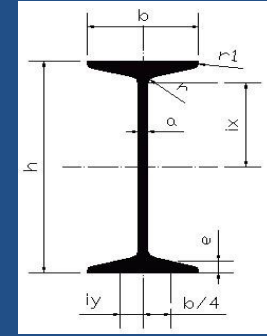




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# Perfiles IPN



## Medidas y Propiedades de la Sección

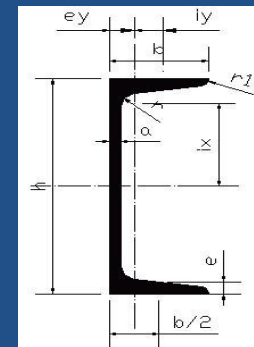
Designación del Perfil	Altura	Ala	Espesor Alma	Espesor Ala	Radios de Acuerdo		Sección Nominal	Masa Nominal	Momento de Inercia		Módulo Resistente		Radio de Giro	
	h	b	a	e	r	r <sub>1</sub>	S	G	I <sub>x</sub>	I <sub>y</sub>	W <sub>x</sub>	W <sub>y</sub>	i <sub>x</sub>	i <sub>y</sub>
	mm	mm	mm	mm	mm	mm	Cm <sup>2</sup>	Kg/m	Cm <sup>4</sup>	Cm <sup>4</sup>	Cm <sup>3</sup>	Cm <sup>3</sup>	Cm	Cm
<b>IPN 80</b>	80	42	3.9	5.9	3.9	2.3	7.6	<b>5.9</b>	77.8	6.29	19.5	3.00	3.20	0.91
<b>IPN 100</b>	100	50	4.5	6.8	4.5	2.7	10.6	<b>8.3</b>	171	12.2	34.2	4.88	4.01	1.07
<b>IPN 120</b>	120	58	5.1	7.7	5.1	3.1	14.2	<b>11.2</b>	328	21.5	54.7	7.41	4.81	1.23
<b>IPN 140</b>	140	66	5.7	8.6	5.7	3.4	18.3	<b>14.3</b>	573	35.2	81.9	10.7	5.61	1.40
<b>IPN 160</b>	160	74	6.3	9.5	6.3	3.8	22.8	<b>17.9</b>	935	54.7	117	14.8	6.40	1.55
<b>IPN 180</b>	180	82	6.9	10.4	6.9	4.1	27.9	<b>21.9</b>	1450	81.3	161	19.8	7.20	1.71
<b>IPN 200</b>	200	90	7.5	11.3	7.5	4.5	33.5	<b>26.2</b>	2140	117	214	26.0	8.00	1.87
<b>IPN 220</b>	220	98	8.1	12.2	8.1	4.9	39.6	<b>31.1</b>	3060	162	278	33.1	8.80	2.02
<b>IPN 240</b>	240	106	8.7	13.1	8.7	5.2	46.1	<b>36.2</b>	4250	221	354	41.7	9.59	2.20
<b>IPN 260</b>	260	113	9.4	14.1	9.4	5.6	53.3	<b>41.9</b>	5740	288	442	51.0	10.4	2.32
<b>IPN 280</b>	280	119	10.1	15.2	10.1	6.1	61.0	<b>47.9</b>	7590	364	542	61.2	11.1	2.45
<b>IPN 300</b>	300	125	10.8	16.2	10.8	6.5	69.1	<b>54.2</b>	9800	451	653	72.2	11.9	2.56
<b>IPN 320</b>	320	131	11.5	17.3	11.5	6.9	77.7	<b>61.0</b>	12510	555	782	84.7	12.7	2.67
<b>IPN 340</b>	340	137	12.2	18.3	12.2	7.3	86.7	<b>68.0</b>	15700	674	923	98.4	13.5	2.80
<b>IPN 360</b>	360	143	13.0	19.5	13.0	7.8	97.0	<b>76.0</b>	19610	818	1090	114	14.2	2.90
<b>IPN 400</b>	400	155	14.4	21.6	14.4	8.6	118.0	<b>92.4</b>	29210	1160	1460	149	15.7	3.13
<b>IPN 450</b>	450	170	16.2	24.3	16.2	9.7	147.0	<b>115.0</b>	45850	1730	2040	203	17.7	3.43
<b>IPN 500</b>	500	185	18.0	27.0	18.0	10.8	179.0	<b>141.0</b>	68740	2480	2750	268	19.6	3.72



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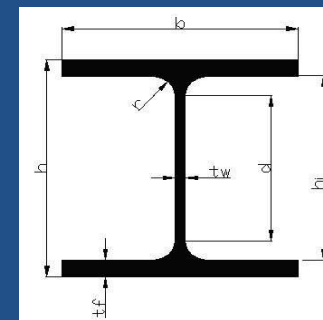
## Medidas y Propiedades de la Sección

Designación del Perfil	Altura	Ala	Espesor Alma	Espesor Ala	Radios de Acuerdo		Centro de Gravedad	Sección Nominal	Masa Nominal	Momento de Inercia		Módulo Resistente		Radio de Giro	
	h	b	a	e	r	r <sub>1</sub>	e <sub>y</sub>	S	G	I <sub>x</sub>	I <sub>y</sub>	W <sub>x</sub>	W <sub>y</sub>	i <sub>x</sub>	i <sub>y</sub>
	mm	mm	mm	mm	mm	mm	Cm	Cm <sup>2</sup>	Kg/m	Cm <sup>4</sup>	Cm <sup>4</sup>	Cm <sup>3</sup>	Cm <sup>3</sup>	Cm	Cm
<b>UPN 80</b>	80	45	6.0	8.0	8.0	4.0	1.45	11.0	<b>8.6</b>	106	19.4	26.5	6.36	3.10	1.33
<b>UPN 100</b>	100	50	6.0	8.5	8.5	4.5	1.55	13.5	<b>10.6</b>	206	29.3	41.2	8.49	3.91	1.47
<b>UPN 120</b>	120	55	7.0	9.0	9.0	4.5	1.60	17.0	<b>13.4</b>	364	43.2	60.7	11.1	4.62	1.55
<b>UPN 140</b>	140	60	7.0	10.0	10.0	5.0	1.75	20.4	<b>16.0</b>	605	62.7	86.4	14.8	5.45	1.75
<b>UPN 160</b>	160	65	7.5	10.5	10.5	5.5	1.84	24.0	<b>18.8</b>	925	85.3	116.0	18.3	6.21	1.89
<b>UPN 180</b>	180	70	8.0	11.0	11.0	5.5	1.92	28.0	<b>22.0</b>	1350	114.0	150.0	22.4	6.95	2.02
<b>UPN 200</b>	200	75	8.5	11.5	11.5	6.0	2.01	32.2	<b>25.3</b>	1910	148.0	191.0	27.0	7.70	2.14
<b>UPN 220</b>	220	80	9.0	12.5	12.5	6.5	2.14	37.4	<b>29.4</b>	2690	197.0	245.0	33.6	8.48	2.26
<b>UPN 240</b>	240	85	9.5	13.0	13.0	6.5	2.23	42.3	<b>33.2</b>	3600	248.0	300.0	39.6	9.22	2.42
<b>UPN 260</b>	260	90	10.0	14.0	14.0	7.0	2.36	48.3	<b>37.9</b>	4820	317.0	371.0	47.7	9.99	2.56
<b>UPN 280</b>	280	95	10.0	15.0	15.0	7.5	2.53	53.3	<b>41.8</b>	6280	399.0	448.0	57.2	10.90	2.74
<b>UPN 300</b>	300	100	10.0	16.0	16.0	8.0	2.70	58.8	<b>46.2</b>	8030	495.0	535.0	67.8	11.70	2.90
<b>UPN 320</b>	320	100	14.0	17.5	17.5	8.7	2.60	75.8	<b>59.5</b>	10870	597.0	679.4	80.6	12.10	2.81
<b>UPN 400</b>	400	110	14.0	18.0	18.0	9.0	2.65	91.5	<b>71.8</b>	20350	846.0	1020.0	102.0	14.90	3.04



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# Perfiles HEB



## Medidas y Propiedades de la Sección

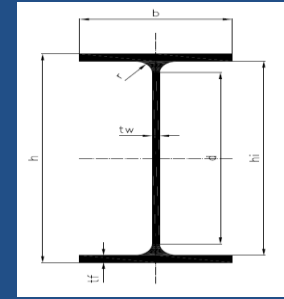
Designación del Perfil	Altura	Ala	Espesor Alma	Espesor Ala	Radios de Acuerdo	Dimensiones interiores del alma		Sección Nominal	Masa Nominal	Momento de Inercia		Módulo Resistente		Radio de Giro	
	h	b	tw	tf	r	d	hi	S	G	I <sub>x</sub>	I <sub>y</sub>	W <sub>x</sub>	W <sub>y</sub>	i <sub>x</sub>	i <sub>y</sub>
	mm	mm	mm	mm	mm	mm	mm	Cm <sup>2</sup>	Kg/m	Cm <sup>4</sup>	Cm <sup>4</sup>	Cm <sup>3</sup>	Cm <sup>3</sup>	Cm	Cm
<b>HEB 100</b>	100	100	6.0	10.0	12	56	80	26.0	<b>20.4</b>	449.5	167.3	89.9	33.5	4.2	2.5
<b>HEB 120</b>	120	120	6.5	11.0	12	74	98	34.0	<b>26.7</b>	864.4	317.5	144.1	52.9	5.0	3.1
<b>HEB 140</b>	140	140	7.0	12.0	12	92	116	43.0	<b>33.7</b>	1509.0	549.7	215.6	78.5	5.9	3.6
<b>HEB 160</b>	160	160	8.0	13.0	15	104	134	54.3	<b>42.6</b>	2492.0	889.2	311.5	111.2	6.8	4.1
<b>HEB 180</b>	180	180	8.5	14.0	15	122	152	65.3	<b>51.2</b>	3831.0	1363.0	425.7	151.4	7.7	4.6
<b>HEB 200</b>	200	200	9.0	15.0	18	134	170	78.1	<b>61.3</b>	5696.0	2003.0	569.6	200.3	8.5	5.1
<b>HEB 220</b>	220	220	9.5	16.0	18	152	188	91.0	<b>71.5</b>	8091.0	2843.0	735.5	258.5	9.4	5.6
<b>HEB 240</b>	240	240	10.0	17.0	21	164	206	106.0	<b>83.2</b>	11260.0	3923.0	938.3	326.9	10.3	6.1
<b>HEB 260</b>	260	260	10.0	17.5	24	177	225	118.4	<b>93.0</b>	14920.0	5135.0	1148.0	395.0	11.2	6.6
<b>HEB 280</b>	280	280	10.5	18.0	24	196	244	131.4	<b>103.0</b>	19270.0	6595.0	1376.0	471.0	12.1	7.1
<b>HEB 300</b>	300	300	11.0	19.0	27	208	262	149.1	<b>117.0</b>	25170.0	8563.0	1678.0	570.9	13.0	7.6
<b>HEB 320</b>	320	300	11.5	20.5	27	225	279	161.3	<b>127.0</b>	30820.0	9239.0	1926.0	615.9	13.8	7.6
<b>HEB 340</b>	340	300	12.0	21.5	27	243	297	170.9	<b>134.0</b>	36660.0	9690.0	2156.0	646.0	14.7	7.5
<b>HEB 360</b>	360	300	12.5	22.5	27	261	315	180.6	<b>142.0</b>	43190.0	10140.0	2400.0	676.1	15.5	7.5
<b>HEB 400</b>	400	300	13.5	24.0	27	298	352	197.8	<b>155.0</b>	57680.0	10820.0	2884.0	721.3	17.1	7.4
<b>HEB 450</b>	450	300	14.0	26.0	27	344	398	218.0	<b>171.0</b>	79890.0	11720.0	3551.0	781.4	19.1	7.3
<b>HEB 500</b>	500	300	14.5	28.0	27	390	444	239.0	<b>187.0</b>	107200.0	12620.0	4290.0	842.0	21.2	7.3



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# Perfiles IPE

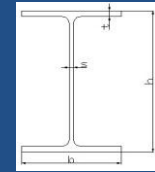
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## Medidas y Propiedades de la Sección

Designación del Perfil	Altura	Ala	Espesor Alma	Espesor Ala	Radios de Acuerdo	Altura del alma		Sección Nominal	Masa Nominal	Momento de Inercia		Módulo Resistente		Radio de Giro	
	h	b	tw	tf	r	d	hi	S	G	I <sub>x</sub>	I <sub>y</sub>	W <sub>x</sub>	W <sub>y</sub>	i <sub>x</sub>	i <sub>y</sub>
	mm	mm	mm	mm	mm	mm	mm	Cm <sup>2</sup>	Kg/m	Cm <sup>4</sup>	Cm <sup>4</sup>	Cm <sup>3</sup>	Cm <sup>3</sup>	Cm	Cm
<b>IPE 100</b>	100	55	4.1	5.7	7	75	89	10.3	<b>8.1</b>	171.0	15.9	34.2	5.8	4.07	1.24
<b>IPE 120</b>	120	64	4.4	6.3	7	93	107	13.2	<b>10.4</b>	317.8	27.7	53.0	8.7	4.90	1.45
<b>IPE 140</b>	140	73	4.7	6.9	7	112	126	16.4	<b>12.9</b>	541.2	44.9	77.3	12.3	5.74	1.65
<b>IPE 160</b>	160	82	5.0	7.4	9	127	145	20.1	<b>15.8</b>	869.3	68.3	108.7	16.7	6.58	1.84
<b>IPE 180</b>	180	91	5.3	8.0	9	146	164	24.0	<b>18.8</b>	1317.0	100.9	146.3	22.2	7.42	2.05
<b>IPE 200</b>	200	100	5.6	8.5	12	159	183	28.5	<b>22.4</b>	1943.0	142.4	194.3	28.5	8.26	2.24
<b>IPE 220</b>	220	110	5.9	9.2	12	178	202	33.4	<b>26.2</b>	2772.0	204.9	252.0	37.3	9.11	2.48
<b>IPE 240</b>	240	120	6.2	9.8	15	190	220	39.1	<b>30.7</b>	3892.0	283.6	324.3	47.3	9.97	2.69
<b>IPE 270</b>	270	135	6.6	10.2	15	220	250	45.9	<b>36.1</b>	5790.0	419.9	428.9	62.2	11.23	3.02
<b>IPE 300</b>	300	150	7.1	10.7	15	249	279	53.8	<b>42.2</b>	8356.0	603.8	557.1	80.5	12.46	3.35
<b>IPE 330</b>	330	160	7.5	11.5	18	271	307	62.61	<b>49.1</b>	11770.0	788.1	713.1	98.5	13.71	3.55
<b>IPE 360</b>	360	170	8.0	12.7	18	298	335	72.7	<b>57.1</b>	16270.0	1040.0	904.0	123.0	15.00	3.78
<b>IPE 400</b>	400	180	8.6	13.5	21	331	373	84.5	<b>66.3</b>	23130.0	1318.0	1156.0	146.4	16.55	3.95
<b>IPE 450</b>	450	190	9.4	14.6	21	379	421	98.8	<b>77.6</b>	33740.0	1676.0	1500.0	176.4	18.48	4.12
<b>IPE 500</b>	500	200	10.2	16.0	21	426	468	116.0	<b>90.7</b>	48200.0	2140.0	1930.0	214.0	20.40	4.30





### Medidas y Propiedades de la Sección

Designación del Perfil	Altura	Ala	Alma	Espesor ala	Sección Nominal	Masa Nominal	Momento de Inercia		Módulo Resistente		Radio de Giro		Designación del Perfil
	h	b	s	t	S	G	I <sub>x</sub>	I <sub>y</sub>	W <sub>x</sub>	W <sub>y</sub>	i <sub>x</sub>	i <sub>y</sub>	
(mm x kg/m)	mm	mm	mm	mm	Cm <sup>2</sup>	Kg/m	Cm <sup>4</sup>	Cm <sup>4</sup>	Cm <sup>3</sup>	Cm <sup>3</sup>	Cm	Cm	
<b>W 150 x 22.5</b>	152	152	5.8	6.6	29	<b>22.5</b>	1229	387	161.7	50.9	6.51	3.65	<b>W 6 x 15</b>
<b>W 150 x 29.8</b>	157	153	6.6	9.3	38.5	<b>29.8</b>	1739	556	221.5	72.6	6.72	3.8	<b>W 6 x 20</b>
<b>W 150 x 37.1</b>	162	154	8.1	11.6	47.8	<b>37.1</b>	2244	707	277	91.8	6.85	3.84	<b>W 6 x 25</b>
<b>W 200 x 35.9</b>	201	165	6.2	10.2	45.7	<b>35.9</b>	3437	764	342	92.6	8.67	4.09	<b>W 8 x 24</b>
<b>W 200 x 41.7</b>	205	166	7.2	11.8	53.5	<b>41.7</b>	4114	901	401.4	108.5	8.77	4.1	<b>W 8 x 28</b>
<b>W 200 x 46.1</b>	203	203	7.2	11	58.6	<b>46.1</b>	4543	1535	447.6	151.2	8.81	5.12	<b>W 8 x 31</b>
<b>W 200 x 52.0</b>	206	204	7.9	12.6	66.9	<b>52</b>	5298	1784	514.4	174.9	8.9	5.16	<b>W 8 x 35</b>
<b>HP 200 x 53.0</b>	204	207	11.3	11.3	68.1	<b>53</b>	4977	1673	488	161.7	8.55	4.96	<b>HP 8 x 36</b>
<b>W 200 x 59.0</b>	210	205	9.1	14.2	76	<b>59</b>	6140	2041	584.8	199.1	8.99	5.18	<b>W 8 x 40</b>
<b>W 200 x 71.0</b>	216	206	10.2	17.4	91	<b>71.0</b>	7660	2537	709.2	246.3	9.17	5.28	<b>W 8 x 48</b>
<b>W 200 x 86.0</b>	222	209	13	20.6	110.9	<b>86.0</b>	9498	3139	855.7	300.4	9.26	5.32	<b>W 8 x 58</b>
<b>HP 250 x 62.0</b>	246	256	10.5	10.7	79.6	<b>62</b>	8728	2995	709.6	234	10.47	6.13	<b>HP 10 x 42</b>
<b>W 250 x 73.0</b>	253	254	8.6	14.2	92.7	<b>73</b>	11257	3880	889.9	305.5	11.02	6.47	<b>W 10 x 49</b>
<b>W 250 x 80.0</b>	256	255	9.4	15.6	101.9	<b>80</b>	12550	4313	980.5	338.3	11.1	6.51	<b>W 10 x 54</b>
<b>HP 250 x 85.0</b>	254	260	14.4	14.4	108.5	<b>85</b>	12280	4225	966.9	325	10.64	6.24	<b>HP 10 x 57</b>
<b>W 250 x 89.0</b>	260	256	10.7	17.3	113.9	<b>89</b>	14237	4841	1095.1	378.2	11.18	6.52	<b>W 10 x 60</b>
<b>W 250 x 101.0</b>	264	257	11.9	19.6	128.7	<b>101</b>	16352	5549	1238.8	431.8	11.27	6.57	<b>W 10 x 68</b>
<b>W 250 x 115.0</b>	269	259	13.5	22.1	146.1	<b>115</b>	18920	6405	1406.7	494.6	11.38	6.62	<b>W 10 x 77</b>
<b>HP 310 x 79.0</b>	299	306	11	11	100	<b>79</b>	16316	5258	1091.3	343.7	12.77	7.25	<b>HP 12 x 53</b>
<b>HP 310 x 93.0</b>	303	308	13.1	13.1	119.2	<b>93</b>	19682	6387	1299.1	414.7	12.85	7.32	<b>HP 12 x 63</b>
<b>W 310 x 97.0</b>	308	305	9.9	15.4	123.6	<b>97</b>	22284	7286	1447	477.8	13.43	7.68	<b>W 12 x 65</b>
<b>W 310 x 107.0</b>	311	306	10.9	17	136.4	<b>107</b>	24839	8123	1597.3	530.9	13.49	7.72	<b>W 12 x 72</b>
<b>HP 310 x 110.0</b>	308	310	15.4	15.5	141	<b>110.0</b>	23703	7707	1539.1	497.3	12.97	7.39	<b>HP 12 x 74</b>
<b>W 310 x 117.0</b>	314	307	11.9	18.7	149.9	<b>117.0</b>	27563	9024	1755.6	587.9	13.56	7.76	<b>W 12 x 79</b>
<b>HP 310 x 125.0</b>	312	312	17.4	17.4	159	<b>125.0</b>	27076	8823	1735.6	565.6	13.05	7.45	<b>HP 12 x 84</b>
<b>W 310 x 129 (H)</b>	318	308	13.1	20.6	165.1	<b>129.7</b>	30801	10031	1934	651	13.67	7.8	<b>W 12 x 87</b>
<b>W 310 x 142.8 (H)</b>	323	309	14	22.9	181.9	<b>142.8</b>	34672	11238	2147	728	13.82	7.85	<b>W 12 x 96</b>
<b>W 310 x 158 (H)</b>	327	310	15.5	25.1	201.2	<b>157.8</b>	38834	12529	2376	808	13.89	7.9	<b>W 12 x 106</b>
<b>W 360 x 90.7 (H)</b>	353	254	9.5	16.4	115	<b>90.3</b>	26639	4454	1511	352	15.19	6.22	<b>W 14 x 61</b>
<b>W 360 x 91.0</b>	353	254	9.5	16.4	115.9	<b>91.0</b>	26755	4483	1515.9	353	15.19	6.22	<b>W 14 x 61</b>
<b>W 360 x 101.0</b>	357	255	10.5	18.3	129.5	<b>101.0</b>	30279	5063	1696.3	397.1	15.29	6.25	<b>W 14 x 68</b>
<b>W 360 x 110.0</b>	360	256	11.4	19.9	140.6	<b>110.0</b>	33155	5570	1841.9	435.2	15.36	6.29	<b>W 14 x 74</b>
<b>W 360 x 122.0</b>	363	257	13	21.7	155.3	<b>122.0</b>	36599	6147	2016.5	478.4	15.35	6.29	<b>W 14 x 82</b>