

## Mechanical Tube

ILJIN Steel produces hot-rolled and cold-drawn mechanical tubes made of alloy steel that meet or exceed various international standards including ASTM A519, ASTM A513, EN 10297 and EN 10305.

ILJIN Steel have integrated process with Seamless tube and cold drawing.

It is possible to provide better service to customer, quick delivery, technical improvement, value engineering, prompt feed back for quality improvement.



### List of Standards and Ranges for Mechanical Application

Specification	Steel Grade
<b>ASTM A519/513</b> Seamless/ERW Carbon and Alloy Steel Mechanical Tubes	1008 - 1045, 52100, 1520, 1536, 1541, 4115, 4130
<b>JIS 3441</b> Alloy Steel Tube for Machine Structural Purpose	STKM11 - 20 S10C - S58C SCM, SCR, SNCM, SUJ2
<b>JIS 3445</b> Carbon Steel Tube for Machine Structural Purpose	
<b>JIS 4051</b> Carbon Steel for Machine Structural use	
<b>DIN EN 10297-1</b> Seamless circular steel tubes for mechanical and general engineering purpose; Non-alloy and alloy steel tubes	E235, E355, E470 and others according to standards
<b>DIN EN 10305-1</b> Steel tubes for precision applications; Seamless cold drawn tubes	E235, E355

### Tube For Automotive Parts

Items	Material	Size(mm)		Condition
		O.D	W.T	
<b>Drive Shaft</b>	ASTM 1026 ASTM 1035 EN 25CrMo4	20 ~ 60	2 ~ 6	Cold drawn & Annealed Cold Drawn & Q/T
<b>Airbag Inflator</b>	SAE 1510-M 10CrMnMo	20 ~ 70	1.5 ~ 4	Cold Drawn & Q/T
<b>Axle</b>	SAE 1030, SAE 1527 EN E 355 (ST 52)	101.6 ~ 152.4	6.35 ~ 25.4	Hot Finished SMLS
<b>CV Joint Cage</b>	SAE 8617H EN 16NiCrMo2	40 ~ 90	4 ~ 14	As rolled, or normalized
<b>Bearing</b>	SAE52100 EN 100Cr6, SUJ2	20 ~ 170	1.5 ~ 20	Spheroidizing Annealed

### Tube For Hydraulic Cylinder

#### Ready to Honing

(Unit : mm)

Application	Supply Condition		Material Grade	Size Range
Double Acting Telescopic	ERW & Seamless (DOM, CDS)	Stress Relived (BKS)	SAE1020, 1026 EN10305(St52.3) STKM13C	O.D : 40 ~ 308 W.T : 4.0 ~ 25.0 L'th : 4~11.5m

#### Ready to Use

Application	Supply Condition		Material Grade	Size Range (mm)
SSID Tube (No honing)	Tube Condition	ERW & DOM (BK)	SAE1020/1026 EN10305(St52.3) STKM13C	O.D : 15.0~140 W.T : 1.0~12.5 L'th : 4~11.5m
	Dimension Tolerance	ISO H9 Grade		
	Inside Roughness	Rmax 5µm Max.		

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## Size Range

	Outside Diameter	Wall Thickness (mm)														Wall Thickness (mm)														
		3.0	3.5	4.0	5.0	5.5	6.5	7.0	7.5	8.0	9.0	9.5	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	19.0	20.0	22.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0
25.4		Seamless Cold finished																												
27.2		Seamless Cold finished																												
31.8		Seamless Hot finished																												
33.4		Seamless Hot finished																												
38.1		Seamless Hot finished																												
42.2		Seamless Hot finished																												
42.7		Seamless Hot finished																												
44.5		Seamless Hot finished																												
48.3		Seamless Hot finished																												
48.6		Seamless Hot finished																												
50.8		Seamless Hot finished																												
54.0		Seamless Hot finished																												
60.3		Seamless Hot finished																												
63.5		Seamless Hot finished																												
73.0		Seamless Hot finished																												
76.2		Seamless Hot finished																												
88.9		Seamless Hot finished																												
101.6		Seamless Hot finished																												
114.3		Seamless Hot finished																												
127.0		Seamless Hot finished																												
139.7		Seamless Hot finished																												
141.3		Seamless Hot finished																												
152.4		Seamless Hot finished																												
165.2		Seamless Hot finished																												
168.3		Seamless Hot finished																												
177.8		Seamless Hot finished																												
190.7																														
215.9																														
228.6																														
241.3																														
254.0																														
266.7																														
279.4																														
292.1																														
304.8																														