

## Channels

## SAFE LOADS FOR GRADE 43 STEEL

Section size	Mass per metre	Safe distributed loads in kilonewtons for spans in metres and deflection coefficients													Critical span L <sub>c</sub> m
		1.50 199.1	2.00 112.0	2.50 71.68	3.00 49.78	3.50 36.57	4.00 28.00	4.50 22.12	5.00 17.92	5.50 14.81	6.00 12.44	7.00 9.143	8.00 7.000	9.00 5.531	
76 x 38	6.70	17	13	10											1.724
102 x 51	10.42	<i>36</i>	<i>27</i>	22	18										1.993
127 x 64	14.90	<i>67</i>	<i>50</i>	40	33	29	25								2.477
152 x 76	17.88	<i>98</i>	<i>74</i>	<i>59</i>	49	42	37	33	30						2.591
152 x 89	23.84	<i>135</i>	<i>101</i>	<i>81</i>	67	58	50	45	40						3.629
178 x 76	20.84	<i>132</i>	<i>99</i>	<i>79</i>	66	57	50	44	40	36	33				2.577
178 x 89	26.81	<i>174</i>	<i>130</i>	<i>104</i>	87	74	65	58	52	47	43				3.388
203 x 76	23.82	<i>169</i>	<i>127</i>	<i>101</i>	<i>84</i>	72	63	56	51	46	42				2.497
203 x 89	29.78	<i>216</i>	<i>162</i>	<i>129</i>	<i>108</i>	92	81	72	65	59	54				3.190
229 x 76	26.06	<i>201</i>	<i>151</i>	<i>121</i>	<i>100</i>	86	75	67	60	55	50	43			2.317
229 x 89	32.76	<i>261</i>	<i>196</i>	<i>156</i>	<i>130</i>	112	98	87	78	71	65	56			3.005
254 x 76	28.29	<i>233</i>	<i>175</i>	<i>140</i>	<i>117</i>	<i>100</i>	<i>87</i>	78	70	64	58	50	44		2.142
254 x 89	35.74	<i>308</i>	<i>231</i>	<i>185</i>	<i>154</i>	<i>132</i>	<i>116</i>	103	92	84	77	66	58		2.842
304 x 89	41.69	<i>408</i>	<i>306</i>	<i>245</i>	<i>204</i>	<i>175</i>	<i>153</i>	<i>136</i>	<i>122</i>	111	102	87	76	68	2.537
305 x 102	46.18	<i>474</i>	<i>356</i>	<i>285</i>	<i>237</i>	<i>203</i>	<i>178</i>	<i>158</i>	<i>142</i>	129	119	102	89	79	3.077
381 x 102	55.10	<i>688</i>	<i>516</i>	<i>413</i>	<i>344</i>	<i>295</i>	<i>258</i>	<i>229</i>	<i>206</i>	<i>188</i>	<i>172</i>	147	129	115	2.896
432 x 102	65.54	<i>872</i>	<i>654</i>	<i>523</i>	<i>436</i>	<i>374</i>	<i>327</i>	<i>291</i>	<i>262</i>	<i>238</i>	<i>218</i>	<i>187</i>	164	145	2.707

For explanation of table see page 21.

The loads listed are based on a bending stress of 165 N/mm<sup>2</sup>, and assume adequate lateral support. Without such support the span must not exceed L<sub>c</sub> unless the compressive stress is reduced in accordance with clause 19a (ii) of BS 449.

Loads printed in bold type may cause overloading of the unstiffened web, the capacity of which should be checked. See page 26.

Loads printed in italic type do not cause overloading of the unstiffened web, and do not cause deflection exceeding span/360.

Loads printed in ordinary type should be checked for deflection. See pages 24 and 25.

† Load is based on allowable shear of web and is less than allowable load in bending.