

EN 10219

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•Production Standard of EN 10219

•EN 10219

EN 10219 steel pipes with high level of strength, durability, and precision. These EN 10219 cold-formed, welded hollow sections are designed for structural applications, providing an ideal solution across various industries. Crafted meticulously from high-quality steel, offer superior load-bearing capacity and resistance to harsh environments.

The EN 10219 sections available in circular, square, and rectangular shapes for multiple design and architectural needs.

•Dimensions and Sizes of EN 10219

D N	O. D.		W. T.														
	In ch	m	SC H5S	SCH 10S	SC H10	SC H20	SC H30	SC H40	SC H60	SC H80	SCH 100	SCH 120	SCH 140	SCH 160	St h	XS	XX S
50	2"	60.3	1.65	2.77	-	-	-	3.91	-	5.54	-	-	-	8.74	3.91	5.54	11.07
65	2 1/2"	73	2.11	3.05	-	-	-	5.16	-	7.01	-	-	-	9.53	5.16	7.01	14.02
80	3"	88.	2.11	3.05	-	-	-	5.4	-	7.6	-	-	-	11.1	5.4	7.5	15.

0		9						9		2				3	49	2	24
9	3	10	2.11	3.05	-	-	-	5.7	-	8.0	-	-	-	-	5.	8.0	-
0	1/2"	1.6						4		8				-	74	8	
1	4"	11	2.11	3.05	-	-	-	6.0	-	8.5	-	11.1	-	13.4	6.	8.5	17.
0		4.3						2		8		3		9	02	6	12
1	5"	14	2.77	3.4	-	-	-	6.5	-	9.5	-	12.7	-	15.8	6.	9.5	18.
2		1.3						5		3				8	55	3	05
1	6"	16	2.77	3.4	-	-	-	7.1	-	10.	-	14.2	-	18.2	7.	10.	21.
5		8.3						1		97		7		6	11	97	95
0																	
2	8"	21	2.77	3.76	-	6.3	7.0	8.1	10.	12.	15.0	18.2	20.6	23.0	8.	12.	22.
0		9.1				5	4	8	31	7	9	6	2	1	18	7	23
2	10"	27	3.4	4.19	-	6.3	7.8	9.2	12.	15.	18.2	21.4	25.4	28.5	9.	12.	25.
5		3.1				5		7	7	09	6	4		8	27	7	4
0																	
3	12"	32	3.96	4.57	-	6.3	8.3	10.	14.	17.	21.4	25.4	28.5	33.3	9.	12.	25.
0		3.9				5	8	31	27	48	4		8	2	53	7	4
3	14"	35	3.96	4.78	6.3	7.9	9.5	11.	15.	19.	23.8	27.7	31.7	35.7	9.	12.	-
5		5.5			5	2	3	13	09	05	3	9	5	1	53	7	
0																	
4	16"	40	4.19	4.78	6.3	7.9	9.5	12.	16.	21.	26.1	30.9	36.5	40.4	9.	12.	-
0		6.4			5	2	3	7	66	44	9	6	3	9	53	7	
4	18"	45	4.19	4.78	6.3	7.9	11.	14.	19.	23.	39.3	34.9	39.6	45.2	-	-	-
5		7.2			5	2	13	27	05	83	6	3	7	4			
0																	
5	20"	50	4.78	5.54	6.3	9.5	12.	15.	20.	26.	32.5	38.1	44.4	50.0	-	-	-
0		8			5	3	7	09	62	19	4		5	1			
5	22"	55	4.78	5.54	6.3	9.5	12.	-	22.	28.	34.9	41.2	47.6	53.9	-	-	-
5		8.8			5	3	7		23	58	3	8	3	8			
0																	
6	24"	60	5.54	6.35	6.3	9.5	14.	17.	24.	30.	38.8	46.0	52.3	59.5	-	-	-
0		9.6			5	3	27	48	61	96	9	2	7	4			

●Chemical Composition of EN 10219

Steel Grade		Ytpe of De-oxidation a	% by Mass, Maximum					
Steel Name	Steel Number		C	Si	Mn	P	S	N b
S235JRH	1.0039	FF	0.17	–	1.4	0.04	0.04	0.009
S275J0H	1.0149	FF	0.2	–	1.5	0.035	0.035	0.009
S275J2H	1.0138	FF	0.2	–	1.5	0.03	0.03	–
S355J0H	1.0547	FF	0.22	0.55	1.6	0.035	0.035	0.009
S355J2H	1.0576	FF	0.22	0.55	1.6	0.03	0.03	–
S355K2H	1.0512	FF	0.22	0.55	1.6	0.03	0.03	–

a The deoxidation method is designated as follows:

FF: Fully killed steel containing nitrogen binding elements in amounts sufficient to bind available nitrogen (e.g. min. 0.020% total Al or 0.015% soluble Al).

b The maximum value for nitrogen does not apply if the chemical composition shows a minimum total Al content of 0.020% with a minimum Al/N ratio of 2:1, or if sufficient other N-binding elements are present. The N-binding elements shall be recorded in the Inspection Document.

●Mechanical Properties Tensile Strength and Yield Strength of EN 10219

Steel Grade		Minimum Yield Strength ReH MPa		Tensile Strength Rm MPa		Minimum elongation A d %	Minimum Impact Energy KV e J		
Steel Name	Steel Number	Specified Thickness mm		Specified Thickness mm		Specified Thickness mm	at Test Temperature of		
		≤16	> 16 ≤ 40	<3	≥3 ≤40		≤40	-20 °C	0 °C
S235JRH a	1.0039	235	225	360-510	360-510	24 b	–	–	27
S275J0H a	1.0149	275	265	430-580	410-560	20 c	–	27	–
S275J2H	1.0138						27	–	–
S355J0H a	1.0547	355	345	510-680	470-630	20 c	–	27	–
S355J2H	1.0576						–	–	–
S355K2H	1.0512						40 f	–	–

a The impact properties are verified only when Option 1.3 is specified

b For thicknesses > 3 mm and section sizes D/T < 15 (round) and (B+H)/2T < 12.5 (square and rectangular) the minimum elongation is by 2. For thicknesses > 3 mm the minimum value for elongation is 17 %.

c For section size D/T < 15 (circular) and (B+H)/2T < 12.5 (square and rectangular) and minimum elongation is reduced by 2.

d For thicknesses < 3 mm see 9.2.2.

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|---|---|
| e | For impact properties for reduced section test pieces see 6.7.2 |
| f | This value corresponds to 27J at -30 °C (see EN 1993-1-1). |