

ANGLE BARS



Information

Angle bars, also known as an "L-bracket" or an "angle iron", are commonly manufactured by hot-rolled carbon steel or high strength low alloy steel. An angle bar has L-cross shaped section with two legs - equal or unequal and the angle would be 90 degree. Structural steel angles have various dimensions which comply with your different needs.

Applications

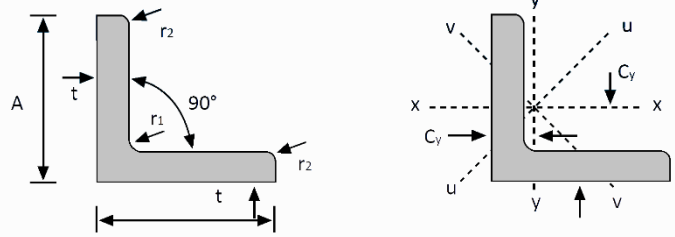
Structural applications, general fabrication, machining and repairs, transmission line towers, construction, transportation frames and corners, manufacturing and support frames.

Features

- Corrosion resistant
- Reliable and long lasting finish
- Good ductility and mechanical characteristics
- Length and thickness accuracy
- Wide application in construction, heavy automobiles
- Easily welded and durable

EQUAL ANGLE BARS

Material Specification: EN 10025 S275JR/S355JR
 ASTM A36
 BS4360 Gr43A
 JIS G3101 SS400

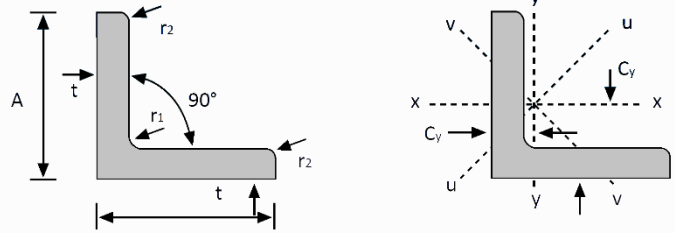


(Metric units)

Standard Sectional Dimension		Mass Per Metre	Radius		Sectional Area	Distance Centre Of Gravity	Second Moment of Area			Radius Of Gyration			Elastic Modulus
Section Size	Thickness		Root	Toe			Axis	Axis	Axis	Axis	Axis	Axis	
A x A	t		r1	r2	A	Cx and Cy	x-x, y-y	u-u	v-v	x-x, y-y	u-u	v-v	x-x, y-y
mm	mm	Kg/m	mm	mm	cm ²	cm	cm ⁴	cm ⁴	cm ⁴	cm	cm	cm	cm ³
20 x 20	3	0.89	3.5	2.4	1.11	0.593	0.381	0.601	0.16	0.585	0.735	0.38	0.271
25 x 25	3	1.12	3.5	2.4	1.41	0.718	0.784	1.24	0.326	0.745	0.938	0.481	0.44
	4	1.45	3.5	2.4	1.84	0.758	1	1.58	0.422	0.737	0.926	0.479	0.574
	5	1.76	3.5	2.4	2.25	0.796	1.19	1.87	0.516	0.728	0.912	0.479	0.701
30 x 30	3	1.36	5	2.4	1.74	0.836	1.41	2.23	0.59	0.901	1.13	0.582	0.652
	4	1.76	5	2.4	2.27	0.879	1.81	2.86	0.758	0.893	1.12	0.578	0.853
	5	2.16	5	2.4	2.78	0.919	2.17	3.42	0.921	0.884	1.11	0.576	1.04
35 x 35	6	1.65	5	2.4	3.87	1.08	4.13	6.51	1.76	1.03	1.3	0.67	1.71
38 x 38	3	1.72	6	2.4	2.24	1.03	2.99	4.72	1.25	1.15	1.45	0.75	1.08
	4	2.36	6	2.4	2.93	1.07	3.85	6.1	1.61	1.15	1.44	0.74	1.41
	5	2.79	6	2.4	3.6	1.12	4.66	7.36	1.95	1.14	1.43	0.74	1.73
	6	3.33	6	2.4	4.25	1.15	5.4	8.51	2.29	1.13	1.41	0.73	2.04
40 x 40	3	1.83	6	2.4	2.36	1.08	3.51	5.55	1.47	1.22	1.53	0.79	1.2
	4	2.42	6	2.4	3.09	1.12	4.53	7.18	1.89	1.21	1.52	0.78	1.58
	5	2.95	6	2.4	3.8	1.17	5.48	8.68	2.29	1.2	1.51	0.78	1.94
	6	3.52	6	2.4	4.49	1.2	6.37	10.1	2.69	1.19	1.5	0.77	2.28
45 x 45	4	2.74	7	2.4	3.52	1.24	6.59	10.4	2.75	1.37	1.72	0.88	2.02
	5	3.38	7	2.4	4.33	1.29	7.99	12.6	3.34	1.36	1.71	0.88	2.49
	6	3.96	7	2.4	5.12	1.33	9.31	14.7	3.9	1.35	1.69	0.87	2.93
50 x 50	3	2.33	7	2.4	2.99	1.32	7.06	11.1	2.97	1.54	1.93	0.997	1.92
	4	3.06	7	2.4	3.92	1.37	9.17	14.5	3.82	1.53	1.92	0.987	2.52
	5	3.77	7	2.4	4.83	1.41	11.2	17.7	4.64	1.52	1.91	0.98	3.11
	6	4.43	7	2.4	5.72	1.45	13	20.6	5.43	1.51	1.9	0.974	3.67
	8	5.78	7	2.4	7.44	1.53	16.5	25.9	6.97	1.49	1.87	0.968	4.74
60 x 60	5	4.55	8	2.4	5.86	1.65	19.8	31.4	8.24	1.84	2.31	1.19	4.56
	6	5.42	8	2.4	6.95	1.7	23.2	36.8	9.65	1.83	2.3	1.18	5.4
63 x 63	5	4.75	8	2.4	6.16	1.73	23.1	36.6	9.58	1.93	2.44	1.25	5.05
	6	5.71	8	2.4	7.31	1.77	27.1	42.9	11.2	1.92	2.42	1.24	5.98

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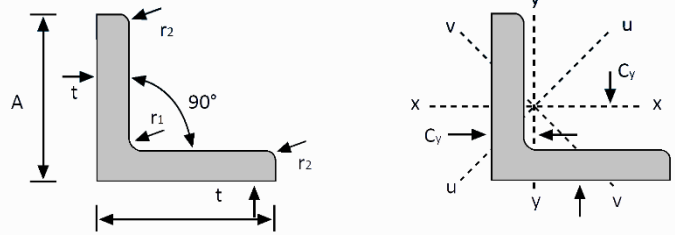


(Metric units)

Standard Sectional Dimension		Mass Per Metre	Radius		Sectional Area	Distance Centre Of Gravity	Second Moment of Area			Radius Of Gyration			Elastic Modulus
Section Size	Thickness		Root	Toe			Axis	Axis	Axis	Axis	Axis	Axis	
A x A	t		r1	r2	A	Cx and Cy	x-x, y-y	u-u	v-v	x-x, y-y	u-u	v-v	x-x, y-y
mm	mm	Kg/m	mm	mm	cm ²	cm	cm ⁴	cm ⁴	cm ⁴	cm	cm	cm	cm ³
65 x 65	5	5	9	2.4	6.4	1.77	25.5	40.3	10.6	2	2.51	1.29	5.39
	6	5.91	9	2.4	7.59	1.82	29.9	47.4	12.4	1.98	2.5	1.28	6.38
	8	7.66	9	2.4	9.91	1.9	38.2	60.4	15.9	1.96	2.47	1.27	8.29
	9	8.55	9	2.4	11	1.94	42	66.4	17.6	1.95	2.45	1.26	9.21
70 x 70	6	6.38	9	2.4	8.19	1.94	37.7	59.8	15.7	2.15	2.7	1.38	7.48
	7	7.38	9	2.4	9.46	1.98	43.1	68.3	17.9	2.13	2.69	1.38	8.59
	8	8.43	9	2.4	10.71	2.02	48.3	76.5	20.1	2.12	2.67	1.37	9.7
75 x 75	5	5.76	10	4.8	7.37	2	38.7	61.2	16.2	2.29	2.88	1.48	7.02
	6	6.85	10	4.8	8.76	2.04	45.7	72.4	19	2.28	2.88	1.47	8.38
	8	9.03	10	4.8	11.5	2.13	59	93.5	24.5	2.27	2.85	1.46	11
	9	9.96	10	4.8	12.8	2.17	65.3	103	27.2	2.26	2.84	1.46	12.3
	10	10.99	10	4.8	14.1	2.21	71.3	113	29.8	2.25	2.83	1.45	13.5
	12	13	10	4.8	16.7	2.29	82.7	130	35	2.23	2.8	1.45	15.9
80 x 80	6	7.32	10	4.8	9.36	2.17	56	88.7	23.2	2.45	3.08	1.58	9.6
	8	9.66	10	4.8	12.3	2.26	72.4	115	30	2.43	3.06	1.56	12.6
	10	11.8	10	4.8	15.1	2.34	87.7	139	36.5	2.41	3.03	1.55	15.5
90 x 90	6	8.28	11	4.8	10.6	2.41	81	128	33.7	2.76	3.48	1.78	12.3
	7	9.59	11	4.8	12.3	2.46	93.2	148	38.7	2.76	3.47	1.77	14.3
	8	10.9	11	4.8	13.9	2.5	105	167	43.5	2.75	3.46	1.77	16.2
	9	12.2	11	4.8	15.6	2.54	117	185	48.2	2.74	3.45	1.76	18
	10	13.3	11	4.8	17.2	2.58	128	202	52.9	2.73	3.43	1.76	19.9
	12	15.9	11	4.8	20.3	2.66	149	235	62.1	2.7	3.4	1.75	23.5
	13	17	11	4.8	21.9	2.7	159	251	66.6	2.69	3.39	1.74	25.2
100 x 100	6	9.2	12	4.8	11.9	2.65	113	178	47	3.08	3.88	1.99	15.3
	7	10.7	12	4.8	13.7	2.7	130	206	53.9	3.08	3.87	1.98	17.8
	8	12.2	12	4.8	15.6	2.75	146	232	60.6	3.07	3.86	1.97	20.2
	10	15	12	4.8	19.2	2.83	178	283	73.8	3.05	3.84	1.96	24.8
	12	17.8	12	4.8	22.8	2.91	208	330	86.5	3.02	3.81	1.95	29.4
	13	19.1	12	4.8	24.5	2.95	222	352	92.8	3.01	3.79	1.95	31.5
	15	21.9	12	4.8	28	3.02	250	395	105	2.99	3.76	1.94	35.8

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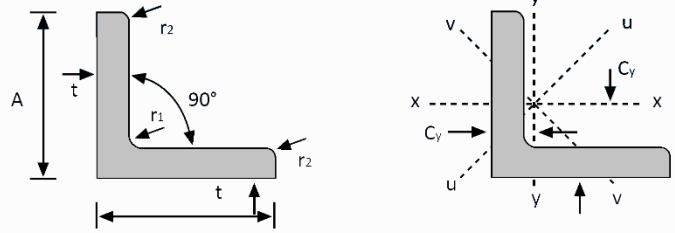


(Metric units)

Standard Sectional Dimension		Mass Per Metre	Radius		Sectional Area	Distance Centre Of Gravity	Second Moment of Area			Radius Of Gyration			Elastic Modulus
Section Size	Thickness		Root	Toe			Axis	Axis	Axis	Axis	Axis	Axis	
A x A	t		r1	r2	A	Cx and Cy	x-x, y-y	u-u	v-v	x-x, y-y	u-u	v-v	x-x, y-y
mm	mm	Kg/m	mm	mm	cm ²	cm	cm ⁴	cm ⁴	cm ⁴	cm	cm	cm	cm ³
120 x 120	8	14.7	13	4.8	18.8	3.24	259	411	107	3.71	4.67	2.38	29.5
	10	18.2	13	4.8	23.3	3.32	316	502	130	3.69	4.64	2.37	36.4
	12	21.6	13	4.8	27.6	3.41	371	588	153	3.66	4.62	2.36	43.1
	15	26.6	13	4.8	34	3.52	448	710	186	3.63	4.57	2.34	52.8
125 x 125	8	14.9	14	4.8	19.7	3.36	294	466	122	3.87	4.87	2.49	32.2
	10	19.09	14	4.8	24.3	3.44	360	570	149	3.84	4.84	2.47	39.7
	12	22.67	14	4.8	28.9	3.53	422	669	174	3.82	4.81	2.46	47
130 x 130	8	15.9	14	4.8	20.5	3.48	332	527	138	4.03	5.07	2.59	34.9
	9	17.9	14	4.8	22.9	3.53	370	586	153	4.02	5.06	2.58	39
	10	19.7	14	4.8	25.3	3.57	406	645	168	4.01	5.05	2.57	43.1
	12	23.5	14	4.8	30.1	3.65	477	758	197	3.98	5.02	2.56	51.1
	15	28.8	14	4.8	37.1	3.77	578	916	240	3.95	4.97	2.54	62.6
	16	30.7	14	4.8	39.4	3.81	610	966	253	3.94	4.95	2.54	66.3
150 x 150	8	18	16	4.8	23.8	3.97	518	820	215	4.66	5.87	3.01	46.9
	10	23	16	4.8	29.5	4.06	635	1008	263	4.64	5.85	2.99	58
	12	27.3	16	4.8	35	4.14	748	1187	309	4.62	5.82	2.97	68.9
	15	33.8	16	4.8	43.2	4.26	909	1442	375	4.59	5.78	2.95	84.6
	16	35.7	16	4.8	45.9	4.3	960	1523	397	4.57	5.76	2.94	89.8
	18	40.1	16	4.8	51.2	4.38	1060	1680	440	4.55	5.73	2.93	99.8
	19	41.9	16	4.8	53.8	4.42	1109	1756	462	4.54	5.71	2.93	105
175 x 175	12	31.8	16	4.8	41	4.77	1208	1920	497	5.43	6.84	3.48	94.9
	15	39.4	16	4.8	50.7	4.89	1474	2342	606	5.39	6.8	3.46	117

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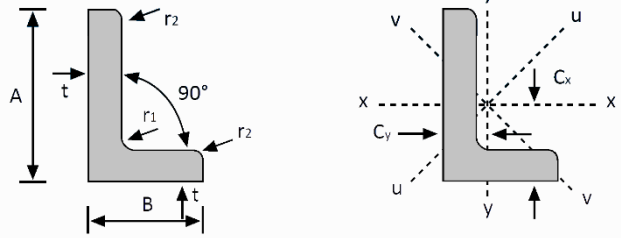


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Standard Sectional Dimension		Mass Per Metre	Radius		Sectional Area	Distance Centre Of Gravity	Second Moment of Area			Radius Of Gyration			Elastic Modulus
Section Size	Thickness		Root	Toe			Axis	Axis	Axis	Axis	Axis	Axis	
A x A	t		r1	r2	A	Cx and Cy	x-x, y-y	u-u	v-v	x-x, y-y	u-u	v-v	x-x, y-y
mm	mm	Kg/m	mm	mm	cm ²	cm	cm ⁴	cm ⁴	cm ⁴	cm	cm	cm	cm ³
200 x 200	12	36.55	18	4.8	47.2	5.38	1829	2906	753	6.23	7.85	4	125
	13	39.49	18	4.8	50.9	5.42	1967	3126	809	6.22	7.84	3.99	135
	15	45.3	18	4.8	58.3	5.5	2237	3555	919	6.19	7.81	3.97	154
	16	48.5	18	4.8	62	5.54	2369	3765	973	6.18	7.79	3.96	164
	18	54.2	18	4.8	69.4	5.62	2627	4174	1080	6.15	7.76	3.95	183
	20	59.9	18	4.8	76.6	5.7	2877	4569	1185	6.13	7.72	3.93	201
	24	71.1	18	4.8	90.8	5.85	3357	5322	1391	6.08	7.65	3.91	237
	25	73.6	18	4.8	94.3	5.89	3472	5502	1442	6.07	7.64	3.91	246
250 x 250	26	76.8	18	4.8	97.8	5.93	3586	5680	1492	6.05	7.62	3.91	255
	25	93.7	20	4.8	120	7.14	7030	11170	2891	7.67	9.67	4.92	394
	28	104	20	4.8	133	7.25	7741	12290	3195	7.63	9.61	4.9	436
	32	118	20	4.8	151	7.4	8650	13710	3593	7.58	9.54	4.89	491
300 x 300	35	128	20	4.8	164	7.51	9305	14720	3887	7.54	9.49	4.88	532
	35	155	24	18	197	8.71	16300	25900	6690	9.09	11.5	5.82	766
350 x 350	35	182	24	18	232	9.96	26600	42300	10800	10.7	13.5	6.83	1060

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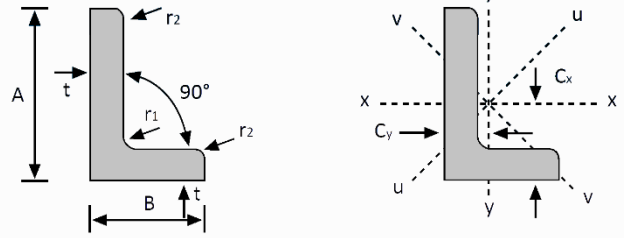


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Section Size	Thickness		Root	Toe		Axis	Axis	Axis	Axis	Axis	Axis	Axis	Axis	Axis	Axis	Axis	Axis
A x B	t		r1	r2	A	Cx	Cy	x-x	y-y	u-u	v-v	x-x	y-y	u-u	v-v	x-x	y-y
mm	mm	Kg/m	mm	mm	cm ²	cm	cm	cm ⁴	cm ⁴	cm ⁴	cm ⁴	cm	cm	cm	cm	cm ³	cm ³
63 x 38	4.5	3.5	6	2.4	4.4	2.1	0.87	18	4.9	20	3	2.01	1.06	2.12	0.82	4.2	1.68
	6	4.4	6	2.4	5.8	2.17	0.93	23	6.3	25	3.8	1.99	1.04	2.1	0.82	5.5	2.18
75 x 50	6	5.76	7	2.4	7.22	2.45	1.21	40.9	14.6	47.1	8.48	2.38	1.42	2.55	1.08	8.1	3.87
	8	7.35	7	2.4	9.44	2.53	1.29	52.4	18.6	60.1	10.9	2.36	1.4	2.52	1.07	10.5	5.01
100 x 65	7	8.8	10	4.8	11.2	3.23	1.52	113	37.7	128	22.1	3.18	1.84	3.39	1.41	16.7	7.56
	8	9.94	10	4.8	12.7	3.28	1.56	127	42.3	144	24.9	3.17	1.83	3.38	1.4	18.9	8.57
	9	11	10	7	14	3.31	1.58	138	45.5	157	26.8	3.14	1.8	3.34	1.38	20.6	9.26
	10	12.3	10	4.8	15.6	3.36	1.64	154	51.1	175	30.2	3.14	1.81	3.35	1.39	23.2	10.5
100 x 75	12	14.4	10	7	18.4	3.43	1.7	177	58	201	34.7	3.11	1.78	3.3	1.37	27	12.1
	7	9.32	10	5	11.9	3.06	1.84	118	56.9	144	30.7	3.15	2.19	3.49	1.61	17	10.1
	8	10.6	10	4.8	13.5	3.11	1.88	133	64.2	163	34.6	3.14	2.18	3.48	1.6	19.3	11.4
	9	11.8	10	4.8	15.1	3.15	1.92	148	71.1	181	38.4	3.13	2.17	3.46	1.6	21.6	12.7
	10	13	10	4.8	16.6	3.19	1.96	162	77.7	198	42.2	3.12	2.16	3.45	1.59	23.8	14
125 x 75	12	15.4	10	4.8	19.7	3.27	2.03	189	90.3	230	49.5	3.1	2.14	3.42	1.59	28.1	16.5
	13	16.5	10	4.8	21.2	3.31	2.07	202	96.3	245	53.1	3.09	2.13	3.4	1.58	30.2	17.7
	6.5	10	11	4.8	12.7	4.07	1.62	206	56.6	228	34.4	4.02	2.11	4.23	1.64	24.4	9.63
	7	10.7	11	4.8	13.7	4.1	1.64	220	60.5	244	36.7	4.01	2.1	4.22	1.64	26.2	10.3
	8	12.2	11	4.8	15.5	4.14	1.69	249	68.1	275	41.3	4	2.1	4.21	1.63	29.7	11.7
	9	13.6	11	4.8	17.4	4.19	1.73	276	75.5	306	45.8	3.99	2.09	4.2	1.62	33.2	13.1
	10	15	11	4.8	19.2	4.23	1.77	303	82.6	336	50.2	3.98	2.08	4.18	1.62	36.7	14.4
150 x 75	12	17.8	11	4.8	22.7	4.32	1.84	355	96	392	58.8	3.95	2.06	4.16	1.61	43.4	17
	13	19.1	11	4.8	24.3	4.35	1.87	376	101	414	61.9	3.93	2.04	4.13	1.6	46.1	17.9
	7	12.1	12	5	15.5	5.17	1.5	364	63.1	386	40.8	4.85	2.02	5	1.62	37	10.5
	8	13.8	11	4.8	17.5	5.23	1.54	411	71.2	436	45.8	4.84	2.02	4.99	1.62	42.1	11.9
	9	15.3	12	8.5	19.4	5.25	1.55	447	75.3	473	48.7	4.79	1.97	4.93	1.58	45.8	12.7
	10	17	11	4.8	21.7	5.32	1.62	503	86.3	533	55.8	4.82	2	4.96	1.6	52	14.7
150 x 75	12	20.1	11	4.8	25.7	5.41	1.7	591	100	626	65.3	4.79	1.98	4.93	1.59	61.6	17.3
	15	24.8	11	4.8	31.7	5.53	1.81	715	120	756	79.2	4.75	1.95	4.89	1.58	75.5	21.1

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Standard Sectional Dimension		Mass Per Metre	Radius		Sectional Area	Distance Centre Of Gravity		Second Moment of Area				Radius Of Gyration				Elastic Modulus	
Section Size	Thickness		Root	Toe		Axis	Axis	Axis	Axis	Axis	Axis	Axis	Axis	Axis	Axis	Axis	Axis
A x B	t		r1	r2	A	Cx	Cy	x-x	y-y	u-u	v-v	x-x	y-y	u-u	v-v	x-x	y-y
mm	mm	Kg/m	mm	mm	cm ²	cm	cm	cm ⁴	cm ⁴	cm ⁴	cm ⁴	cm	cm	cm	cm	cm ³	cm ³
150 x 90	8	14.3	10	5	18.7	4.93	1.97	436	121	484	72.7	4.83	2.54	5.09	1.97	43.3	17.2
	9	16.4	12	6	20.9	4.95	2	485	133	537	80.5	4.81	2.52	5.06	1.96	48.2	19
	10	18.2	12	4.8	23.2	5	2.04	536	147	595	89.2	4.81	2.52	5.06	1.96	53.7	21.2
	12	21.6	12	4.8	27.6	5.09	2.12	630	172	698	105	4.78	2.5	5.03	1.95	63.6	25
	15	26.6	12	4.8	34	5.21	2.24	764	207	844	127	4.74	2.47	4.99	1.93	78.1	30.6
150 x 100	8	15.2	12	8.5	19.4	4.7	2.24	441	158	508	90.9	4.77	2.86	5.12	2.17	42.8	20.3
	9	17.1	12	6	21.8	4.77	2.3	502	181	579	104	4.79	2.88	5.15	2.18	49.1	23.5
	10	18.79	13	6.5	24.2	4.8	2.34	552	198	635	114	4.78	2.86	5.13	2.17	54.1	25.8
	12	22.4	12	8.5	28.6	4.88	2.41	642	228	738	132	4.74	2.83	5.08	2.15	63.4	30.1
	14	26.1	12	6	33.2	4.98	2.5	744	265	856	153	4.74	2.82	5.08	2.15	74.3	35.3
200 x 100	10	23	15	4.8	29.4	6.95	2.03	1233	215	1309	138	6.48	2.7	6.68	2.17	94.5	27
	12	27.3	15	4.8	34.9	7.04	2.11	1454	252	1544	162	6.45	2.68	6.65	2.16	112	31.9
	14	31.6	15	7.5	40.3	7.12	2.18	1654	282	1755	182	6.41	2.65	6.6	2.12	128	36.1
	15	33.7	15	4.8	43.1	7.17	2.23	1772	303	1879	197	6.41	2.65	6.6	2.14	138	39
200 x 150	12	32	15	4.8	40.9	6.1	3.63	1667	813	2046	434	6.38	4.45	7.07	3.26	120	71.5
	15	39.6	15	4.8	50.6	6.22	3.75	2037	989	2496	530	6.34	4.42	7.02	3.23	148	87.9
	18	47.4	15	4.8	60.1	6.34	3.86	2390	1155	2923	622	6.3	4.38	6.97	3.22	175	104