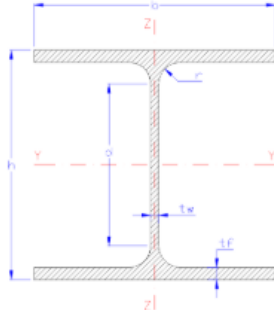


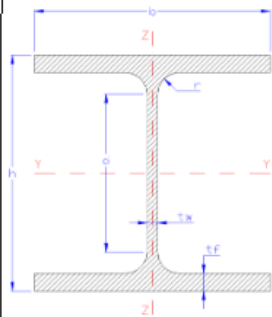
## جدول اشتال تیر آهن IPB

HEA	MECHANICAL PROPERTIES AND DIMENSIONS OF THE SERIE														
	Dimensions						Area A cm <sup>2</sup>	Weight G Kg/m	Properties of the section						
	h mm	b mm	t <sub>w</sub> mm	t <sub>f</sub> mm	r mm	d mm			Referred to the y-y axis			Referred to the z-z axis			
						I <sub>y</sub> cm <sup>4</sup>	W <sub>y</sub> cm <sup>3</sup>	i <sub>y</sub> cm	I <sub>z</sub> cm <sup>4</sup>	W <sub>z</sub> cm <sup>3</sup>	i <sub>z</sub> cm				
HEA 100	96	100	5	8	12	56	21.2	16.7	349	72.8	4.06	134	26.8	2.51	
HEA 120	114	120	5	8	12	74	25.3	19.9	606	106	4.89	231	38.5	3.02	
HEA 140	133	140	5.5	8.5	12	92	31.4	24.7	1,030	155	5.73	389	55.6	3.52	
HEA 160	152	160	6	9	15	104	38.8	30.4	1,670	220	6.57	616	76.9	3.98	
HEA 180	171	180	6	9.5	15	122	45.3	35.5	2,510	294	7.45	925	103	4.52	
HEA 200	190	200	6.5	10	18	134	53.8	42.3	3,690	389	8.28	1,340	134	4.98	
HEA 220	210	220	7	11	18	152	64.3	50.5	5,410	515	9.17	1,950	178	5.51	
HEA 240	230	240	7.5	12	21	164	76.8	60.3	7,760	675	10.8	2,770	231	6	
HEA 260	250	260	7.5	12.5	24	177	86.8	68.2	10,450	836	11	3,670	282	6.5	
HEA 280	270	280	8	13	24	196	97.3	76.4	13,670	1,010	11.9	4,760	340	7	
HEA 300	290	300	8.5	14	27	208	113	88.3	18,260	1,260	12.7	6,310	421	7.47	
HEA 320	310	300	9	15.5	27	225	124	97.6	22,930	1,480	13.6	6,990	466	7.51	
HEA 340	330	300	9.5	16.5	27	243	133	105	27,690	1,680	14.4	7,740	496	7.46	
HEA 360	350	300	10	17.5	27	261	143	112	33,090	1,890	15.2	7,890	526	7.43	
HEA 400	390	300	11	19	27	298	159	125	46,070	2,310	16.8	8,560	571	7.34	
HEA 450	440	300	11.5	21	27	344	178	140	63,720	2,900	18.9	9,470	631	7.29	
HEA 500	490	300	12	23	27	390	198	155	86,970	3,550	21	10,370	691	7.24	
HEA 550	540	300	12.5	24	27	438	211.8	166	111,932	4,150	23	10,819	721	7.15	
HEA 600	590	300	13	25	27	486	226.6	178	141,208	4,790	25	11,271	751	7.05	
HEA 650	640	300	13.5	26	27	534	241.6	190	175,178	5,470	26.9	11,724	782	6.97	
HEA 700	690	300	14.5	27	27	582	260.5	204	215,301	6,240	28.8	12,179	812	6.84	
HEA 800	790	300	15	28	30	674	285.8	224	303,442	7,680	32.6	12,639	843	6.65	
HEA 900	890	300	16	30	30	770	320.5	252	422,075	9,480	36.3	13,547	903	6.5	
HEA 1000	990	300	16.5	31	30	868	346.8	272	553,846	11,190	40	14,004	934	6.35	



## جدول اشتال تیر آهن IPB

HEB	MECHANICAL PROPERTIES AND DIMENSIONS OF THE SERIE														
	HEB	Dimensions						Area A cm <sup>2</sup>	Weight G Kg/m	Propiedades de la Sección					
		h mm	b mm	t <sub>w</sub> mm	t <sub>f</sub> mm	r mm	d mm			Referido al eje y-y			Referido al eje z-z		
										I <sub>y</sub> cm <sup>4</sup>	W <sub>y</sub> cm <sup>3</sup>	i <sub>y</sub> cm	I <sub>z</sub> cm <sup>4</sup>	W <sub>z</sub> cm <sup>3</sup>	i <sub>z</sub> cm
HEB 100	100	100	6	10	12	56	28	20.4	450	89.9	4.16	167	33.5	2.53	
HEB 120	120	120	6.5	11	12	74	34	26.7	864	144	5.04	318	52.9	3.06	
HEB 140	140	140	7	12	12	92	43	33.7	1,510	216	5.93	550	78.5	3.58	
HEB 160	160	160	8	13	15	104	54.3	42.6	2,490	311	6.78	889	111	4.05	
HEB 180	180	180	8.5	14	15	122	65.3	51.2	3,830	426	7.66	1,360	151	4.57	
HEB 200	200	200	9	15	18	134	78.1	61.3	5,700	570	8.54	2,000	200	5.07	
HEB 220	220	220	9.5	16	18	152	91	71.5	8,090	736	9.43	2,840	258	5.59	
HEB 240	240	240	10	17	21	164	106	83.2	11,260	938	10.3	3,920	327	6.08	
HEB 260	260	280	10	17.5	24	177	118	93	14,920	1,150	11.2	5,130	395	6.58	
HEB 280	280	280	10.5	18	24	196	131	103	19,270	1,380	12.1	6,590	471	7.09	
HEB 300	300	300	11	19	27	208	149	117	25,170	1,680	13	8,560	571	7.58	
HEB 320	320	300	11.5	20.5	27	225	161	127	30,820	1,930	13.8	9,240	616	7.57	
HEB 340	340	300	12	21.5	27	243	171	134	36,660	2,160	14.6	9,990	646	7.53	
HEB 360	360	300	12.5	22.5	27	261	181	142	43,190	2,400	15.5	10,140	676	7.49	
HEB 400	400	300	13.5	24	27	298	198	155	57,680	2,880	17.1	10,820	721	7.4	
HEB 450	450	300	14	26	27	344	218	171	79,890	3,550	19.1	11,720	781	7.33	
HEB 500	500	300	14.5	28	27	390	239	187	107,200	4,290	21.2	12,620	842	7.27	
HEB 550	550	300	15	29	27	438	254.1	199	136,891	4,970	23.2	13,077	872	7.17	
HEB 600	600	300	15.5	30	27	486	270	212	171,041	5,790	25.2	13,350	902	7.08	
HEB 650	650	300	16	31	27	534	286.3	225	210,616	6,480	27.1	13,984	932	6.99	
HEB 700	700	300	17	32	27	582	306.4	241	256,888	7,340	29	14,441	963	6.87	
HEB 800	800	300	17.5	33	30	674	334.2	262	350,083	8,980	32.8	14,904	994	6.68	
HEB 900	900	300	18.5	35	30	770	371.3	291	494,065	10,980	36.5	15,816	1,050	6.53	
HEB 1000	1000	300	19	36	30	868	400	314	664,748	12,890	40.1	16,276	1,090	6.38	



## جدول اشتال تیر آهن IPB

HEM		MECHANICAL PROPERTIES AND DIMENSIONS OF THE SERIE												
HEM	Dimensions						Area A cm <sup>2</sup>	Weight G Kg/m	Properties of the section					
	h mm	b mm	t <sub>w</sub> mm	t <sub>f</sub> mm	r mm	d mm			Referred to the y-y axis			Referred to the z-z axis		
							I <sub>y</sub> cm <sup>4</sup>	W <sub>y</sub> cm <sup>3</sup>	i <sub>y</sub> cm	I <sub>z</sub> cm <sup>4</sup>	W <sub>z</sub> cm <sup>3</sup>	i <sub>z</sub> cm		
HEM 100	120	106	12	20	12	56	53.2	41.8	1,143	190	4.63	399	75	2.74
HEM 120	140	126	12.5	21	12	74	66.4	52.1	2,018	288	5.51	703	112	3.25
HEM 140	160	146	13	22	12	92	80.6	63.2	3,291	411	6.39	1,144	157	3.77
HEM 160	180	166	14	23	15	104	97.1	76.2	5,098	566	7.25	1,759	212	4.26
HEM 180	200	186	14.5	24	15	122	113.3	88.9	7,483	748	8.13	2,580	277	4.77
HEM 200	220	206	15	25	18	134	131.1	103	10,642	967	9	3,651	354	5.27
HEM 220	240	226	15.5	26	18	152	149.4	117	14,605	1,220	9.89	5,012	444	5.79
HEM 240	270	248	18	32	21	164	199.6	157	24,289	1,800	11	8,153	657	6.39
HEM 260	290	268	18	32.5	24	177	219.6	172	31,307	2,160	11.9	10,449	780	6.9
HEM 280	310	288	18.5	33	24	196	240.2	189	39,547	2,500	12.8	13,163	914	7.4
HEM 300	340	310	21	39	27	208	303.1	238	59,201	3,480	14	19,403	1,250	8
HEM 320	359	309	21	40	27	225	312	245	68,135	3,800	14.8	19,709	1,280	7.95
HEM 340	377	309	21	40	27	243	315.8	248	76,372	4,050	15.6	19,711	1,280	7.9
HEM 360	395	308	21	40	27	261	318.8	250	84,867	4,300	16.3	19,522	1,270	7.83
HEM 400	432	307	21	40	27	298	325.8	256	104,119	4,820	17.9	19,335	1,260	7.7
HEM 450	478	307	21	40	27	344	335.4	263	131,484	5,500	19.8	19,339	1,260	7.59
HEM 500	524	306	21	40	27	390	344.3	270	161,929	6,180	21.7	19,155	1,250	7.46
HEM 550	572	306	21	40	27	438	354.4	278	197,984	6,920	23.6	19,158	1,250	7.35
HEM 600	620	305	21	40	27	486	363.7	285	237,447	7,660	25.6	18,975	1,240	7.22
HEM 650	668	305	21	40	27	534	373.7	293	281,667	8,430	27.5	18,979	1,240	7.13
HEM 700	716	304	21	40	27	582	383	301	329,278	9,200	29.3	18,797	1,240	7.01
HEM 800	814	303	21	40	30	674	404.3	317	442,598	10,870	33.1	18,627	1,230	6.79
HEM 900	910	302	21	40	30	770	423.6	333	570,434	12,540	36.7	18,452	1,220	6.6
HEM 1000	1008	302	21	40	30	868	442.2	349	722,299	14,330	40.3	18,459	1,220	6.45

