

POPULAR STANDARDS AND SPECIFICATIONS

QUALITY		CHEMICAL ANALYSIS									MECHANICAL PROPERTIES			SPECIFIC REQUIREMENT			
SMLS	WELDED	SPECIFICATION	WT	C %	Mn %	P % MAX	S % MAX	Si %	Cr %	Mo %	TENSILE STRENGTH Mpa	YIELD STRESS Mpa	ELONGATION IN50 mm Min Longitudinal				
Carbon Steel Pipes / Tubes Conform to Various Specifications as Listed Below																	
*	*	ASTM A53/A	AW	0.25 Max	0.95 Max	0.050	0.060	-	-	-	331 Min	207 Min	36	-----			
*	*	ASTM A53/B	AW	0.30 Max	1.20 Max	00.50	0.60	-	-	-	413 Min	240 Min	29.5	-----			
*	-	ASTM A106/A	AW	0.25 Max	0.27-0.93	0.025	0.025	0.10 Min	0.40 Max	0.15 Max	330 Min	205 Min	35/28	CR MO CU NI VA			
*	-	ASTM A106/B	AW	0.30 Max	0.29-1.06	0.025	0.025	0.10 Min	0.40 Max	0.15 Max	415 Min	240 Min	30/22	.40 .15 .40 .40.08			
*	-	ASTM A106/C	AW	0.35 Max	0.29-1.06	0.025	0.025	0.10 Min	0.40 Max	0.15 Max	485 Min	275 Min	30/22	Five Elements Not to Exceed 1 %			
*	-	ASTM A179	MW	0.06-0.18	0.27-0.63	0.048	0.048	-	-	-	325 Min 385 Min	180 Min	35.0	Hardness 72 HRB Max			
*	-	ASTM A214	MW	0.18 Max	0.27-0.63	0.050	0.050	-	-	-	Min	180 Min	35.0	Hardness 72HRB Max			
*	-	ASTM A192	MW	0.06-0.18	0.27-0.63	0.048	0.048	0.25 mAX	-	-	325 Min	180 Min	35.0	Hardness 77 HRB Max			
*	*	ASTM A333/1	AW	0.30 Max	0.40-1.06	0.025	0.025	-	-	-	380 Min	205 Min	25/20	Impact Test -50F 40x10 J14			
*	*	ASTM A333/6	AW	0.30 Max	0.29-1.06	0.025	0.025	0.10 Min	-	-	415 Min	240 Min	30/18	Impact Test -50F 40x10 J14			
*	*	ASTM A334/1	MW	0.30 Max	0.40-1.06	0.025	0.025	-	-	-	380 Min	205 Min	35/28	-50F 40x10 J14 85 HRB Max			
*	*	ASTM A334/6	MW	0.30 Max	0.29-1.06	0.025	0.025	0.10 Min	-	-	415 Min	240 Min	30/22	-50F 40x10 J14 85 HRB Max			
*	*	BS/3059/90/Part/320		0.16 Max	0.30-0.70	0.040	0.040	-	-	-	320-480	186 Min	25				
*	*	BS/3059/90/Part/360		0.17 Max	0.40-0.80	0.035	0.035	0.10-0.35	-	-	360-500	235 Min	21				
*	*	BS/3059/90/Part/440		0.12-0.18	0.90-1.20	0.035	0.035	0.10-0.35	-	-	480-560	245 Min	22				
*	-	ASTM A210/A-1	MW	0.27 Max	0.93 Max	0.048	0.058	0.10 Min	-	-	415 Min	255 Min	30/22	Hardness 79HRB Max			
*	-	ASTM A210/C	MW	0.35 Max	0.29-1.06	0.048	0.058	0.10 Min	-	-	485 Min	275 Min	30/22	Hardness 89HRB Max			
*	-	DIN/17175/ST35.8		0.17 Max	0.40-0.80	0.040	0.040	0.035 Max	-	-	340-480	235 Min	25				
*	-	DIN/17175/ST45.8		0.22 Max	0.40-1.20	0.040	0.040	0.10-0.35	-	-	410-540	255 Min	21				
*	-	DIN 2391 ST 35	AW	0.17 Max	0.40 Min	0.025	0.025				340-470	235 Min	25				
*	-	DIN 2391 ST 45	AW	0.21 Max	0.40 Min	0.025	00.25				440-570	255 Min	21				
*	-	DIN 2391 ST 52	AW	0.22 Max	1.60 Max	0.025	0.025				490-630	355 Min	22				
-	*	ASTM A 178/A	MW	0.06-0.18	0.27-0.63	0.050	0.050	0.50-1.00	-	-	325 Min	172 Min	30/22				
-	*	ASTM A178/C	MW	0.35 Max	0.80 Max	0.035	0.035	-	-	-	415 Min	255 Min	35				
-	*	ASTM A175/D	MW	0.27 Max	1.00-1.50	0.050	0.050	0.10 Min	-	-	485 Min	180 Min	30				
-	*	BS 6323 Part V/1	AW	0.13 Max	0.60 Max	0.050	0.050				300 Min	200 Min	10 / 20				
-	*	BS 6323 Part V/2	AW	0.16 Max	0.70 Max	0.050	0.050				340 Min	250 Min	8 / 15				
-	*	BS 6323 Part V/3	AW	0.20 Max	0.90 Max	0.050	0.050	0.35 Max			400 Min	300 Min	7 / 12				
PSL-1	-	API 5L GR. A-25	AW	0.21 Max	0.60 Max	0.030	0.030				310 Min	172 Min		SMLS	C% .21 Max		
PSL-1	PSL-1	API 5L GR.A	AW	0.22 Max	0.90 Max	0.030	0.030				331 Min	207 Min		SMLS	C% .22 Max		
PSL-1	PSL-1	API 5L GR.B	AW	0.26 Max	1.20 Max	0.030	00.30				414 Min	241 Min		SMLS	C% .28 Max		
PSL-1	PSL-1	API 5L GR. X - 42	AW	0.26 Max	1.30 Max	0.030	0.030				414 Min	290 Min		SMLS	C% .28 Max		
PSL-1	PSL-1	API 5L GR. X - 46	AW	0.26 Max	1.40 Max	0.030	00.30				434 Min	317 Min		SMLS	C% .28 Max		
PSL-1	PSL-1	API 5L GR. X - 52	AW	0.26 Max	1.40 Max	0.030	0.030				455 Min	359 Min		SMLS	C% .28 Max		
PSL-1	PSL-1	API 5L GR. X - 56	AW	0.26 Max	1.40 Max	00.30	00.30				490 Min	386 Min		SMLS	C% .28 Max		
PSL-1	PSL-1	API 5L GR. X - 60	AW	0.26 Max	1.40 Max	0.030	0.030				517 Min	414 Min		SMLS	C% .28 Max		
PS-1	PSL-1	API 5L GR. X - 65	AW	0.26 Max	1.45 Max	0.030	0.030				531 Min	448 Min		SMLS	C% .28 Max		
-	PSL-1	APL 5L GR. X -70	AW	0.26 Max	1.65 Max	0.030	0.030				565 Min	483 Min		SMLS	C% -		
														C.E. IMPACT ENERGY			
PSL-2	PSL-2	API 5L GR. B	AW	0.22 Max	1.20 Max	0.025	0.015				414-758	241-448		PCM	I/W		
PSL-2	PSL-2	API 5L GR. X - 42	AW	0.22 Max	1.30 Max	0.025	0.015				414-758	290-496		0.25	0.43		
PSL-2	PSL-2	API 5L GR. X - 46	AW	0.22 Max	1.40 Max	0.025	0.015				434-758	317-524		0.25	0.43		
PSL-2	PSL-2	API 5L GR. X - 52	AW	0.22 Max	1.40 Max	0.025	0.015				455-758	359-531		0.25	0.43		
PSL-2	PSL-2	API 5L GR. X - 56	AW	0.22 Max	1.40 Max	0.025	0.015				490-758	386-544		0.25	0.43		
PSL-2	PSL-2	API 5L GR. X - 60	AW	0.22 Max	1.40 Max	0.025	0.015				517-758	414-565		0.25	0.43		
-	PSL-2	API 5L GR. X - 65	AW	0.22 Max	1.45 Max	0.025	0.015				531-758	448-565		0.25	0.43		
-	PSL-2	API 5L GR. X - 70	AW	0.22 Max	1.65 Max	0.025	0.015				565-758	483-565		0.25	0.43		
														J		FT/LB	
PSL-2	PSL-2	API 5L GR. B	AW	0.22 Max	1.20 Max	0.025	0.015				414-758	241-448		T/L	27/41		
PSL-2	PSL-2	API 5L GR. X - 42	AW	0.22 Max	1.30 Max	0.025	0.015				414-758	290-496		T/L	27/41		
PSL-2	PSL-2	API 5L GR. X - 46	AW	0.22 Max	1.40 Max	0.025	0.015				434-758	317-524		T/L	27/41		
PSL-2	PSL-2	API 5L GR. X - 52	AW	0.22 Max	1.40 Max	0.025	0.015				455-758	359-531		T/L	27/41		
PSL-2	PSL-2	API 5L GR. X - 56	AW	0.22 Max	1.40 Max	0.025	0.015				490-758	386-544		T/L	27/41		
PSL-2	PSL-2	API 5L GR. X - 60	AW	0.22 Max	1.40 Max	0.025	0.015				517-758	414-565		T/L	27/41		
-	PSL-2	API 5L GR. X - 65	AW	0.22 Max	1.45 Max	0.025	0.015				531-758	448-565		T/L	27/41		
-	PSL-2	API 5L GR. X - 70	AW	0.22 Max	1.65 Max	0.025	0.015				565-758	483-565		T/L	27/41		
*	*	IS 1978 / YST 210	AW	0.22 Max	0.90 Max	0.040	0.050				330 Min	210 Min					
*	*	IS 1978 / YST 240	AW	0.27 Max	1.15 Max	0.040	0.050				410 Min	240 Min					
*	*	IS 1979 / YST 290	AW	0.28 Max	1.25 Max	0.040	0.050				410 Min	290 Min					
*	*	IS 1979 / YST 320	AW	0.30 Max	1.35 Max	0.040	0.050				430 Min	320 Min					
*	*	IS 1979 / YST 360	AW	0.30 Max	1.35 Max	0.040	0.050				450-550	360 Min					
*	*	IS 1979 / YST 390	AW	0.26 Max	1.35 Max	0.040	0.050				490-520	390 Min					
*	*	IS 1979 / YST 410	AW	0.26 Max	1.35 Max	0.040	0.050				520-540	410 Min					
*	*	IS 1979 / YST 450	AW	0.26 Max	1.40 Max	0.040	0.050				530-550	450 Min					
*	*	IS 1979 / YST 480	AW	0.23 Max	1.60 Max	0.040	0.050				565 Min	480 Min					
-	*	IS 3589 Gr. 330	AW	0.16 Max	1.20 Max	0.040	0.040				330 Min	195 Min	20 GL=5.65				
-	*	IS 3589 Gr. 410	AW	0.20 Max	1.30 Max	0.040	0.040				410 Min	235 Min	18 GL=5.65				
-	*	IS 3589 Gr. 450	AW	0.25 Max	1.20 Max	0.040	0.040				450 Min	275 Min	15 GL=5.65				
-	*	IS 1161 / YST 210	AW	0.12 Max	0.60 Max	0.050	0.050				330 Min	210 Min	20 GL=5.65				
-	*	IS 1161 / YST 240	AW	0.16 Max	1.20 Max	0.050	0.050				410 Min	240 Min	17 GL=5.65				
-	*	IS 1161 / YST 310	AW	0.25 Max	1.30 Max	0.050	0.050				450 Min	310 Min	14 GL=5.65				

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SMLS	WELDED	SPECIFICATION	WT	C %	Mn %	P % MAX	S % MAX	Si %	Cr%	Mo %	TENSILE STRENGTH Mpa	YIELD STRESS Mpa	ELONGATION IN50 mm Min Longitudinal	
*	-	ASTM A335/P1	AW	0.10-0.20	0.30-0.80	0.025	0.025	0.10-0.50	-	0.44-0.65	380 Min	205 Min	30	----
*	-	ASTM A335/P2	AW	0.10-0.20	0.30-0.61	0.025	0.025	0.10-0.30	0.50-0.81	0.44-0.65	380 Min	205 Min	30	----
*	-	ASTM A335/P5	AW	0.15 Max	0.30-0.60	0.025	0.025	0.50 Max	4.00-6.00	0.44-0.65	415 Min	205 Min	30	----
*	-	ASTM Z335/P9	AW	0.15 Max	0.30-0.60	0.030	0.030	0.25-1.00	8.00-10.00	0.90-1.10	415 Min	172 Min	30/22	----
*	-	ASTM A335/P11	AW	0.15 Max	0.30-0.60	0.025	0.025	0.50-1.00	1.00-1.50	0.44-0.65	415 Min	205 Min	30	----
*	-	ASTM A355/P12	AW	0.15 Max	0.30-0.61	0.025	0.025	0.50 Max	0.80-1.25	0.44-0.65	415 Min	205 Min	30	----
*	-	ASTM A335/P22	AW	0.15 Max	0.30-0.61	0.025	0.025	0.50 Max	1.90-2.60	0.87-1.13	415 Min	205 Min	30	----
*	-	ASTM A335/P91	AW	0.08-0.12	0.30-0.60	0.020	0.010	0.20-0.50	8.00-9.50	0.85-1.05	585 Min	415 Min	20	Cb 0.06-0.10 N ≤ 0.030-0.070 Al ≤ 0.040 V 0.18-0.25
*	-	ASTM A213/T2	MW	0.10-0.20	0.30-0.61	0.045	0.045	0.10-0.30	0.50-0.81	0.44-0.65	415 Min	205 Min	30/22	Hardness 85HRB Max
*	-	ASTM A213/T5	MW	0.15 Max	0.30-0.60	0.030	0.030	0.50 Max	4.00-6.00	0.44-0.65	415 Min	205 Min	30/22	Hardness 85HRB Max
*	-	ASTM A213/T9	MW	0.15 Max	0.30-0.60	0.030	0.030	0.25-1.00	8.00-10.00	0.90-1.10	415 Min	170 Min	30/22	Hardness 89HRB Max
*	-	ASTM A213T/11	MW	0.15 Max	0.30-0.60	0.030	0.030	0.50-1.00	1.00-15.0	0.44-0.65	415 Min	205 Min	30/22	Hardness 85HRB Max
*	-	ASTM A213/T12	MW	0.15Max	0.30-0.61	0.045	0.045	0.50 Max	0.80-1.25	0.44-0.65	415 Min	205 Min	30/22	Hardness 85HRB Max
*	-	ASTM 213/T-22	MW	0.15 Max	0.30-0.60	0.030	0.030	0.50 Max	1.90-2.60	0.87-1.13	415 Min	205 Min	30/22	Hardness 85HRB Max
*	-	ASTM A335/P91	AW	0.08-0.12	0.30-0.60	0.020	0.010	0.20-0.50	8.00-9.50	0.85-1.05	585 Min	415 Min	20	Cb 0.06-0.10 N ≤ 0.030-0.070 Al ≤ 0.040 V 0.18-0.25

CHEMICAL COMPOSITION OF STAINLESS STEEL

Grade	Chemical Composition - Per cent									Nearest Equivalent Specification	
AISI	C Max	Mn Max	P Max	S Max	Si Max	Cr	Ni	Mo	Other Element	I.S	En
201	0.15	5.50-7.50	0.060	0.030	1.00	16.00/18.00	3.50-5.50	-	N<0.25	-	-
202	0.15	7.50-10.00	0.060	0.03	1.00	17.0/19.0	4.0/6.0	-	-	-	-
301	0.15	2.0max	0.045	0.040	1.0	16.0/18.0	6.0/8.0	-	-	10Cr 17Ni7	-
302	0.15	2.0	0.045	0.030	1.0	17.0/19.0	8.0/10.0	-	-	07Cr18Ni9	En-58A
303	0.15	2.0	0.045	-	1.0	17.0/19.0	8.0/10.0	-	-	15Cr18Ni9	En-58M
304	0.08	2.0	0.045	0.030	1.0	18.0/20.0	8.0/10.0	-	-	04Cr18Ni10	En-58E
304L	0.030	2.0	0.045	0.030	1.0	18.0/20.0	8.0/10.0	-	-	02Cr18Ni11	-
308	0.08	2.0	0.040	0.030	1.0	10.0/21.0	10.0/12.0	-	-	-	-
309	0.20	2.0max	0.045	0.030	1.0	22.0/24.0	12.0/15.0	-	-	20Cr24Ni12	-
309S	0.08	2.0	0.045	0.030	1.0	22.0/24.0	12.0/15.0	-	-	-	-
310	0.25	2.0	0.045	0.030	1.50	24.0/26.0	19.0/22.0	-	-	10Cr25Ni12	-
310S	0.08	2.0	0.045	0.030	1.50	24.0/26.0	19.0/22.0	-	-	-	-
314	0.25	2.0	0.040	0.030	1.5 to 3	25.0/26.0	19.0/22.0	-	-	-	-
316	0.08	2.0	0.045	0.030	1.0	16.0/18.0	10.0/14.0	2.0/3.0	-	04Cr17Ni12Mo2	En 58H
316L	0.030	2.0	0.045	0.030	1.0	16.0/18.0	10.0/14.0	2.0/3.0	-	03Cr17Ni12Mo2	-
317	0.08	2.0	0.045	0.030	1.0	18.0/20.0	11.0/15.0	3.0/4.0	-	-	-
317L	0.030	2.0	0.045	0.030	1.0	18.0/20.0	11.0/15.0	3.0/4.0	-	Tiy5 c Min	-
316TI	0.080	2.0	0.045	0.030	1.0	16.0/18.0	10.0/14.0	2.0/3.0	Ti5xCmin	-	-
321	0.08	2.0	0.045	0.030	1.0	17.0/19.0	9.0/12.0	-	Ti5xCmin	04Cr18Ni10Ti20	En-58C
347	0.08	2.0	0.045	0.030	1.0	17.0/19.0	9.0/12.0	-	Nb/Ta10xCmin	04Cr18Ni10Nb-40	En-58G
409	0.030	1.00	0.040	0.030	1.00	10.50/11.75	0.50max	-	-	-	-
409M	0.028	0.8/1.5	0.040	0.030	1.00	10.8/12.5	1.5max	-	T10.25/0.75	-	-
410	0.15	1.0	0.040	0.030	1.00	11.5/13.5	0.60	-	-	-	-
410S	0.08	1.0	0.040	0.030	1.0	11.5/13.5	0.60max	-	-	12cr13	En-58A
416	0.15	1.25	0.060	0.15	1.00	12.00/14.00	-	<0.60	-	N 0.25max	-
420	over.15	1.0	0.040	0.030	1.0	12.0/14.0	0.60	-	-	22cr13	En56C&D
430	0.12	1.00	0.040	0.030	1.0	16.00/18.00	0.60	-	-	07cr17	En-60
431	0.20	1.0max	0.040	0.030	1.0	15.0/17.0	1.25/2.50	0.75max	-	15cr16Ni2	En-57
440A	0.60/0.70	1.0	0.040	0.030	1.0	16/18	-	-	-	-	-
440B	0.75	1.0	0.040	0.030	1.0	16.0/18.0	-	0.75max	-	-	-
440C	0.95	1.0	0.040	0.030	1.0	16/18	-	0.75max	-	-	-
446	0.20	1.50max	0.040	0.030	1.0	23.0/27.0	0.60max	-	N-25max	-	-
17.4PH	0.07	1.0	0.040	0.030	1.0	21.0/23.0	4.5/6.5	2.5/3.5	N-0.08/0.20	-	-
UNS S31803	0.03	2.0	0.030	0.020	1.0	24.0/26.0	6.0/8.0	3.0/4.0	N-0.20/0.30	-	-
UNS S32760	0.03	1.0	0.03	0.01	1.0	24.0/26.0	6.0/8.0	3.0/4.0	N-0.24/0.32	-	-
UNS S32750	0.03	1.0	0.035	0.02	0.80	24.026.0	6.0/8.0	3.0/5.0	N-0.10/0.32	-	-
UNS S31803	0.04	1.5	0.04	0.030	1.00	24.0/27.0	4.50/6.50	2.9/3.9	N-0.10/0.25	-	-

Stainless Steel 2 Carbon Steel Pipes Dimension As per ASTM and Weight Per mtr (ANSI B 36.19-19.65)

DN (inch)	OD (mm)		5S	5	10S	10	20	30	STD	40S	40	60	XS	80S	80	100	120	140	160	XXS
1/8	10.3	WT Kg/m	1.24 0.276	1.24 0.276	1.24 0.28	1.24 0.28		1.45 0.32	1.73 0.37	1.73 0.37	1.73 0.37		2.41 0.47	2.41 0.47	2.41 0.47					
1/4	13.7	WT Kg/m	1.24 0.390	1.24 0.390	1.65 0.49	1.65 0.49		1.85 0.54	2.24 0.63	2.24 0.63	2.24 0.63		3.02 0.80	3.02 0.80	3.02 0.80					
3/8	17.1	WT Kg/m	1.24 0.490	1.24 0.490	1.65 0.63	1.65 0.63		1.85 0.7	2.31 0.84	2.31 0.84	2.31 0.84		3.20 1.10	3.20 1.10	3.20 1.10					
1/2	21.3	WT Kg/m	1.65 0.800	1.65 0.800	2.11 1.00	2.11 1.00		2.41 1.12	2.77 1.27	2.77 1.27	2.77 1.27		3.73 1.62	3.73 1.62	3.73 1.62				4.78 1.95	7.47 2.55
3/4	26.7	WT Kg/m	1.65 1.03	1.65 1.03	2.11 1.28	2.11 1.28		2.41 1.44	2.87 1.69	2.87 1.69	2.87 1.69		3.91 2.2	3.91 52.20	3.91 2.20				5.56 2.9	7.82 3.63
1	33.4	WT Kg/m	1.65 1.30	1.65 1.30	2.77 2.09	2.77 2.09		2.9 2.18	3.38 2.50	3.38 2.50	3.38 2.5		4.55 3.24	4.55 3.24	4.55 3.24				6.35 4.24	9.09 5.45
1 1/4	42.2	WT Kg/m	1.65 1.65	1.65 1.65	2.77 2.69	2.77 2.69		2.97 2.87	3.56 3.39	3.56 3.39	3.56 3.39		4.85 4.47	4.85 4.47	4.85 4.47				6.35 5.91	9.70 7.77
1 1/2	48.3	WT Kg/m	1.65 1.91	1.65 1.91	2.77 3.11	2.77 3.11		3.18 3.54	3.68 4.05	3.68 4.05	3.68 4.05		5.08 5.41	5.08 5.41	5.08 5.41				7.14 7.25	10.16 9.54
2	60.3	WT Kg/m	1.65 2.40	1.65 2.40	2.77 3.93	2.77 3.93		3.18 4.48	3.91 5.44	3.91 5.44	3.91 5.44		5.54 7.48	5.54 7.48	5.54 7.48				8.74 11.1	11.07 13.4
2 1/2	73.0	WT Kg/m	2.11 3.69	2.11 3.69	3.05 5.26	3.05 5.26		4.78 8.04	5.16 8.63	5.16 8.63	5.16 8.63		7.01 11.4	7.01 11.4	7.01 11.4				9.53 14.9	14.2 20.39
3	88.9	WT Kg/m	2.11 4.51	2.11 4.51	3.05 6.45	3.05 6.45		4.78 9.92	5.49 11.3	5.49 11.3	5.49 11.3		7.62 15.3	7.62 15.3	7.62 15.3				11.1 21.4	15.24 27.65
3 1/2	102	WT Kg/m	2.11 5.18	2.11 5.18	3.05 7.41	3.05 7.41		4.78 114	5.74 13.6	5.74 13.6	5.74 13.6		8.08 18.6	8.08 18.6	8.08 18.6					
4	114.3	WT Kg/m	2.11 5.84	2.11 5.84	3.05 8.37	3.05 8.37		4.78 12.9	6.02 16.1	6.02 16.1	6.02 16.1		8.56 22.3	8.56 22.3	8.56 22.3		11.1 28.3		13.5 33.5	17.12 41.03
5	141.3	WT Kg/m	2.77 9.47	2.77 9.46	3.40 11.6	3.40 11.6			6.55 21.8	6.55 21.8	6.55 21.8		9.53 31.9	9.53 31.9	9.53 31.9		12.7 40.3		15.9 49.1	19.05 57.43
6	168.3	WT Kg/m	2.77 11.32	2.77 11.32	3.40 13.8	3.40 13.8			7.11 28.3	7.11 28.3	7.11 28.3		11.0 42.6	11.0 42.6	11.0 42.6	14.3	14.3 54.2		18.3 67.6	21.95 79.22
8	219.1	WT Kg/m	2.77 14.79	2.77 14.8	3.76 20	3.76 20	6.35 33.3	7.04 36.8	8.18 42.6	8.18 42.6	8.18 42.6	10.3 53.1	12.7 64.6	12.7 64.6	12.7 64.6	15.1 75.9	18.3 90.4	20.6 101	23.0 111.0	22.23 107.80
10	273.1	WT Kg/m	3.40 22.63	3.4 22.6	4.19 27.8	4.19 27.8	6.35 41.8	7.8 51	9.27 60.3	9.27 60.5	9.27 60.5	12.7 81.5	12.7 81.5	12.7 81.5	15.1 96.0	18.3 115	21.4 133	25.4 155	28.6 172.4	25.4 155.15
12	323.9	WT Kg/m	3.96 31.25	3.96 31.2	4.57 36.0	4.57 36.0	6.35 49.7	8.38 65.2	9.53 73.9	9.53 73.9	10.3 79.7	14.3 109	12.7 97.5	12.7 97.5	17.5 132	21.4 160	25.4 187	28.6 208	33.3 239.0	25.40 186.97
14	356.6	WT Kg/m	3.96 34.36	3.96 34.3	4.78 41.4	6.35 54.7	7.92 67.9	9.53 81.3	9.53 81.3		11.1 84.6	15.1 127	12.7 107		19.1 158.0	23.8 195	27.8 225	31.8 254	35.7 282.0	
16	406.4	WT Kg/m	4.19 41.56	4.19 41.6	4.78 47.3	6.35 62.6	7.92 77.8	9.53 93.3	9.53 93.3		12.7 123	16.7 19.1	12.7 123		21.4 204	26.2 246	31 287	36.5 333	40.5 365	
18	457.2	WT Kg/m	4.19 46.80	4.19 46.8	4.78 53.3	6.35 70.6	7.92 87.7	11.1 122	9.53 105		14.3 156	160 206	12.7 139		23.8 255	29.4 310	34.9 364	39.7 408	45.2 466	
20	508	WT Kg/m	4.78 59.25	4.78 59.3	5.54 68.6	6.35 78.6	9.53 117	12.7 155	9.53 117		15.1 183	20.6 248	12.7 155		26.2 311	32.5 382	38.1 441	44.5 58	50 565	
22	558.8	WT Kg/m	4.78 65.3	4.78 65.3	5.54 75.6	6.35 86.5	9.53 129	12.7 171	9.53 129			22.2 294	12.7 171		28.6 347	34.9 451	41.3 527	47.6 61	54.0 672	
24	609.6	WT Kg/m	5.54 82.47	5.54 82.6	6.35 94.5	6.35 94.5	9.23 141	14.3 210	9.53 141		17.5 255	24.6 355	12.7 187		31 442	38.9 548	46 640	52.5 720	59.5 808.0	
26	660.4	WT Kg/m				7.92 127	12.7 203		9.53 153				12.7 203							
28	711.2	WT Kg/m				7.92 137	12.7 219	15.9 272	9.53 165				12.7 219							
30	762	WT Kg/m	6.35 118	6.35 118	7.92 147	7.92 147	12.7 235	15.9 292	9.53 177				12.7 235							
32	812.8	WT Kg/m				7.92 157	12.7 251	15.9 312	9.53 189		17.5 343		12.7 251							
34	863.6	WT Kg/m				7.92 167	12.7 267	15.9 332	9.53 201		17.5 365		12.7 264							
36	914.4	WT Kg/m				7.92 177	12.7 282	15.9 352	9.53 213		19.1 420		12.7 282							