

CASING, TUBING VE TIJ BORULARI

*CASING, TUBING
AND DRILL PIPES*



CASING BORU EBATLARI VE BİRİM AĞIRLIKLARI

GENERALLY USED CASING PIPE DIMENSIONS AND WEIGHTS

Etiket / Labels		Dış Çap OD, mm	Ağırlık kg/m Weight kg/m	Et Wall	Çelik Kaliteleri Steel Grades	Boru Uçları Pipe Ends
Inch	Lb/ft					
4-1/2"	09.50	114.3	14.14	5.21	H40, J55, K55	P, S
4-1/2"	10.50	114.3	15.63	5.69	J55, K55	P, S, B
4-1/2"	11.60	114.3	17.26	6.35	J55, K55, L80, N80, C90, T95, P110	P, S, L, B
4-1/2"	13.50	114.3	20.09	7.37	L80, N80, C90, T95, P110	P, L, B
5"	11.50	127	17.11	5.59	J55, K55	P, S
5"	13.00	127	19.35	6.43	J55, K55	P, S, L, B
5"	15.00	127	22.32	7.52	J55, K55, L80, N80, C90, T95, P110	P, S, L, B
5"	18.00	127	26.79	9.19	L80, N80, C90, T95, P110	P, L, B
5-1/2"	14.00	139.7	20.83	6.2	H40, J55, K55	P, S
5-1/2"	15.50	139.7	23.07	6.98	J55, K55	P, S, L, B
5-1/2"	17.00	139.7	25.3	7.72	J55, K55, L80, N80, C90, T95, P110	P, S, L, B
5-1/2"	29.50	139.7	29.76	9.17	L80, N80, C90, T95, P110	P, S, L, B
6-5/8"	20.00	168.28	29.76	7.32	H40, J55, K55	P, S, L, B
6-5/8"	24.00	168.28	35.72	8.94	J55, K55, L80, N80, C90, T95, P110	P, S, L, B
7"	23.00	177.8	34.23	8.05	J55, K55, L80, N80, C90, T95	P, S, L, B
7"	26.00	177.8	38.69	9.19	J55, K55, L80, N80, C90, T95, P110	P, S, L, B
7"	29.00	177.8	43.16	10.36	L80, N80, C90, T95, P110	P, L, B
7"	32.00	177.8	47.62	11.51	L80, N80, C90, T95, P110	P, L, B
7-5/8"	26.40	193.68	39.29	8.33	J55, K55, L80, N80, C90, T95	P, S, L, B
7-5/8"	29.70	193.68	44.2	9.52	L80, N80, C90, T95, P110	P, L, B
7-5/8"	33.70	193.68	50.15	10.92	L80, N80, C90, T95, P110	P, L, B
8-5/8"	28.00	219.08	41.67	7.72	H40	P, S
8-5/8"	32.00	219.08	47.67	8.94	H40, J55, K55	P, S
8-5/8"	36.00	219.08	53.57	10.16	J55, K55, L80, N80, C90, T95	P, S, L, B
8-5/8"	40.00	219.08	59.53	11.43	L80, N80, C90, T95, P110	P, S, L, B
9-5/8"	36.00	244.48	53.57	8.94	H40, J55, K55	P, S, L, B
9-5/8"	40.00	244.48	59.53	10.03	J55, K55, L80, N80, C90, T95	P, S, L, B
9-5/8"	43.50	244.48	64.73	11.05	L80, N80, C90, T95, P110	P, L, B
9-5/8"	47.00	244.48	69.94	11.99	L80, N80, C90, T95, P110	P, L, B
10-3/4"	40.50	273.05	60.27	8.89	H40, J55, K55	P, S, B
10-3/4"	45.50	273.05	67.71	10.16	J55, K55	P, S, B
10-3/4"	51.00	273.05	75.9	11.43	J55, K55, L80, N80, C90, T95, P110	P, S, B
11-3/4"	42.00	298.45	69.94	9.53	J55, K55	P, S, B
11-3/4"	47.00	298.45	80.36	11.05	J55, K55	P, S, B
13-3/8"	54.50	339.72	81.1	9.65	J55, K55	P, S, B
13-3/8"	61.00	339.72	90.78	10.92	J55, K55	P, S, B
13-3/8"	68.00	339.72	101.19	12.19	J55, K55, L80, N80, C90, T95, P110	P, S, B
13-3/8"	72.00	339.72	107.15	13.06	L80, N80, C90, T95, P110	P, S, B
16"	75.00	406.4	111.61	11.13	J55, K55	P, S
16"	84.00	406.4	125.01	12.57	J55, K55	P, S, B
18-5/8"	87.50	473.08	130.21	11.05	H40, J55, K55	P, S, B
20"	94.00	508	139.89	11.13	H40, J55, K55	P, S, L, B
20"	106.50	508	158.49	12.7	J55, K55	P, S, L, B

Kısaltmalar/ Abbr.

- P:** Düz Uçlu/ Plain End
- S:** Kısa Dişli/short threaded
- L:** Uzun dişli/long threaded
- B:** Butres dişli/ Buttress threaded

Toleranslar / Tolerances:

- Dış Çap tolerans aralığı/ Outside Diameter permissible deviation: **+%1 / -%0,5**
- Et Kalınlığı tolerans aralığı/ Wall Thickness permissible deviation: **-%12,5 (+tolerance by weight)**
- Ağırlıkta Değişim / Weight Deviation: **+%6,5 / -%3,5**

Casing dış tipleri / Casing thread types:

- P:** Düz uçlu / Plain end
- SC:** Kısa yuvarlak Casing dişi / Short round Casing thread
- LC:** Uzun yuvarlak Casing dişi / Long round Casing thread
- BC:** Butres Casing dişi / Buttress Casing thread

Casing dış tipleri / Casing thread types:

- Range 1** 16- 25 feet (4,88 - 7,62m)
- Range 2** 25- 34 feet (7,62 - 10,36)
- Range 3** 34- 48 feet (10,36 - 14,63)

TUBING BORU EBATLARI VE BİRİM AĞIRLIKLARI

TUBING PIPE DIMENSIONS AND WEIGHTS

Etiket / Labels			Dış Çap /OD	Ağırlık/Weight		Et/Wall	Çelik Kaliteleri / Steel Grades	Boru Uçları / Pipe Ends
Inch	NU	EU		NU	EU			
	Lb/ft	Lb/ft	mm	Kg/m	Kg/m	mm		
1.900"	2.40	-	48.26	-	-	3.18	H40, J55	P
1.900"	2.75	2.90	48.26	4.09	4.32	3.68	H40, J55, L80, N80, C90, T95	P, N, U
1.900"	3.65	3.73	48.26	5.43	5.55	5.08	H40, J55, L80, N80, C90, T95, P110	P, U
1.900"	4.42	-	48.26	6.58	-	6.35	L80, C90, T95	P
2-3/8"	4.00	-	60.32	5.95	-	4.24	H40, J55, L80, N80, C90, T95	P, N
2-3/8"	4.60	4.70	60.32	6.85	6.99	4.83	H40, J55, L80, N80, C90, T95, P110	P, N, U
2-3/8"	5.80	5.80	60.32	8.63	8.85	6.45	L80, N80, C90, T95, P110	P, N, U
2-7/8"	6.40	6.50	73.02	9.52	9.67	5.51	H40, J55, L80, N80, C90, T95, P110	P, N, U
2-7/8"	7.80	7.90	73.02	11.61	11.76	7.01	L80, N80, C90, T95, P110	P, N, U
2-7/8"	8.60	8.70	73.02	12.80	12.95	7.82	L80, N80, C90, T95, P110	P, N, U
2-7/8"	9.35	9.45	73.02	13.91	14.06	8.64	L80, N80, C90, T95	P, U
3-1/2"	7.70	-	88.90	11.46	-	5.49	H40, J55, L80, N80, C90, T95	P, N
3-1/2"	9.20	9.30	88.90	13.69	13.84	6.45	H40, J55, L80, N80, C90, T95, P110	P, N, U
3-1/2"	10.20	-	88.90	15.18	-	7.34	H40, J55, L80, N80, C90, T95	P, N
3-1/2"	12.70	12.95	88.90	18.90	19.27	9.52	H40, J55, L80, N80, C90, T95, P110	P, N, U
4"	9.50	-	101.60	14.14	-	5.74	H40, J55, L80, N80, C90, T95	P, N
4"	10.70	11.00	101.60	-	16.37	6.65	H40, J55, L80, N80, C90, T95	P, U
4"	13.20	-	101.60	19.64	-	8.38	L80, C90, T95	P
4-1/2"	12.60	12.75	114.30	18.75	18.97	6.88	H40, J55, L80, N80, C90, T95	P, N, U
4-1/2"	15.20	-	114.30	22.62	-	8.56	L80, C90, T95	P
4-1/2"	17.00	-	114.30	25.30	-	9.65	L80, C90, T95	P
4-1/2"	18.90	-	114.30	28.13	-	10.92	L80, C90, T95	P

Kısaltmalar/ Abbr.

- P:** Düz Uçlu / Plain End
N: Upsetsiz Dişli Manşonlu / Non-upset T&C
U: Upsetli Dişli Manşonlu / External-upset T&C

- P:** Düz Uçlu / Plain End
NU: Upsetsiz, Dişli-Manşonlu Tubing / Non-upset Tubing Threaded and coupled
EU: Dışa-Upsetli Dişli-Manşonlu Tubing / External-Upset Tubing Threaded and Coupled

Toleranslar / Tolerances:

Dış Çap tolerans aralığı / Outside Diameter permissible deviation: $\pm 0,031$ inch / $\pm 0,79$ mm
Et Kalınlığı tolerans aralığı / Wall Thickness permissible deviation: $-\%12,5$ (+tolerance by weight)
Ağırlıkta Değişim / Weight Deviation: $+\%6,5 / -\%3,5$

Boy Aralığı / Length Ranges

Range 1 20- 24 feet (6,10 - 7,32m)
Range 2 28- 32 feet (8,53- 9,75)

CASING VE TUBING KİMYASAL KOMPOZİSYON GEREKSİNİMLERİ

CHEMICAL COMPOSITION REQUIREMENTS OF CASINGS AND TUBINGS

Group	Grade	Type	C		Mn		Mo		Cr		Ni	Cu	P	S	Si
			min.	max.	min.	max.	min.	max.	min.	max.					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	H40	-	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
	J55	-	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
	K55	-	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
	N80	1	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
	N80	Q	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
	R95	-	-	0,45 C	-	1.90	-	-	-	-	-	-	-	0.030	0.030
2	M65	-	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
	L80	1	-	0,43 a	-	1.90	-	-	-	-	0.25	0.35	0.030	0.030	0.54
	L80	9Cr	-	0.15	0.30	0.60	0.90	1.10	8.00	10.00	0.50	0.25	0.020	0.020	1.00
	L80	13Cr	0.15	0.22	0.25	1.00	-	-	12.00	14.00	0.50	0.25	0.020	0.020	1.00
	C90	1	-	0.35	-	1.20	0,25b	0.85	-	1.50	0.99	-	0.020	0.020	-
	T95	1	-	0.35	-	1.20	0,25d	0.85	0.40	1.50	0.99	-	0.020	0.020	-
3	P110	e	-	-	-	-	-	-	-	-	-	-	0,03e	0,03e	-
													0,03e	0,03e	-
4	Q125	1	-	0.35	-	1.35	-	0.85	-	1.50	0.99	-	0.020	0.020	-

A: Ürüne yağda su verilmiş ise, L80 için karbon içeriği max 0,50%'e kadar artırılabilir.

The carbon content for L80 may be increased up to 0,50 % maximum if the product is oil-quenched.

B: Et kalınlığı 17,78 mm'den daha az ise C90 Tip-1 için kalite için molibden içeriği için minimum limit toleransı yoktur.

The molybdenum content for Grade C90 Type 1 has no minimum tolerance if the wall thickness is less than 17,78 mm.

C: Ürüne yağda su verilmiş ise, R95 için karbon içeriği max 0,55%'e kadar artırılabilir.

The carbon content for R95 may be increased up to 0,55 % maximum if the product is oil-quenched.

D: Et kalınlığı 17,78 mm'den daha az ise T95 Tip-1 için kalite için molibden içeriği 0,15% minimuma kadar indirilebilir.

The molybdenum content for T95 Type 1 may be decreased to 0,15 % minimum if the wall thickness is less than 17,78 mm.

E: EW Kalite P110 için, fosfor içeriği maksimum 0,020 % ve kükürt içeriği maksimum 0,010 % olacaktır.

For EW Grade P110, the phosphorus content shall be 0,020 % maximum and the sulfur content 0,010 % maximum.

CASING VE TUBING MEKANİK ÖZELLİKLERİ

MECHANICAL PROPERTIES OF API 5CT CASING AND TUBING

Kalite Grade	Akma Mukavemeti Yield Strength, psi/MPa		Min, Çekme Mukavemeti Tensile Strength, psi/MPa	Uzama Elongation %
	min.	min.		
H40	40000/276	80000/552	60000/414	28
J55	55000/ 379	80000/ 552	75000/ 517	23
K55	55000/ 379	80000/ 552	95000/ 655	19
N80	80000/ 552	110000/ 758	100000/ 689	18
L80-1	80000/ 552	95000/ 655	95000/ 655	19
C90	90000/ 621	105000/ 724	100000/ 689	18
T95	95000/ 655	110000/ 758	105000/ 724	17
P110	110000/758	140000/ 965	125000/ 862	15
Q125	125000/862	150000/1034	135000/931	14

TIJ BORUSU GÖVDE DIŞ ÇAP TOLERANSLARI

DRILL-PIPE-BODY OUTSIDE-DIAMETER TOLERANCES

Etiket / Label	Toleranslar / Tolerances
Boru Gövdesi / Pipe Body	
≤4	±0,79 mm
>4	+1% Ddp -0,5%
Tij-boru- gövdede meu sonrasında / Drill-Pipe-Body After The Meu	
≥2-3/8 to ≤ 3-1/2	+2,38% / -0,79 mm
>3-1/2 to ≤ 5	+2,78 / -0,75% Ddp
> 5 to ≤ 6-5/8	+3,18 / -0,75% Ddp

Tij borusu Boyları / Drill-Pipe Length, (meters)

Boylar, dahil Length, L, inclusive	Aralık 1 / Range 1 6,10 - 7,01	Aralık 2/ Range 2 8,84- 9,75	Aralık 3 / Range 3 12,19- 13,72
Sipariş miktarının %95'i için sınırlama / Limitation for 95% of order quantity			
Maksimum değişim / Maximum variation	0.61	-	-
Minimum boy / Minimum Length	6.40	-	-
Sipariş miktarının %90'i için sınırlama / Limitation for 90% of order quantity			
Maksimum değişim / Maximum variation	-	0.91	0.91
Minimum boy / Minimum Length	-	9.14	12.19

Tij Borusu Kimyasal Kompozisyon Gereksinimleri / Chemical Composition Requirements of Drill Pipes

	Fosfor/ Phosphorus Maximum %	Kükürt / Sulfur Maximum %
Boru gövdesi/ Pipe body: Grade E	0.030	0.020
Boru gövdesi/ Pipe body: Grade X, G and S	0.020	0.015
Bağlantı başlığı / Tool Joint	0.020	0.015

API 5DP TIJ Borusu Mekanik Özellikleri / Mechanical Properties of API 5DP Drill Pipes

Tij Borusu Gövdesi / Drill-Pipe - Body	Akma dayanımı Yield strength, MPa		Çekme Dayanımı Tensile strength, Mpa		Uzama Elongation, %
	Min.	Max.	Min.	Max.	Max.
Kalite E / Grade E	517	724	689		19
Kalite X / Grade X	655	862	724		18
Kalite G / Grade G	724	931	793		16
Kalite S / Grade S	931	1138	1000		13
Bağlantı Başlığı / Tool Joint	827	1138	965		13

API 5DP Sondaj Tij Boruları, Ana Boyutlar ve Ağırlıklar

API 5DP Drill Pipes, Main Dimensions and Mass

Tanımlar / Designations					Boru Gövde Dişçap Pipe-body OD/Çapı	Et kalınlık Wall thickness	Kaynak boyunu Weld Neck	Takım Kafaları / Tool Joint				RSC Konik Çap Bevel Dia.	Ağırlık Mass kg/m
								Dişçap OD	Pin İççap ID	Pin Dişçap boy OD Length	Box Dişçap OD Length		
Etiket-1 Label-1	Etiket-2 Label-2	Kalite Grade	Upset Tipi Upset Type	RSC Tipi RSC Type	Ddp mm	T mm	Dte mm	D mm	Dp mm	Lpb mm	Lb mm	Df mm	Wdp kg/m
						-12.50%	Max.	±0,8	-0.5	±6,4	±6,4	±0,4	Hesaplanmış Calculated
4"	14.00	X	IU	NC40	101.6	8.38	106.4	133.4	68.3	177.8	254	127.4	22.76
4"	14.00	G	IU	NC40	101.6	8.38	106.4	139.7	61.9	177.8	254	127.4	23.61
4-1/2"	13.75	E	IU	NC46	114.3	6.88	119.1	152.4	85.7	177.8	254	145.26	22.5
2-3/8"	6.65	E	EU	NC26	60.32	7.11	65.1	85.7	44.5	177.8	203.2	82.95	10.45
2-3/8"	6.65	X, G	EU	NC26	60.32	7.11	65.1	85.7	44.5	177.8	203.2	82.95	10.58
2-7/8"	10.40	E	EU	NC31	73.02	9.19	81	104.8	54	177.8	228.6	100.41	16.25
2-7/8"	10.40	X, G	EU	NC31	73.02	9.19	81	104.8	50.8	177.8	228.6	100.41	16.5
2-7/8"	10.40	S	EU	NC31	73.02	9.19	81	111.1	41.3	177.8	228.6	100.41	17.19
3-1/2"	13.30	E	EU	NC38	88.9	9.35	98.4	120.7	68.3	203.2	266.7	116.28	20.77
3-1/2"	13.30	X	EU	NC38	88.9	9.35	98.4	127	65.1	203.2	266.7	116.28	21.76
3-1/2"	13.30	G	EU	NC38	88.9	9.35	98.4	127	61.9	203.2	266.7	116.28	21.9
3-1/2"	13.30	S	EU	NC38	88.9	9.35	98.4	127	54	203.2	266.7	116.28	22.22
4	14.00	X	EU	NC46	101.6	8.38	114.3	152.4	82.6	177.8	254	145.26	24.12
4	14.00	G	EU	NC46	101.6	8.38	114.3	152.4	76.2	177.8	254	145.26	24.46
4-1/2"	16.60	E	EU	NC50	114.3	8.56	127	168.3	95.3	177.8	254	153.99	27.51
4-1/2"	16.60	X, G	EU	NC50	114.3	8.56	127	168.3	95.3	177.8	254	153.99	28.07
4-1/2"	16.60	S	EU	NC50	114.3	8.56	127	168.3	88.9	177.8	254	153.99	28.47
4-1/2"	20.00	E	EU	NC50	114.3	10.92	127	168.3	82.1	177.8	254	153.99	32.93
4-1/2"	20.00	X, G	EU	NC50	114.3	10.92	127	168.3	88.9	177.8	254	153.99	33.63
4-1/2"	16.60	X, G	IEU	NC46	114.3	8.56	119.1	158.8	76.2	177.8	254	145.26	27.73
4-1/2"	16.60	S	IEU	NC46	114.3	8.56	119.1	158.8	69.9	177.8	254	145.26	28.04
5	19.50	G	IEU	NC50	127	9.19	130.2	168.3	82.6	177.8	254	153.99	32.95
5	19.50	S	IEU	NC50	127	9.19	130.2	168.3	69.9	177.8	254	153.99	33.6
5	19.50	E	IEU	5 1/2 FH	127	9.19	130.2	177.8	95.3	203.2	254	170.66	33.22
5	19.50	X, G	IEU	5 1/2 FH	127	9.19	130.2	177.8	95.3	203.2	254	170.66	33.61
5	19.50	S	IEU	5 1/2 FH	127	9.19	130.2	184.2	88.9	203.2	254	170.66	34.89
5-1/2"	21.90	X	IEU	5 1/2 FH	139.7	9.17	144.5	177.8	95.3	203.2	254	170.66	36.36
5-1/2"	21.90	G	IEU	5 1/2 FH	139.7	9.17	144.5	184.2	88.9	203.2	254	170.66	37.61
5-1/2"	21.90	S	IEU	5 1/2 FH	139.7	9.17	144.5	190.5	76.2	203.2	254	180.18	39.27
5-1/2"	24.70	E	IEU	5 1/2 FH	139.7	10.54	144.5	177.8	101.6	203.2	254	170.66	39.19
6-5/8"	25.20	E	IEU	6 5/8 FH	168.28	8.38	176.2	203.2	127	203.2	279.4	195.66	41.03
6-5/8"	25.20	X	IEU	6 5/8 FH	168.28	8.38	176.2	203.2	127	203.2	279.4	195.66	41.03
6-5/8"	25.20	G	IEU	6 5/8 FH	168.28	8.38	176.2	209.6	120.7	203.2	279.4	195.66	42.6
6-5/8"	25.20	S	IEU	6 5/8 FH	168.28	8.38	176.2	215.9	108	203.2	279.4	195.66	44.73

Tanımlar sipariş sırasında tanımlayıcı olması amacıyla gösterilmiştir.
Designations are shown for the purpose of identification in ordering.

RSC Tipi: RSC Tipi, ilgili döner omuz bağlantısının boyutunu ve stilini gösterir.

The RSC Type indicates the size and the style of the applicable rotary shouldered connection.

IU: İç Çapta Upsetli / Internal Upset.

EU: Dış Çapta Upsetli / External Upset.

IEU: İç ve Dış Çapta Upsetli / Internal and External Upset.



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