3466

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### ● Production Standard of JIS G3466

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#### ● JIS G3466

JIS G3466 is a Japanese Industrial Standard that specifies the requirements for carbon steel square and rectangular tubes used in general structural applications. These tubes are designed for strength and durability in construction and engineering projects. The standard covers dimensions, tolerances, mechanical properties, and chemical composition to ensure the reliability and performance of the tubes in structural applications.

### ● Dimensions and Sizes of JIS G3466

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<b>Standard</b>	JIS G3466	
<b>Application</b>	Used for civil engineering architecture and other structures	
<b>Steel Grade</b>	STKR400	STKR490
<b>Manufacturing</b>	ERW and Seamless into square tubes.	
<b>Dimension</b>	Square	20*20 to 350*350

	Rectangular	30*20 to 400*200				
<b>Wall thickness</b>	Square	1.2 – 12.5 mm				
	Rectangular	1.2 – 12 mm				
<b>Chemical Composition</b>	–	C	Si	Mn	P	S
	STKR400	≤0.25	–	–	≤0.04	≤0.04
	STKR490	≤0.18	≤0.55	≤1.5	≤0.04	≤0.04
<b>Mechanical Properties</b>		Tensile Strength(Mpa)		Yield Strength(Mpa)		Elongation %
	STKR400	≥400		≥245		≥23
	STKR490	≥490		≥325		≥23
<b>Wall thickness tolerance</b>	Welded	Under 3mm {0.3mm}, 3mm or over {10%}				
	Seamless	Under 45mm {0.6mm}, 45mm or over {15%}				
<b>Test</b>	Chemical analysis					
	Tensile test					
<b>Comparative Standard</b>	ASTM A500 {Gr.B Gr.C}					
	EN10025 {S275JR S355J0}					
	KS {SPSR400 SPSR490}					

### --Production Tolerance of JIS G3466

Specified item and dimension		Dimensional tolerances
Length of side	≤100 mm	±1.5mm
	> 100 mm	±1.5%
Unevenness of flat plate portion of each side	Side length ≤100 mm	0.5 mm max
	Side length > 100 mm	Within 0.5% of side length
Angularity made by adjacent flat plate portions		±1.5%
Dimension at corner: s		3mm max
Length		+ not specified 0

Unstraightness		Within 0.3% of side length	
Wall thickness	Square steel tube manufactured by welding	< 3 mm	±0.3mm
		≥3 mm	±10%
	Seamless square steel tube	< 4 mm	±0.6mm
		≥4 mm	±15%

### ●Chemical Composition of JIS G3466

Chemical Composition (%)					
Symbol of Grade	C	Si	Mn	P	S
STKR400	0.25 max.	–	–	0.040 max.	0.040 max.
STKR490	0.18 max.	0.55 max.	1.50 max.	0.040 max.	0.040 max.

Note If necessary, Other alloy elements than those given in this table may be added.

### ●Mechanical Properties Tensile Strength and Yield Strength of JIS G3466

Mechanical Properties				
Symbol of Grade	Tensile Strength N/mm <sup>2</sup>	Yield Point or Proof Stress N/mm <sup>2</sup>	Elongation %	
			Tensile Test piece	Test direction
			Test piece No.5	Tube axis direction
STKR400	400 min.	245 min.	23 min.	
STKR490	490 min.	325 min.	23 min.	

NOTE: 1 N/mm<sup>2</sup>=1 MPa