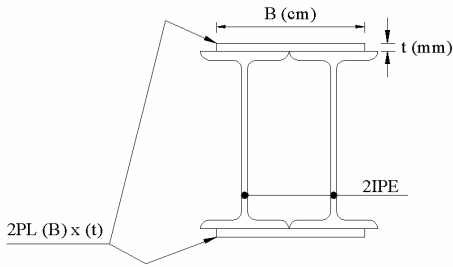


## مقاطع 2IPE



- مساحت مقطع : A  
 سختی پیچشی مقطع : J  
 ممان اینرسی مقطع :  $I_3, I_2$   
 مساحت موثر برشی :  $AV_2, AV_3$   
 اساس مقطع :  $S_3, S_2$   
 مدول پلاستیک مقطع :  $Z_3, Z_2$   
 شعاع ژیراسیون مقطع :  $R_3, R_2$

NAME (نام مقطع)	A Cm <sup>2</sup>	J Cm <sup>4</sup>	I <sub>3</sub> Cm <sup>4</sup>	I <sub>2</sub> Cm <sup>4</sup>	AV <sub>2</sub> Cm <sup>2</sup>	AV <sub>3</sub> Cm <sup>2</sup>	S <sub>3</sub> Cm <sup>3</sup>	S <sub>2</sub> Cm <sup>3</sup>	Z <sub>3</sub> Cm <sup>3</sup>	Z <sub>2</sub> Cm <sup>3</sup>	R <sub>3</sub> Cm	R <sub>2</sub> Cm
<b>2IPE140</b>												
2IPE140	32.80	4.90	1082.0	526.8	13.16	16.79	154.6	72.2	176.7	119.8	5.74	4.01
2IPE140 + 2PL100×6	44.80	6.34	1721.8	626.8	13.16	26.79	226.6	85.9	264.3	149.8	6.20	3.74
2IPE140 + 2PL100×8	48.80	8.31	1959.0	660.1	13.16	30.12	251.2	90.4	295.1	159.8	6.34	3.68
2IPE140 + 2PL100×10	52.80	11.57	2208.7	693.4	13.16	33.46	276.1	95.0	326.7	169.8	6.47	3.62
2IPE140 + 2PL100×12	56.80	16.42	2471.1	726.8	13.16	36.79	301.4	99.6	359.1	179.8	6.60	3.58
2IPE140 + 2PL100×15	62.80	27.40	2889.5	776.8	13.16	41.79	339.9	106.4	409.2	194.8	6.78	3.52
2IPE140 + 2PL120×6	47.20	6.63	1849.8	699.6	13.16	28.79	243.4	95.8	281.8	163.0	6.26	3.85
2IPE140 + 2PL120×8	52.00	9.00	2134.4	757.2	13.16	32.79	273.6	103.7	318.8	177.4	6.41	3.82
2IPE140 + 2PL120×10	56.80	12.90	2434.0	814.8	13.16	36.79	304.3	111.6	356.7	191.8	6.55	3.79
2IPE140 + 2PL120×12	61.60	18.72	2748.9	872.4	13.16	40.79	335.2	119.5	395.6	206.2	6.68	3.76
2IPE140 + 2PL120×15	68.80	31.90	3251.0	958.8	13.16	46.79	382.5	131.3	455.7	227.8	6.87	3.73
2IPE140 + 2PL180×6	54.40	7.49	2233.7	1110.0	13.16	34.79	293.9	123.3	334.4	217.0	6.41	4.52
2IPE140 + 2PL180×8	61.60	11.04	2660.6	1304.4	13.16	40.79	341.1	144.9	389.8	249.4	6.57	4.60
2IPE140 + 2PL180×10	68.80	16.90	3110.0	1498.8	13.16	46.79	388.8	166.5	446.7	281.8	6.72	4.67
2IPE140 + 2PL180×12	76.00	25.64	3582.4	1693.2	13.16	52.79	436.9	188.1	505.0	314.2	6.87	4.72
2IPE140 + 2PL180×15	86.80	45.40	4335.5	1984.8	13.16	61.79	510.1	220.5	595.2	362.8	7.07	4.78
<b>2IPE160</b>												
2IPE160	40.20	7.24	1738.0	812.4	16.00	20.23	217.3	99.1	247.7	164.5	6.58	4.50
2IPE160 + 2PL100×6	52.20	8.68	2565.0	912.4	16.00	30.23	298.3	111.3	347.3	194.5	7.01	4.18
2IPE160 + 2PL100×8	56.20	10.65	2867.8	945.7	16.00	33.56	325.9	115.3	382.1	204.5	7.14	4.10
2IPE160 + 2PL100×10	60.20	13.91	3184.7	979.0	16.00	36.89	353.9	119.4	417.7	214.5	7.27	4.03
2IPE160 + 2PL100×12	64.20	18.76	3515.9	1012.4	16.00	40.23	382.2	123.5	454.1	224.5	7.40	3.97
2IPE160 + 2PL100×15	70.20	29.74	4040.5	1062.4	16.00	45.23	425.3	129.6	510.2	239.5	7.59	3.89
2IPE160 + 2PL120×6	54.60	8.97	2730.4	985.2	16.00	32.23	317.5	120.1	367.2	207.7	7.07	4.25
2IPE160 + 2PL120×8	59.40	11.34	3093.8	1042.8	16.00	36.23	351.6	127.2	409.0	222.1	7.22	4.19
2IPE160 + 2PL120×10	64.20	15.24	3474.0	1100.4	16.00	40.23	386.0	134.2	451.7	236.5	7.36	4.14
2IPE160 + 2PL120×12	69.00	21.06	3871.5	1158.0	16.00	44.23	420.8	141.2	495.4	250.9	7.49	4.10
2IPE160 + 2PL120×15	76.20	34.24	4501.0	1244.4	16.00	50.23	473.8	151.8	562.7	272.5	7.69	4.04
2IPE160 + 2PL180×6	61.80	9.83	3226.7	1395.6	16.00	38.23	375.2	155.1	427.0	261.7	7.23	4.75
2IPE160 + 2PL180×8	69.00	13.38	3771.7	1590.0	16.00	44.23	428.6	176.7	489.6	294.1	7.39	4.80
2IPE160 + 2PL180×10	76.20	19.24	4342.0	1784.4	16.00	50.23	482.4	198.3	553.7	326.5	7.55	4.84
2IPE160 + 2PL180×12	83.40	27.98	4938.3	1978.8	16.00	56.23	536.8	219.9	619.2	358.9	7.69	4.87
2IPE160 + 2PL180×15	94.20	47.74	5882.5	2270.4	16.00	65.23	619.2	252.3	720.2	407.5	7.90	4.91

NAME (نام مقطع)	A Cm <sup>2</sup>	J Cm <sup>4</sup>	I <sub>3</sub> Cm <sup>4</sup>	I <sub>2</sub> Cm <sup>4</sup>	AV <sub>2</sub> Cm <sup>2</sup>	AV <sub>3</sub> Cm <sup>2</sup>	S <sub>3</sub> Cm <sup>3</sup>	S <sub>2</sub> Cm <sup>3</sup>	Z <sub>3</sub> Cm <sup>3</sup>	Z <sub>2</sub> Cm <sup>3</sup>	R <sub>3</sub> Cm	R <sub>2</sub> Cm
<b>2IPE180</b>												
2IPE180	47.80	9.62	2640.0	1191.6	19.08	24.27	293.3	130.9	332.8	217.6	7.43	4.99
2IPE180 + 2PL100×6	59.80	11.06	3678.2	1291.6	19.08	34.27	383.2	141.9	444.4	247.6	7.84	4.65
2IPE180 + 2PL100×8	63.80	13.03	4054.6	1324.9	19.08	37.60	413.7	145.6	483.2	257.6	7.97	4.56
2IPE180 + 2PL100×10	67.80	16.29	4446.7	1358.2	19.08	40.93	444.7	149.3	522.8	267.6	8.10	4.48
2IPE180 + 2PL100×12	71.80	21.14	4854.7	1391.6	19.08	44.27	476.0	152.9	563.2	277.6	8.22	4.40
2IPE180 + 2PL100×15	77.80	32.12	5497.5	1441.6	19.08	49.27	523.6	158.4	625.3	292.6	8.41	4.30
2IPE180 + 2PL120×6	62.20	11.35	3885.9	1364.4	19.08	36.27	404.8	149.9	466.7	260.8	7.90	4.68
2IPE180 + 2PL120×8	67.00	13.72	4337.5	1422.0	19.08	40.27	442.6	156.3	513.3	275.2	8.05	4.61
2IPE180 + 2PL120×10	71.80	17.62	4808.0	1479.6	19.08	44.27	480.8	162.6	560.8	289.6	8.18	4.54
2IPE180 + 2PL120×12	76.60	23.44	5297.7	1537.2	19.08	48.27	519.4	168.9	609.3	304.0	8.32	4.48
2IPE180 + 2PL120×15	83.80	36.62	6069.0	1623.6	19.08	54.27	578.0	178.4	683.8	325.6	8.51	4.40
2IPE180 + 2PL150×6	65.80	11.78	4197.4	1529.1	19.08	39.27	437.2	168.0	500.2	285.1	7.99	4.82
2IPE180 + 2PL150×8	71.80	14.74	4761.9	1641.6	19.08	44.27	485.9	180.4	558.4	307.6	8.14	4.78
2IPE180 + 2PL150×10	77.80	19.62	5350.0	1754.1	19.08	49.27	535.0	192.8	617.8	330.1	8.29	4.75
2IPE180 + 2PL150×12	83.80	26.90	5962.1	1866.6	19.08	54.27	584.5	205.1	678.4	352.6	8.43	4.72
2IPE180 + 2PL150×15	92.80	43.37	6926.3	2035.3	19.08	61.77	659.6	223.7	771.6	386.4	8.64	4.68
2IPE180 + 2PL200×6	71.80	12.50	4716.5	1991.6	19.08	44.27	491.3	199.2	556.0	337.6	8.10	5.27
2IPE180 + 2PL200×8	79.80	16.45	5469.2	2258.2	19.08	50.93	558.1	225.8	633.6	377.6	8.28	5.32
2IPE180 + 2PL200×10	87.80	22.95	6253.3	2524.9	19.08	57.60	625.3	252.5	712.8	417.6	8.44	5.36
2IPE180 + 2PL200×12	95.80	32.66	7069.4	2791.6	19.08	64.27	693.1	279.2	793.6	457.6	8.59	5.40
2IPE180 + 2PL200×15	107.80	54.62	8355.0	3191.6	19.08	74.27	795.7	319.2	917.8	517.6	8.80	5.44
<b>2IPE200</b>												
2IPE200	57.00	14.02	3880.0	1709.0	22.40	28.33	388.0	170.9	441.3	284.2	8.25	5.48
2IPE200 + 2PL120×6	71.40	15.75	5408.1	1881.8	22.40	40.33	510.2	188.2	589.6	327.4	8.70	5.13
2IPE200 + 2PL120×8	76.20	18.12	5957.7	1939.4	22.40	44.33	551.6	193.9	641.0	341.8	8.84	5.04
2IPE200 + 2PL120×10	81.00	22.02	6528.0	1997.0	22.40	48.33	593.5	199.7	693.3	356.2	8.98	4.97
2IPE200 + 2PL120×12	85.80	27.84	7119.4	2054.6	22.40	52.33	635.7	205.5	746.6	370.6	9.11	4.89
2IPE200 + 2PL120×15	93.00	41.02	8047.0	2141.0	22.40	58.33	699.7	214.1	828.3	392.2	9.30	4.80
2IPE200 + 2PL150×6	75.00	16.18	5790.2	2046.5	22.40	43.33	546.2	204.7	626.7	351.7	8.79	5.22
2IPE200 + 2PL150×8	81.00	19.14	6477.1	2159.0	22.40	48.33	599.7	215.9	690.9	374.2	8.94	5.16
2IPE200 + 2PL150×10	87.00	24.02	7190.0	2271.5	22.40	53.33	653.6	227.2	756.3	396.7	9.09	5.11
2IPE200 + 2PL150×12	93.00	31.30	7929.3	2384.0	22.40	58.33	708.0	238.4	822.9	419.2	9.23	5.06
2IPE200 + 2PL150×15	102.00	47.77	9088.8	2552.8	22.40	65.83	790.3	255.3	925.0	452.9	9.44	5.00
2IPE200 + 2PL180×6	78.60	16.61	6172.2	2292.2	22.40	46.33	582.3	229.2	663.8	381.4	8.86	5.40
2IPE200 + 2PL180×8	85.80	20.16	6996.5	2486.6	22.40	52.33	647.8	248.7	740.8	413.8	9.03	5.38
2IPE200 + 2PL180×10	93.00	26.02	7852.0	2681.0	22.40	58.33	713.8	268.1	819.3	446.2	9.19	5.37
2IPE200 + 2PL180×12	100.20	34.76	8739.1	2875.4	22.40	64.33	780.3	287.5	899.2	478.6	9.34	5.36
2IPE200 + 2PL180×15	111.00	54.52	10130.5	3167.0	22.40	73.33	880.9	316.7	1021.8	527.2	9.55	5.34
2IPE200 + 2PL220×6	83.40	17.19	6681.6	2773.8	22.40	50.33	630.3	252.2	713.2	429.4	8.95	5.77
2IPE200 + 2PL220×8	92.20	21.53	7689.1	3128.7	22.40	57.67	712.0	284.4	807.4	477.8	9.13	5.83
2IPE200 + 2PL220×10	101.00	28.69	8734.7	3483.7	22.40	65.00	794.1	316.7	903.3	526.2	9.30	5.87
2IPE200 + 2PL220×12	81.30	32.35	7878.9	2271.6	22.40	58.17	703.5	206.5	1001.0	574.6	9.84	5.29
2IPE200 + 2PL220×15	94.50	56.51	9579.5	2804.0	22.40	69.17	833.0	254.9	1150.8	647.2	10.07	5.45

NAME (نام مقطع)	A Cm <sup>2</sup>	J Cm <sup>4</sup>	I <sub>3</sub> Cm <sup>4</sup>	I <sub>2</sub> Cm <sup>4</sup>	AV <sub>2</sub> Cm <sup>2</sup>	AV <sub>3</sub> Cm <sup>2</sup>	S <sub>3</sub> Cm <sup>3</sup>	S <sub>2</sub> Cm <sup>3</sup>	Z <sub>3</sub> Cm <sup>3</sup>	Z <sub>2</sub> Cm <sup>3</sup>	R <sub>3</sub> Cm	R <sub>2</sub> Cm
<b>2IPE220</b>												
2IPE220	66.80	18.20	5540.0	2430.7	25.96	33.73	503.6	221.0	570.8	366.4	9.11	6.03
2IPE220 + 2PL150×6	84.80	20.36	7839.0	2768.2	25.96	48.73	675.8	251.7	774.2	433.9	9.61	5.71
2IPE220 + 2PL150×8	90.80	23.32	8660.3	2880.7	25.96	53.73	733.9	261.9	844.4	456.4	9.77	5.63
2IPE220 + 2PL150×10	96.80	28.20	9510.0	2993.2	25.96	58.73	792.5	272.1	915.8	478.9	9.91	5.56
2IPE220 + 2PL150×12	102.80	35.48	10388.5	3105.7	25.96	63.73	851.5	282.3	988.4	501.4	10.05	5.50
2IPE220 + 2PL150×15	111.80	51.95	11761.3	3274.5	25.96	71.23	940.9	297.7	1099.6	535.2	10.26	5.41
2IPE220 + 2PL180×6	88.40	20.79	8298.8	3013.9	25.96	51.73	715.4	274.0	814.9	463.6	9.69	5.84
2IPE220 + 2PL180×8	95.60	24.34	9284.4	3208.3	25.96	57.73	786.8	291.7	899.1	496.0	9.85	5.79
2IPE220 + 2PL180×10	102.80	30.20	10304.0	3402.7	25.96	63.73	858.7	309.3	984.8	528.4	10.01	5.75
2IPE220 + 2PL180×12	110.00	38.94	11358.2	3597.1	25.96	69.73	931.0	327.0	1071.9	560.8	10.16	5.72
2IPE220 + 2PL180×15	120.80	58.70	13005.5	3888.7	25.96	78.73	1040.4	353.5	1205.3	609.4	10.38	5.67
2IPE220 + 2PL200×6	90.80	21.08	8605.3	3230.7	25.96	53.73	741.8	293.7	842.0	486.4	9.74	5.96
2IPE220 + 2PL200×8	98.80	25.03	9700.4	3497.4	25.96	60.40	822.1	317.9	935.6	526.4	9.91	5.95
2IPE220 + 2PL200×10	106.80	31.53	10833.3	3764.0	25.96	67.07	902.8	342.2	1030.8	566.4	10.07	5.94
2IPE220 + 2PL200×12	114.80	41.24	12004.6	4030.7	25.96	73.73	984.0	366.4	1127.6	606.4	10.23	5.93
2IPE220 + 2PL200×15	126.80	63.20	13835.0	4430.7	25.96	83.73	1106.8	402.8	1275.8	666.4	10.45	5.91
2IPE220 + 2PL250×6	96.80	21.80	9371.6	3993.2	25.96	58.73	807.9	319.5	909.8	553.9	9.84	6.42
2IPE220 + 2PL250×8	106.80	26.73	10740.5	4514.0	25.96	67.07	910.2	361.1	1026.8	616.4	10.03	6.50
2IPE220 + 2PL250×10	116.80	34.87	12156.7	5034.9	25.96	75.40	1013.1	402.8	1145.8	678.9	10.20	6.57
2IPE220 + 2PL250×12	126.80	47.00	13620.8	5555.7	25.96	83.73	1116.5	444.5	1266.8	741.4	10.36	6.62
2IPE220 + 2PL250×15	141.80	74.45	15908.8	6337.0	25.96	96.23	1272.7	507.0	1452.1	835.2	10.59	6.69
<b>2IPE240</b>												
2IPE240	78.20	25.80	7780.0	3383.2	29.76	39.20	648.3	281.9	733.3	468.1	9.97	6.58
2IPE240 + 2PL150×6	96.20	27.96	10503.8	3720.7	29.76	54.20	833.6	310.1	954.7	535.6	10.45	6.22
2IPE240 + 2PL150×8	102.20	30.92	11471.5	3833.2	29.76	59.20	896.2	319.4	1030.9	558.1	10.59	6.12
2IPE240 + 2PL150×10	108.20	35.80	12470.0	3945.7	29.76	64.20	959.2	328.8	1108.3	580.6	10.74	6.04
2IPE240 + 2PL150×12	114.20	43.08	13499.7	4058.2	29.76	69.20	1022.7	338.2	1186.9	603.1	10.87	5.96
2IPE240 + 2PL150×15	123.20	59.55	15103.8	4227.0	29.76	76.70	1118.8	352.2	1307.0	636.8	11.07	5.86
2IPE240 + 2PL180×6	99.80	28.39	11048.5	3966.4	29.76	57.20	876.9	330.5	999.0	565.3	10.52	6.30
2IPE240 + 2PL180×8	107.00	31.94	12209.8	4160.8	29.76	63.20	953.9	346.7	1090.4	597.7	10.68	6.24
2IPE240 + 2PL180×10	114.20	37.80	13408.0	4355.2	29.76	69.20	1031.4	362.9	1183.3	630.1	10.84	6.18
2IPE240 + 2PL180×12	121.40	46.54	14643.6	4549.6	29.76	75.20	1109.4	379.1	1277.6	662.5	10.98	6.12
2IPE240 + 2PL180×15	132.20	66.30	16568.5	4841.2	29.76	84.20	1227.3	403.4	1421.8	711.1	11.20	6.05
2IPE240 + 2PL200×6	102.20	28.68	11411.7	4183.2	29.76	59.20	905.7	348.6	1028.5	588.1	10.57	6.40
2IPE240 + 2PL200×8	110.20	32.63	12702.0	4449.9	29.76	65.87	992.3	370.8	1130.1	628.1	10.74	6.35
2IPE240 + 2PL200×10	118.20	39.13	14033.3	4716.5	29.76	72.53	1079.5	393.0	1233.3	668.1	10.90	6.32
2IPE240 + 2PL200×12	126.20	48.84	15406.2	4983.2	29.76	79.20	1167.1	415.3	1338.1	708.1	11.05	6.28
2IPE240 + 2PL200×15	138.20	70.80	17545.0	5383.2	29.76	89.20	1299.6	448.6	1498.3	768.1	11.27	6.24
2IPE240 + 2PL270×8	121.40	35.02	14424.7	6007.6	29.76	75.20	1126.9	445.0	1269.0	759.7	10.90	7.03
2IPE240 + 2PL270×10	132.20	43.80	16222.0	6663.7	29.76	84.20	1247.8	493.6	1408.3	832.6	11.08	7.10
2IPE240 + 2PL270×12	143.00	56.90	18075.4	7319.8	29.76	93.20	1369.4	542.2	1549.8	905.5	11.24	7.15
2IPE240 + 2PL270×15	159.20	86.55	20962.8	8304.0	29.76	106.70	1552.8	615.1	1766.0	1014.8	11.47	7.22
<b>2IPE270</b>												
2IPE270	91.80	16.00	11580.0	5022.6	35.64	45.90	857.8	372.0	968.0	619.0	11.23	7.40
2IPE270 + 2PL150×6	109.80	18.16	15008.5	5360.1	35.64	60.90	1064.4	397.0	1216.4	686.5	11.69	6.99
2IPE270 + 2PL150×8	115.80	21.12	16218.3	5472.6	35.64	65.90	1134.1	405.4	1301.6	709.0	11.83	6.87
2IPE270 + 2PL150×10	121.80	26.00	17462.5	5585.1	35.64	70.90	1204.3	413.7	1388.0	731.5	11.97	6.77
2IPE270 + 2PL150×12	127.80	33.28	18741.5	5697.6	35.64	75.90	1274.9	422.0	1475.6	754.0	12.11	6.68
2IPE270 + 2PL150×15	136.80	49.75	20726.3	5866.4	35.64	83.40	1381.8	434.5	1609.2	787.7	12.31	6.55
2IPE270 + 2PL180×6	113.40	18.59	15694.2	5605.8	35.64	63.90	1113.1	415.2	1266.1	716.2	11.76	7.03
2IPE270 + 2PL180×8	120.60	22.14	17146.0	5800.2	35.64	69.90	1199.0	429.6	1368.3	748.6	11.92	6.94

NAME (نام مقطع)	A Cm <sup>2</sup>	J Cm <sup>4</sup>	I <sub>3</sub> Cm <sup>4</sup>	I <sub>2</sub> Cm <sup>4</sup>	AV <sub>2</sub> Cm <sup>2</sup>	AV <sub>3</sub> Cm <sup>2</sup>	S <sub>3</sub> Cm <sup>3</sup>	S <sub>2</sub> Cm <sup>3</sup>	Z <sub>3</sub> Cm <sup>3</sup>	Z <sub>2</sub> Cm <sup>3</sup>	R <sub>3</sub> Cm	R <sub>2</sub> Cm
2IPE270 + 2PL180×10	127.80	28.00	18639.0	5994.6	35.64	75.90	1285.4	444.0	1472.0	781.0	12.08	6.85
2IPE270 + 2PL180×12	135.00	36.74	20173.8	6189.0	35.64	81.90	1372.4	458.4	1577.1	813.4	12.22	6.77
2IPE270 + 2PL180×15	145.80	56.50	22555.5	6480.6	35.64	90.90	1503.7	480.0	1737.5	862.0	12.44	6.67
2IPE270 + 2PL200×6	115.80	18.88	16151.3	5822.6	35.64	65.90	1145.5	431.3	1299.2	739.0	11.81	7.09
2IPE270 + 2PL200×8	123.80	22.83	17764.4	6089.3	35.64	72.57	1242.3	451.1	1412.8	779.0	11.98	7.01
2IPE270 + 2PL200×10	131.80	29.33	19423.3	6356.0	35.64	79.23	1339.5	470.8	1528.0	819.0	12.14	6.94
2IPE270 + 2PL200×12	139.80	39.04	21128.6	6622.6	35.64	85.90	1437.3	490.6	1644.8	859.0	12.29	6.88
2IPE270 + 2PL200×15	151.80	61.00	23775.0	7022.6	35.64	95.90	1585.0	520.2	1823.0	919.0	12.51	6.80
2IPE270 + 2PL220×6	118.20	19.17	16608.4	6087.4	35.64	67.90	1177.9	450.9	1332.3	764.2	11.85	7.18
2IPE270 + 2PL220×8	127.00	23.51	18382.9	6442.4	35.64	75.23	1285.5	477.2	1457.3	812.6	12.03	7.12
2IPE270 + 2PL220×10	135.80	30.67	20207.7	6797.3	35.64	82.57	1393.6	503.5	1584.0	861.0	12.20	7.07
2IPE270 + 2PL220×12	144.60	41.34	22083.5	7152.2	35.64	89.90	1502.3	529.8	1712.5	909.4	12.36	7.03
2IPE270 + 2PL220×15	157.80	65.50	24994.5	7684.6	35.64	100.90	1660.3	569.2	1908.5	982.0	12.59	6.98
2IPE270 + 2PL250×8	131.80	24.53	19310.5	7106.0	35.64	79.23	1350.4	526.4	1524.0	869.0	12.10	7.34
2IPE270 + 2PL250×10	141.80	32.67	21384.2	7626.8	35.64	87.57	1474.8	564.9	1668.0	931.5	12.28	7.33
2IPE270 + 2PL250×12	151.80	44.80	23515.8	8147.6	35.64	95.90	1599.7	603.5	1814.0	994.0	12.45	7.33
2IPE270 + 2PL250×15	166.80	72.25	26823.8	8928.9	35.64	108.40	1788.3	661.4	2036.7	1087.7	12.68	7.32
2IPE270 + 2PL300×8	139.80	26.24	20856.6	8622.6	35.64	85.90	1458.5	574.8	1635.2	979.0	12.21	7.85
2IPE270 + 2PL300×10	151.80	36.00	23345.0	9522.6	35.64	95.90	1610.0	634.8	1808.0	1069.0	12.40	7.92
2IPE270 + 2PL300×12	163.80	50.56	25903.0	10422.6	35.64	105.90	1762.1	694.8	1983.2	1159.0	12.58	7.98
2IPE270 + 2PL300×15	181.80	83.50	29872.5	11772.6	35.64	120.90	1991.5	784.8	2250.5	1294.0	12.82	8.05
<b>2IPE300</b>												
2IPE300	107.60	40.40	16720.0	7260.5	42.60	53.50	1114.7	484.0	1256.7	805.9	12.47	8.21
2IPE300 + 2PL180×6	129.20	42.99	21777.0	7843.7	42.60	71.50	1396.0	522.9	1587.2	903.1	12.98	7.79
2IPE300 + 2PL180×8	136.40	46.54	23551.7	8038.1	42.60	77.50	1490.6	535.9	1700.2	935.5	13.14	7.68
2IPE300 + 2PL180×10	143.60	52.40	25372.0	8232.5	42.60	83.50	1585.8	548.8	1814.7	967.9	13.29	7.57
2IPE300 + 2PL180×12	150.80	61.14	27238.3	8426.9	42.60	89.50	1681.4	561.8	1930.6	1000.3	13.44	7.48
2IPE300 + 2PL180×15	161.60	80.90	30125.5	8718.5	42.60	98.50	1825.8	581.2	2107.2	1048.9	13.65	7.35
2IPE300 + 2PL200×6	131.60	43.28	22338.9	8060.5	42.60	73.50	1432.0	537.4	1623.9	925.9	13.03	7.83
2IPE300 + 2PL200×8	139.60	47.23	24310.8	8327.2	42.60	80.17	1538.7	555.1	1749.5	965.9	13.20	7.72
2IPE300 + 2PL200×10	147.60	53.73	26333.3	8593.8	42.60	86.83	1645.8	572.9	1876.7	1005.9	13.36	7.63
2IPE300 + 2PL200×12	155.60	63.44	28407.0	8860.5	42.60	93.50	1753.5	590.7	2005.5	1045.9	13.51	7.55
2IPE300 + 2PL200×15	167.60	85.40	31615.0	9260.5	42.60	103.50	1916.1	617.4	2201.7	1105.9	13.73	7.43
2IPE300 + 2PL220×6	134.00	43.57	22900.8	8325.3	42.60	75.50	1468.0	555.0	1660.6	951.1	13.07	7.88
2IPE300 + 2PL220×8	142.80	47.91	25069.9	8680.2	42.60	82.83	1586.7	578.7	1798.8	999.5	13.25	7.80
2IPE300 + 2PL220×10	151.60	55.07	27294.7	9035.2	42.60	90.17	1705.9	602.3	1938.7	1047.9	13.42	7.72
2IPE300 + 2PL220×12	160.40	65.74	29575.7	9390.1	42.60	97.50	1825.7	626.0	2080.4	1096.3	13.58	7.65
2IPE300 + 2PL220×15	173.60	89.90	33104.5	9922.5	42.60	108.50	2006.3	661.5	2296.2	1168.9	13.81	7.56
2IPE300 + 2PL250×8	147.60	48.93	26208.5	9343.8	42.60	86.83	1658.8	622.9	1872.7	1055.9	13.33	7.96
2IPE300 + 2PL250×10	157.60	57.07	28736.7	9864.7	42.60	95.17	1796.0	657.6	2031.7	1118.4	13.50	7.91
2IPE300 + 2PL250×12	167.60	69.20	31328.8	10385.5	42.60	103.50	1933.9	692.4	2192.7	1180.9	13.67	7.87
2IPE300 + 2PL250×15	182.60	96.65	35338.8	11166.8	42.60	116.00	2141.7	744.5	2438.0	1274.6	13.91	7.82
2IPE300 + 2PL280×8	152.40	49.96	27347.2	10187.4	42.60	90.83	1730.8	679.2	1946.6	1119.5	13.40	8.18
2IPE300 + 2PL280×10	163.60	59.07	30178.7	10919.2	42.60	100.17	1886.2	727.9	2124.7	1197.9	13.58	8.17
2IPE300 + 2PL280×12	174.80	72.66	33081.9	11650.9	42.60	109.50	2042.1	776.7	2305.0	1276.3	13.76	8.16
2IPE300 + 2PL280×15	191.60	103.40	37573.0	12748.5	42.60	123.50	2277.2	849.9	2579.7	1393.9	14.00	8.16
2IPE300 + 2PL320×8	158.80	51.32	28865.3	11629.6	42.60	96.17	1826.9	726.8	2045.2	1215.5	13.48	8.56
2IPE300 + 2PL320×10	171.60	61.73	32101.3	12721.8	42.60	106.83	2006.3	795.1	2248.7	1317.9	13.68	8.61
2IPE300 + 2PL320×12	184.40	77.26	35419.3	13814.1	42.60	117.50	2186.4	863.4	2454.8	1420.3	13.86	8.66
2IPE300 + 2PL320×15	203.60	112.40	40552.0	15452.5	42.60	133.50	2457.7	965.8	2768.7	1573.9	14.11	8.71
2IPE300 + 2PL350×10	177.60	63.73	33543.3	14406.3	41.08	111.83	2096.5	823.2	2341.7	1418.4	13.74	9.01
2IPE300 + 2PL350×12	191.60	80.72	37172.3	15835.5	41.08	123.50	2294.6	904.9	2567.1	1540.9	13.93	9.09
2IPE300 + 2PL350×15	212.60	119.15	42786.3	17979.3	41.08	141.00	2593.1	1027.4	2910.5	1724.6	14.19	9.20