

JIS G3452

- Production Standard of JIS G3452
- Dimensions, Weight and Dimensional Tolerances of JIS G3452
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- Mechanical Properties of JIS G3452



● Production Standard of JIS G3452

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JIS G3452 is one of the Japanese industrial standards for carbon steel pipes. It describes the pipes that are used in the piping for the conveyance of steam, water, oil, gas, air, and other fluids. The working pressures are quite modest in this case. The standard is published by the Japanese Industrial Standards Committee. JIS G3452 is mainly used in low-pressure applications such as planar heat exchangers, non-critical pipeline components, and narrative discussions of thermal designs and stress analysis.

In addition, this standard can be applied to hot-dip galvanized pipes in accordance with JIS G3445. When used in conjunction with JIS G3461, it can also be applied to pipe components such as boilers and high-pressure services. Finally, when used in thermal design and stress analysis, only the material strengths specified in this standard shall be used.

● Dimensions, Weight and Dimensional Tolerances of JIS G3452

JIS G3452 Dimensions, Weights and Dimensional Tolerances						
Nominal Diameter		O.D.	O.D. Tolerances		W.T.	Unit Mass Excluding Socket kg/m
A	B	mm	Pipes to be Cut in Taper Thread	Other Pipes	mm	

6	1/8	10.5	±0.5mm	±0.5mm	2	+Not specified -12.50%	0.419
8	1/4	13.8	±0.5mm	±0.5mm	2.3		0.652
10	3/8	17.3	±0.5mm	±0.5mm	2.3		0.851
15	1/2	21.7	±0.5mm	±0.5mm	2.8		1.31
20	3/4	27.2	±0.5mm	±0.5mm	2.8		1.68
25	1	34	±0.5mm	±0.5mm	3.2		2.43
32	1 1/4	42.7	±0.5mm	±0.5mm	3.5		3.38
40	1 1/2	48.6	±0.5mm	±0.5mm	3.5		3.89
50	2	60.5	±0.5mm	±1%	3.8		5.31
65	2 1/2	76.3	±0.7mm	±1%	4.2		7.47
80	3	89.1	±0.8mm	±1%	4.2		8.79
90	3 1/2	101.6	±0.8mm	±1%	4.2		10.1
100	4	114.3	±0.8mm	±1%	4.5		12.2
125	5	139.8	±0.8mm	±1%	4.5		15
150	6	165.2	±0.8mm	±1.6mm	5		19.8
175	7	190.7	±0.9mm	±1.6mm	5.3		24.2
200	8	216.3	±1.0mm	±0.8%	5.8		30.1
225	9	241.8	±1.2mm	±0.8%	6.2		36
250	10	267.4	±1.3mm	±0.8%	6.6		42.4
300	12	318.5	±1.5mm	±0.8%	6.9		53
350	14	355.6	–	±0.8%	7.9	67.7	
400	16	406.4	–	±0.8%	7.9	77.6	
450	18	457.2	–	±0.8%	7.9	87.5	
500	20	508	–	±0.8%	7.9	97.4	

●Chemical Composition of JIS G3452

Steel Grade	P	S
SGP	0.040max.	0.040max.

●Mechanical Properties of JIS G3452

Designation of symbol	Tensile strength N /mm ²	Elongation a)%						
		Tensile test	Tensile test	Wall thickness				
				Over 3	Over 4	Over 5	Over 6	Over 7

		piece	direction	mm up to and incl .4 mm	mm up to and incl .5 mm	mm up to and incl .6 mm	mm up to and incl .7 mm	mm to and excl .8 mm
SGP	290 min.	No .11 test piece	Parallel to the pipe axis	30min.	30min.	30min.	30min.	30min.
		No .12 test piece	Parallel to the pipe axis	24min.	26min.	27min.	28min.	30min.
		No .5 test piece	Perpen – dicular to the pipe axis	19min.	20min.	22min.	24min.	25min.

NOTE: 1N/mm²=1MPa Note a) The specification for elongation in this table shall not apply to the pipes whose nominal diameter is 32A or under, but the elongation shall be still recorded. Elongation may be specified upon the agreement between the purchaser and the manufacturer.