



# DESCRIPTION

## CERTIFICATIONS

**FIP Industriale** is proud to be the first Italian manufacturer of structural bearings, anti-seismic devices and expansion joints boasting a Quality Assurance System certified at the highest level - from design to customer service assistance. Certification has been achieved via rigorous evaluation by an internationally recognized Third Party Organisation, thus internationally validating the quality assurance system. **FIP Industriale** designs and manufactures its devices in accordance with the most widely adopted and stringent international specifications: EN, AASHTO, CNR, British Standards, DIN, NF. Moreover, **FIP Industriale** meets the most recent requirements by supplying bearings and anti-seismic devices with CE marking.

The certification ISO 9001, obtained in 1992, guarantees that the same quality level is kept from the design stage through manufacture to installation, while the Certificate OHS 618800 guarantees that **FIP Industriale** operates an Occupational Health and Safety Management System which complies the requirements of BS OHSAS 18001:2007.

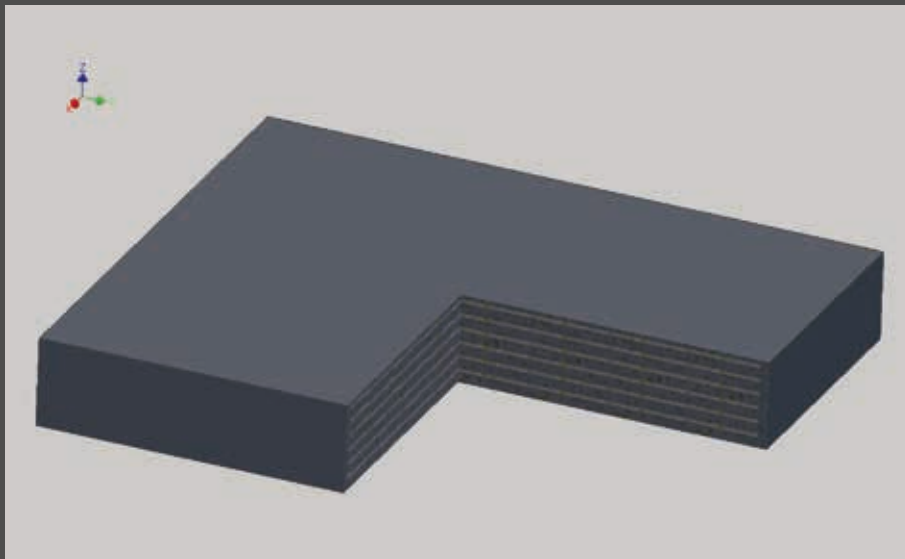
**FIP Industriale** quality system is also certified to perform welding activities in accordance with EN ISO 3834-2 and DIN 18800-7.



OHS 618800

## PRODUCT

The **Neoarm** series is a line of reinforced elastomer structural bearings made up of an elastomer pad inside which several layers of hot-vulcanised steel laminates are inserted with the purpose of minimising the swelling and slipping of rubber under loads. Steel reinforcing plates do not need corrosion protection as they are fully vulcanised into rubber.



The **Neoarm** bearings represent a kind of special device between the fixed and free sliding type of bearings as they permit translations in all planar directions, but at the same time produce horizontal reactions proportional to the translations. Rotations around any horizontal axis are permitted by the deformation of the rubber.

These bearings of simple construction and lightweight are easy to install, very resistant to atmospheric agents and maintenance-free.

The **Neoarm** bearings, which can be rectangular or circular in shape, are classified by their dimensions, the number of steel laminates and the thickness of the internal rubber layers (standard external layers are 2.5 mm thick).

The **Neoarm** bearings are suitable for temperature range from  $-30^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  (until  $+70^{\circ}\text{C}$  for shorts periods). Installation of only one bearing in longitudinal direction is allowed at each support.



If upper and lower surfaces are not parallel, (i.e. there is a longitudinal slope in the superstructure) a suitable wedge plate is to be vulcanised on the upper part of the pond to match the slope. In this case the elastomer bearing becomes a no standard bearing.

The bearings in catalogue are designed according to European standard EN 1337-3, where they are classified as type B, considering  $60 \pm 5$  Sh/A hardness and a rotation of 0.01 radians about a horizontal axis (direction of longer dimension if rectangular).

In following tables bearings are classified according to their typology (circular, rectangulars), their geometric and physic characteristics and maximum vertical loads depending on displacements.

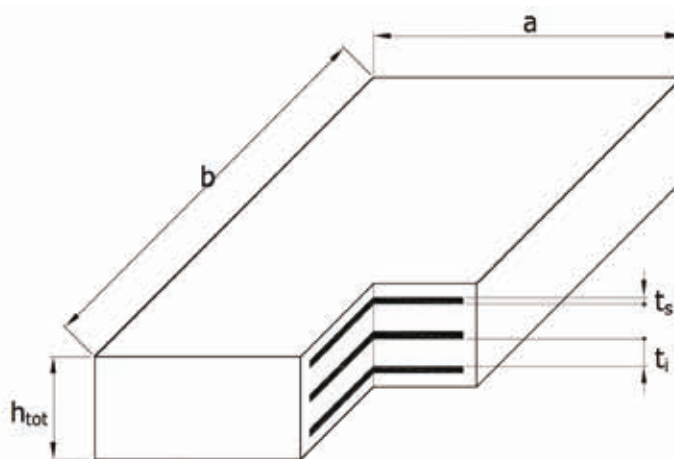
Bearing code in table overleaf shows bearing dimensions. Other dimensions can be realised upon request.



• U.K. - Kingston bridge

# TABLES NEOARM RECTANGULAR TYPE

CHARACTERISTICS								
Dimensions	Height	Steel reinf. Plates	Elastomer		Shear stiffness	Volume	Weight	Bearing code
<b>a x b</b> mm	<b>h<sub>tot</sub></b> mm	<b>t<sub>s</sub></b> mm	<b>t<sub>i</sub></b> mm	<b>n</b> n	<b>K<sub>o</sub></b> kN/mm	<b>Vol</b> dm <sup>3</sup>	<b>W</b> kg	<b>NEOARM</b>
<b>100 x 100</b>	23	2	6	2	0,53	0,2	1	<b>100 x 100 x 23</b>
	31			3	0,39	0,3	1	<b>100 x 100 x 31</b>
<b>100 x 150</b>	23	2	6	2	0,79	0,3	1	<b>100 x 150 x 23</b>
	31			3	0,59	0,5	1	<b>100 x 150 x 31</b>
<b>100 x 200</b>	23	2	6	2	1,06	0,5	1	<b>100 x 200 x 23</b>
	31			3	0,78	0,6	2	<b>100 x 200 x 31</b>
<b>150 x 200</b>	23	2	6	2	1,59	0,7	2	<b>150 x 200 x 23</b>
	31			3	1,17	0,9	2	<b>150 x 200 x 31</b>
<b>150 x 250</b>	23	2	6	2	1,99	0,9	2	<b>150 x 250 x 23</b>
	31			3	1,47	1,2	3	<b>150 x 250 x 31</b>
<b>150 x 300</b>	23	2	6	2	2,38	1,0	3	<b>150 x 300 x 23</b>
	31			3	1,76	1,4	4	<b>150 x 300 x 31</b>
<b>200 x 250</b>	31	2	6	3	1,96	1,6	4	<b>200 x 250 x 31</b>
	39			4	1,55	2,0	5	<b>200 x 250 x 39</b>
	47			5	1,29	2,4	6	<b>200 x 250 x 47</b>
<b>200 x 300</b>	31	2	6	3	2,35	1,9	5	<b>200 x 300 x 31</b>
	39			4	1,86	2,3	6	<b>200 x 300 x 39</b>
	47			5	1,54	2,8	8	<b>200 x 300 x 47</b>
<b>200 x 350</b>	31	2	6	3	2,74	2,2	6	<b>200 x 350 x 31</b>
	39			4	2,17	2,7	7	<b>200 x 350 x 39</b>
	47			5	1,80	3,3	9	<b>200 x 350 x 47</b>
<b>200 x 400</b>	31	2	6	3	3,13	2,5	7	<b>200 x 400 x 31</b>
	39			4	2,48	3,1	8	<b>200 x 400 x 39</b>
	47			5	2,06	3,8	10	<b>200 x 400 x 47</b>
<b>250 x 300</b>	31	2	6	3	2,93	2,3	6	<b>250 x 300 x 31</b>
	39			4	2,33	2,9	8	<b>250 x 300 x 39</b>
	47			5	1,93	3,5	10	<b>250 x 300 x 47</b>
	55			6	1,65	4,1	11	<b>250 x 300 x 55</b>
<b>250 x 400</b>	31	2	6	3	3,91	3,1	8	<b>250 x 400 x 31</b>
	39			4	3,10	3,9	11	<b>250 x 400 x 39</b>
	47			5	2,57	4,7	13	<b>250 x 400 x 47</b>
	55			6	2,20	5,5	15	<b>250 x 400 x 55</b>



MAXIMUM VERTICAL LOAD											
$v_x (\pm mm)$											
0	5	10	15	20	30	40	50	75	100	125	150
$F_{z \text{ ULS}}$ kN											
60	56										
44	41	38									
121	113	106									
89	83	78									
187	175	160									
138	130	120									
510	465	425	385								
499	475	460	430	395							
720	660	600	540								
701	670	645	610	560							
940	855	780	705								
913	875	840	795	730							
1145	1070	995	925	860							
1225	1155	1090	1025	960							
1075	1045	1015	985	955	895						
1515	1415	1320	1225	1135							
1620	1530	1440	1355	1270							
1419	1380	1340	1300	1260	1180						
1900	1775	1650	1535	1420							
2030	1915	1805	1695	1590							
1779	1725	1680	1630	1580	1480						
2295	2145	1995	1855	1715							
2415	2315	2180	2050	1925							
2148	2085	2025	1965	1905	1790						
1850	1720	1600	1480	1365							
2095	1985	1870	1765	1660							
2245	2140	2035	1935	1840	1650						
2275	2225	2150	2055	1960	1780	1610					
2845	2650	2465	2280	2100							
3085	3020	2885	2715	2555							
3085	3020	2950	2885	2820	2540						
3085	3020	2950	2885	2820	2685	2480					

## LEGEND

<b>a</b>	overall width of bearing (shorter dimension)
<b>b</b>	overall length of bearing (longer dimension)
<b><math>h_{\text{tot}}</math></b>	total height
<b><math>t_s</math></b>	thickness of steel reinforcing plates
<b><math>t_i</math></b>	thickness of an individual elastomer layer
<b>n</b>	number of elastomer layers
<b><math>K_o</math></b>	shear stiffness
<b>Vol</b>	volume
<b>W</b>	weight
<b><math>v_x</math></b>	maximum horizontal relative displacement in direction of dimension <b>a</b>
<b><math>F_{z \text{ ULS}}</math></b>	maximum vertical load

# TABLES NEOARM RECTANGULAR TYPE

CHARACTERISTICS								
Dimensions	Height	Steel reinf. Plates	Elastomer		Shear stiffness	Volume	Weight	Bearing code
<b>a x b</b> mm	<b>h<sub>tot</sub></b> mm	<b>t<sub>s</sub></b> mm	<b>t<sub>i</sub></b> mm	<b>n</b> n	<b>K<sub>o</sub></b> kN/mm	<b>Vol</b> dm <sup>3</sup>	<b>W</b> kg	<b>NEOARM</b>
<b>250 x 500</b>	31	2	6	3	4,89	3,9	11	<b>250 x 500 x 31</b>
	39			4	3,88	4,9	13	<b>250 x 500 x 39</b>
	47			5	3,21	5,9	16	<b>250 x 500 x 47</b>
	55			6	2,74	6,9	19	<b>250 x 500 x 55</b>
<b>300 x 400</b>	41	3	8	3	3,72	4,9	15	<b>300 x 400 x 41</b>
	52			4	2,92	6,2	18	<b>300 x 400 x 52</b>
	63			5	2,40	7,6	22	<b>300 x 400 x 63</b>
	74			6	2,04	8,9	26	<b>300 x 400 x 74</b>
<b>300 x 500</b>	41	3	8	3	4,66	6,2	18	<b>300 x 500 x 41</b>
	52			4	3,65	7,8	23	<b>300 x 500 x 52</b>
	63			5	3,00	9,5	28	<b>300 x 500 x 63</b>
	74			6	2,55	11,1	33	<b>300 x 500 x 74</b>
<b>300 x 600</b>	41	3	8	3	5,59	7,4	22	<b>300 x 600 x 41</b>
	52			4	4,38	9,4	28	<b>300 x 600 x 52</b>
	63			5	3,60	11,3	33	<b>300 x 600 x 63</b>
	74			6	3,06	13,3	39	<b>300 x 600 x 74</b>
<b>350 x 450</b>	41	3	8	3	4,89	6,5	19	<b>350 x 450 x 41</b>
	52			4	3,83	8,2	24	<b>350 x 450 x 52</b>
	63			5	3,15	9,9	29	<b>350 x 450 x 63</b>
	74			6	2,67	11,7	34	<b>350 x 450 x 74</b>
<b>350 x 500</b>	41	3	8	3	5,43	7,2	22	<b>350 x 500 x 41</b>
	52			4	4,26	9,1	27	<b>350 x 500 x 52</b>
	63			5	3,50	11,0	33	<b>350 x 500 x 63</b>
	74			6	2,97	13,0	38	<b>350 x 500 x 74</b>
<b>350 x 600</b>	41	3	8	3	6,52	8,6	26	<b>350 x 600 x 41</b>
	52			4	5,11	10,9	33	<b>350 x 600 x 52</b>
	63			5	4,20	13,2	39	<b>350 x 600 x 63</b>
	74			6	3,57	15,5	46	<b>350 x 600 x 74</b>
<b>400 x 500</b>	52	3	8	4	4,86	10,4	31	<b>400 x 500 x 52</b>
	63			5	4,00	12,6	37	<b>400 x 500 x 63</b>
	74			6	3,40	14,8	44	<b>400 x 500 x 74</b>
	85			7	2,95	17,0	50	<b>400 x 500 x 85</b>
<b>400 x 600</b>	52	3	8	4	5,84	12,5	37	<b>400 x 600 x 52</b>
	63			5	4,80	15,1	45	<b>400 x 600 x 63</b>
	74			6	4,08	17,8	53	<b>400 x 600 x 74</b>
	85			7	3,54	20,4	60	<b>400 x 600 x 85</b>
<b>400 x 700</b>	52	3	8	4	6,81	14,6	44	<b>400 x 700 x 52</b>
	63			5	5,60	17,6	53	<b>400 x 700 x 63</b>
	74			6	4,75	20,7	62	<b>400 x 700 x 74</b>
	85			7	4,13	23,8	71	<b>400 x 700 x 85</b>
	96			8	3,65	26,9	80	<b>400 x 700 x 96</b>



MAXIMUM VERTICAL LOAD											
$V_x (\pm mm)$											
0	5	10	15	20	30	40	50	75	100	125	150
$F_z$ ULS kN											
3900	3635	3375	3125	2885							
3900	3815	3730	3645	3505							
3900	3815	3730	3645	3560	3390						
3900	3815	3730	3645	3560	3390	3220					
3185	3020	2860	2700	2545							
3515	3365	3220	3080	2940	2675						
3710	3575	3440	3310	3180	2930	2690					
3395	3335	3275	3215	3155	3030	2880	2660				
4415	4185	3965	3745	3530							
4870	4665	4465	4270	4075	3705						
5145	4955	4770	4590	4410	4065	3730					
4705	4620	4535	4455	4370	4200	3990	3685				
5700	5405	5115	4830	4555							
6285	6020	5760	5510	5260	4780						
6450	6335	6155	5920	5690	5245	4815					
6075	5965	5855	5745	5640	5420	5145	4755				
4135	3905	3675	3455	3240							
4840	4635	4430	4235	4040	3665						
5260	5075	4890	4705	4530	4180	3845					
5545	5365	5195	5025	4855	4530	4210	3910				
4835	4565	4300	4040	3790							
5660	5420	5180	4950	4725	4285						
6150	5930	5715	5505	5295	4890	4500					
6290	6195	6075	5875	5675	5295	4925	4570				
6285	5930	5590	5255	4925							
7355	7040	6735	6435	6140	5575						
7600	7485	7370	7150	6880	6355	5845					
7600	7485	7370	7255	7140	6880	6400	5940				
6060	5790	5520	5255	5000	4500						
6880	6630	6385	6145	5905	5445	5000					
7245	7150	6965	6735	6515	6080	5665	5260				
7245	7150	7055	6960	6865	6540	6140	5755				
7930	7570	7220	6875	6540	5885						
8755	8640	8350	8035	7725	7125	6540					
8755	8640	8525	8410	8295	7955	7410	6880				
8755	8640	8525	8410	8295	8065	7830	7525				
9870	9425	8990	8560	8140	7325						
10265	10130	9995	9860	9620	8870	8145					
10265	10130	9995	9860	9725	9455	9185	8565				
10265	10130	9995	9860	9725	9455	9185	8915				
10265	10130	9995	9860	9725	9455	9185	8915				

# TABLES NEOARM RECTANGULAR TYPE

CHARACTERISTICS								
Dimensions	Height	Steel reinf. Plates	Elastomer		Shear stiffness	Volume	Weight	Bearing code
<b>a x b</b> <i>m</i>	<b>h<sub>tot</sub></b> <i>mm</i>	<b>t<sub>s</sub></b> <i>mm</i>	<b>t<sub>i</sub></b> <i>mm</i>	<b>n</b> <i>n</i>	<b>K<sub>o</sub></b> <i>kN/mm</i>	<b>Vol</b> <i>dm³</i>	<b>W</b> <i>kg</i>	<b>NEOARM</b>
<b>400 x 800</b>	52	3	8	4	7,78	16,6	50	<b>400 x 800 x 52</b>
	63			5	6,40	20,2	60	<b>400 x 800 x 63</b>
	74			6	5,43	23,7	71	<b>400 x 800 x 74</b>
	85			7	4,72	27,2	81	<b>400 x 800 x 85</b>
	96			8	4,17	30,7	91	<b>400 x 800 x 96</b>
<b>450 x 600</b>	60	3	10	4	5,40	16,2	45	<b>450 x 600 x 60</b>
	73			5	4,42	19,7	54	<b>450 x 600 x 73</b>
	86			6	3,74	23,2	64	<b>450 x 600 x 86</b>
	99			7	3,24	26,7	73	<b>450 x 600 x 99</b>
	112			8	2,86	30,2	82	<b>450 x 600 x 112</b>
<b>500 x 500</b>	60	3	10	4	5,00	15,0	42	<b>500 x 500 x 60</b>
	73			5	4,09	18,3	50	<b>500 x 500 x 73</b>
	86			6	3,46	21,5	59	<b>500 x 500 x 86</b>
	99			7	3,00	24,8	67	<b>500 x 500 x 99</b>
	112			8	2,65	28,0	76	<b>500 x 500 x 112</b>
<b>500 x 600</b>	60	3	10	4	6,00	18,0	50	<b>500 x 600 x 60</b>
	73			5	4,91	21,9	60	<b>500 x 600 x 73</b>
	86			6	4,15	25,8	71	<b>500 x 600 x 86</b>
	99			7	3,60	29,7	81	<b>500 x 600 x 99</b>
	112			8	3,18	33,6	92	<b>500 x 600 x 112</b>
<b>500 x 700</b>	60	3	10	4	7,00	21,0	59	<b>500 x 700 x 60</b>
	73			5	5,73	25,6	71	<b>500 x 700 x 73</b>
	86			6	4,85	30,1	83	<b>500 x 700 x 86</b>
	99			7	4,20	34,7	95	<b>500 x 700 x 99</b>
	112			8	3,71	39,2	107	<b>500 x 700 x 112</b>
<b>600 x 600</b>	68	3	12	4	6,11	24,5	64	<b>600 x 600 x 68</b>
	83			5	4,98	29,9	77	<b>600 x 600 x 83</b>
	98			6	4,21	35,3	91	<b>600 x 600 x 98</b>
	113			7	3,64	40,7	104	<b>600 x 600 x 113</b>
	128			8	3,21	46,1	118	<b>600 x 600 x 128</b>
<b>600 x 700</b>	68	3	12	4	7,13	28,6	75	<b>600 x 700 x 68</b>
	83			5	5,82	34,9	90	<b>600 x 700 x 83</b>
	98			6	4,91	41,2	106	<b>600 x 700 x 98</b>
	113			7	4,25	47,5	122	<b>600 x 700 x 113</b>
	128			8	3,74	53,8	137	<b>600 x 700 x 128</b>
<b>600 x 800</b>	68	3	12	4	8,15	32,6	86	<b>600 x 800 x 68</b>
	83			5	6,65	39,8	104	<b>600 x 800 x 83</b>
	98			6	5,61	47,0	122	<b>600 x 800 x 98</b>
	113			7	4,85	54,2	139	<b>600 x 800 x 113</b>
	128			8	4,28	61,4	157	<b>600 x 800 x 128</b>
<b>700 x 700</b>	85	4	15	4	6,78	41,7	113	<b>700 x 700 x 85</b>
	104			5	5,51	51,0	137	<b>700 x 700 x 104</b>
	123			6	4,64	60,3	161	<b>700 x 700 x 123</b>
	142			7	4,01	69,6	185	<b>700 x 700 x 142</b>
	161			8	3,53	78,9	208	<b>700 x 700 x 161</b>



MAXIMUM VERTICAL LOAD											
$V_x (\pm mm)$											
0	5	10	15	20	30	40	50	75	100	125	150
$F_z$ ULS kN											
11775	11335	10810	10295	9790	8810						
11775	11620	11465	11310	11155	10665	9795					
11775	11620	11465	11310	11155	10845	10535	10225				
11775	11620	11465	11310	11155	10845	10535	10225				
11775	11620	11465	11310	11155	10845	10535	10225				
7925	7830	7740	7650	7475	6910	6365					
7925	7830	7740	7650	7555	7370	7185	6925				
7925	7830	7740	7650	7555	7370	7185	7005				
7925	7830	7740	7650	7555	7370	7185	7005	6540			
7925	7830	7740	7650	7555	7370	7185	7005	6540			
6830	6580	6330	6085	5840	5370	4910					
7320	7245	7170	7090	6885	6450	6035	5625				
7320	7245	7170	7090	7015	6865	6710	6405				
7320	7245	7170	7090	7015	6865	6710	6560	6090			
7320	7245	7170	7090	7015	6865	6710	6560	6175			
8845	8700	8370	8045	7725	7100	6495					
8845	8755	8660	8570	8475	8295	7980	7440				
8845	8755	8660	8570	8475	8295	8110	7925				
8845	8755	8660	8570	8475	8295	8110	7925	7465			
8845	8755	8660	8570	8475	8295	8110	7925	7465			
10370	10265	10155	10045	9705	8920	8160					
10370	10265	10155	10045	9940	9725	9505	9290				
10370	10265	10155	10045	9940	9725	9505	9290				
10370	10265	10155	10045	9940	9725	9505	9290	8750			
10370	10265	10155	10045	9940	9725	9505	9290	8750			
8910	8830	8755	8675	8600	8125	7550	6990				
8910	8830	8755	8675	8600	8445	8295	8140				
8910	8830	8755	8675	8600	8445	8295	8140	7755			
8910	8830	8755	8675	8600	8445	8295	8140	7755			
8910	8830	8755	8675	8600	8445	8295	8140	7755	7370		
10445	10355	10265	10175	10085	9905	9550	8845				
10445	10355	10265	10175	10085	9905	9725	9545				
10445	10355	10265	10175	10085	9905	9725	9545	9095			
10445	10355	10265	10175	10085	9905	9725	9545	9095			
10445	10355	10265	10175	10085	9905	9725	9545	9095	8645		
11980	11875	11775	11670	11565	11360	11155	10780				
11980	11875	11775	11670	11565	11360	11155	10945				
11980	11875	11775	11670	11565	11360	11155	10945	10430			
11980	11875	11775	11670	11565	11360	11155	10945	10430			
11980	11875	11775	11670	11565	11360	11155	10945	10430	9915		
13055	12960	12865	12770	12580	11930	11290	10665				
13055	12960	12865	12770	12670	12480	12290	12095	11210			
13055	12960	12865	12770	12670	12480	12290	12095	11615			
13055	12960	12865	12770	12670	12480	12290	12095	11615	11135		
13055	12960	12865	12770	12670	12480	12290	12095	11615	11135	10655	

# TABLES NEOARM RECTANGULAR TYPE

CHARACTERISTICS								
Dimensions	Height	Steel reinf. Plates	Elastomer		Shear stiffness	Volume	Weight	Bearing code
<b>a x b</b> mm	<b>h<sub>tot</sub></b> mm	<b>t<sub>s</sub></b> mm	<b>t<sub>i</sub></b> mm	<b>n</b> n	<b>K<sub>o</sub></b> kN/mm	<b>Vol</b> dm <sup>3</sup>	<b>W</b> kg	<b>NEOARM</b>
<b>700 x 800</b>	85	4	15	4	7,75	47,6	130	<b>700 x 800 x 85</b>
	104			5	6,30	58,2	157	<b>700 x 800 x 104</b>
	123			6	5,31	68,9	184	<b>700 x 800 x 123</b>
	142			7	4,58	79,5	211	<b>700 x 800 x 142</b>
	161			8	4,03	90,2	239	<b>700 x 800 x 161</b>
<b>700 x 900</b>	85	4	15	4	8,72	53,6	146	<b>700 x 900 x 85</b>
	104			5	7,09	65,5	177	<b>700 x 900 x 104</b>
	123			6	5,97	77,5	207	<b>700 x 900 x 123</b>
	142			7	5,15	89,5	238	<b>700 x 900 x 142</b>
	161			8	4,54	101,4	269	<b>700 x 900 x 161</b>
<b>800 x 800</b>	85	4	15	4	8,86	54,4	148	<b>800 x 800 x 85</b>
	104			5	7,20	66,6	180	<b>800 x 800 x 104</b>
	123			6	6,06	78,7	211	<b>800 x 800 x 123</b>
	142			7	5,24	90,9	242	<b>800 x 800 x 142</b>
	161			8	4,61	103,0	273	<b>800 x 800 x 161</b>
<b>800 x 900</b>	85	4	15	4	9,97	61,2	167	<b>800 x 900 x 85</b>
	104			5	8,10	74,9	202	<b>800 x 900 x 104</b>
	123			6	6,82	88,6	238	<b>800 x 900 x 123</b>
	142			7	5,89	102,2	273	<b>800 x 900 x 142</b>
	161			8	5,18	115,9	308	<b>800 x 900 x 161</b>
<b>800 x 1000</b>	85	4	15	4	11,08	68,0	186	<b>800 x 1000 x 85</b>
	104			5	9,00	83,2	225	<b>800 x 1000 x 104</b>
	123			6	7,58	98,4	264	<b>800 x 1000 x 123</b>
	142			7	6,55	113,6	303	<b>800 x 1000 x 142</b>
	161			8	5,76	128,8	343	<b>800 x 1000 x 161</b>
<b>900 x 900</b>	97	4	18	4	9,47	78,6	200	<b>900 x 900 x 97</b>
	119			5	7,67	96,4	243	<b>900 x 900 x 119</b>
	141			6	6,45	114,2	286	<b>900 x 900 x 141</b>
	163			7	5,56	132,0	329	<b>900 x 900 x 163</b>
	185			8	4,89	149,9	371	<b>900 x 900 x 185</b>
<b>900 x 1000</b>	97	4	18	4	10,52	87,3	223	<b>900 x 1000 x 97</b>
	119			5	8,53	107,1	270	<b>900 x 1000 x 119</b>
	141			6	7,17	126,9	318	<b>900 x 1000 x 141</b>
	163			7	6,18	146,7	366	<b>900 x 1000 x 163</b>
	185			8	5,44	166,5	413	<b>900 x 1000 x 185</b>
<b>900 x 1100</b>	125	5	18	5	9,38	123,8	343	<b>900 x 1100 x 125</b>
	148			6	7,88	146,5	403	<b>900 x 1100 x 148</b>
	171			7	6,80	169,3	463	<b>900 x 1100 x 171</b>
	194			8	5,98	192,1	522	<b>900 x 1100 x 194</b>
	217			9	5,34	214,8	582	<b>900 x 1100 x 217</b>
	240			10	4,82	237,6	642	<b>900 x 1100 x 240</b>

MAXIMUM VERTICAL LOAD											
$v_x (\pm mm)$											
0	5	10	15	20	30	40	50	75	100	125	150
$F_z$ ULS kN											
14975	14865	14755	14645	14535	14315	13835	13070				
14975	14865	14755	14645	14535	14315	14095	13875	13325			
14975	14865	14755	14645	14535	14315	14095	13875	13325			
14975	14865	14755	14645	14535	14315	14095	13875	13325	12775		
14975	14865	14755	14645	14535	14315	14095	13875	13325	12775	12225	
16895	16770	16650	16525	16400	16150	15900	15570				
16895	16770	16650	16525	16400	16150	15900	15655	15035			
16895	16770	16650	16525	16400	16150	15900	15655	15035			
16895	16770	16650	16525	16400	16150	15900	15655	15035	14410		
16895	16770	16650	16400	16400	16150	15900	15655	15035	14410	13790	
17175	16705	16235	15770	15315	14410						
17180	17070	16960	16850	16740	16520	16300	16080	14405			
17180	17070	16960	16850	16740	16520	16300	16080	15525			
17180	17070	16960	16850	16740	16520	16300	16080	15525	14975		
17180	17070	16960	16850	16740	16520	16300	16080	15525	14975	14425	
19380	19255	19135	18865	18320							
19380	19255	19135	19010	18885	18635	18390	18140	17230			
19380	19255	19135	19010	18885	18635	18390	18140	17520			
19380	19255	19135	19010	18885	18635	18390	18140	17520	16895		
19380	19255	19135	19010	18885	18635	18390	18140	17520	16895	16275	
21585	21445	21310	21170	21030							
21585	21445	21310	21170	21030	20755	20475	20200	19510			
21585	21445	21310	21170	21030	20755	20475	20200	19510			
21585	21445	21310	21170	21030	20755	20475	20200	19510	18815		
21585	21445	21310	21170	21030	20755	20475	20200	19510	18815	18125	
22785	22285	21795	21310	20825	19870	18930	18010	15780			
23525	23390	23255	23125	22990	22720	22455	21870	19845			
23525	23390	23255	23125	22990	22720	22455	22185	21520	20750		
23525	23390	23255	23125	22990	22720	22455	22185	21520	20850	20180	
23525	23390	23255	23125	22990	22720	22455	22185	21520	20850	20180	
26195	26050	25575	25005	24440	23315	22215	21135				
26195	26050	25900	25750	25600	25305	25005	24710	23290			
26195	26050	25900	25750	25600	25305	25005	24710	23965	23220		
26195	26050	25900	25750	25600	25305	25005	24710	23965	23220	22475	
26195	26050	25900	25750	25600	25305	25005	24710	23965	23220	22475	
27950	27790	27630	27470	27315	26995	26680	26360	25565			
27950	27790	27630	27470	27315	26995	26680	26360	25565	24770		
27950	27790	27630	27470	27315	26995	26680	26360	25565	24770	23980	
27950	27790	27630	27470	27315	26995	26680	26360	25565	24770	23980	
27950	27790	27630	27470	27315	26995	26680	26360	25565	24770	23980	23185
27950	27790	27630	27470	27315	26995	26680	26360	25565	24770	23980	23185

# TABLES NEOARM RECTANGULAR TYPE

CHARACTERISTICS								
Dimensions	Height	Steel reinf. Plates	Elastomer		Shear stiffness	Volume	Weight	Bearing code
<b>a x b</b> mm	<b>h<sub>tot</sub></b> mm	<b>t<sub>s</sub></b> mm	<b>t<sub>i</sub></b> mm	<b>n</b> n	<b>K<sub>o</sub></b> kN/mm	<b>Vol</b> dm <sup>3</sup>	<b>W</b> kg	<b>NEOARM</b>
<b>1000 x 1000</b>	125	5	18	5	9,47	125,0	346	<b>1000 x 1000 x 125</b>
	148			6	7,96	148,0	407	<b>1000 x 1000 x 148</b>
	171			7	6,87	171,0	467	<b>1000 x 1000 x 171</b>
	194			8	6,04	194,0	528	<b>1000 x 1000 x 194</b>
	217			9	5,39	217,0	588	<b>1000 x 1000 x 217</b>
	240			10	4,86	240,0	649	<b>1000 x 1000 x 240</b>
<b>1000 x 1100</b>	125	5	18	5	10,42	137,5	381	<b>1000 x 1100 x 125</b>
	148			6	8,76	162,8	448	<b>1000 x 1100 x 148</b>
	171			7	7,56	188,1	515	<b>1000 x 1100 x 171</b>
	194			8	6,64	213,4	581	<b>1000 x 1100 x 194</b>
	217			9	5,93	238,7	648	<b>1000 x 1100 x 217</b>
	240			10	5,35	264,0	714	<b>1000 x 1100 x 240</b>
<b>1000 x 1200</b>	125	5	18	5	11,37	150,0	416	<b>1000 x 1200 x 125</b>
	148			6	9,56	177,6	489	<b>1000 x 1200 x 148</b>
	171			7	8,24	205,2	562	<b>1000 x 1200 x 171</b>
	194			8	7,25	232,8	634	<b>1000 x 1200 x 194</b>
	217			9	6,47	260,4	707	<b>1000 x 1200 x 217</b>
	240			10	5,84	288,0	780	<b>1000 x 1200 x 240</b>
<b>1100 x 1100</b>	125	5	18	5	11,46	151,3	420	<b>1100 x 1100 x 125</b>
	148			6	9,64	179,1	493	<b>1100 x 1100 x 148</b>
	171			7	8,31	206,9	567	<b>1100 x 1100 x 171</b>
	194			8	7,31	234,7	640	<b>1100 x 1100 x 194</b>
	217			9	6,52	262,6	713	<b>1100 x 1100 x 217</b>
	240			10	5,89	290,4	786	<b>1100 x 1100 x 240</b>
<b>1100 x 1200</b>	125	5	18	5	12,51	165,0	459	<b>1100 x 1200 x 125</b>
	148			6	10,51	195,4	539	<b>1100 x 1200 x 148</b>
	171			7	9,07	225,7	619	<b>1100 x 1200 x 171</b>
	194			8	7,97	256,1	699	<b>1100 x 1200 x 194</b>
	217			9	7,11	286,4	779	<b>1100 x 1200 x 217</b>
	240			10	6,42	316,8	859	<b>1100 x 1200 x 240</b>
<b>1200 x 1200</b>	141	6	20	5	12,34	203,0	585	<b>1200 x 1200 x 141</b>
	167			6	10,37	240,5	687	<b>1200 x 1200 x 167</b>
	193			7	8,94	277,9	789	<b>1200 x 1200 x 193</b>
	219			8	7,85	315,4	890	<b>1200 x 1200 x 219</b>
	245			9	7,01	352,8	992	<b>1200 x 1200 x 245</b>
	271			10	6,32	390,2	1094	<b>1200 x 1200 x 271</b>
<b>1200 x 1500</b>	167	6	20	6	12,96	300,6	860	<b>1200 x 1500 x 167</b>
	193			7	11,17	347,4	988	<b>1200 x 1500 x 193</b>
	219			8	9,82	394,2	1115	<b>1200 x 1500 x 219</b>
	245			9	8,76	441	1243	<b>1200 x 1500 x 245</b>
	271			10	7,90	487,8	1370	<b>1200 x 1500 x 271</b>
	297			11	7,20	534,6	1498	<b>1200 x 1500 x 297</b>
	323			12	6,61	581,4	1626	<b>1200 x 1500 x 323</b>

MAXIMUM VERTICAL LOAD											
$v_x (\pm mm)$											
0	5	10	15	20	30	40	50	75	100	125	150
$F_{z \text{ ULS}}$ kN											
28245	28100	27955	27810	27665	27380	27090	26120	23510			
28245	28100	27955	27810	27665	27380	27090	26800	26080	25360		
28245	28100	27955	27810	27665	27380	27090	26800	26080	25360	24640	
28245	28100	27955	27810	27665	27380	27090	26800	26080	25360	24640	
28245	28100	27955	27810	27665	27380	27090	26800	26080	25360	24640	23920
28245	28100	27955	27810	27665	27380	27090	26800	26080	25360	24640	23920
31125	30965	30805	30650	30490	30170	29855	29535	27170			
31125	30965	30805	30650	30490	30170	29855	29535	28745	27950		
31125	30965	30805	30650	30490	30170	29855	29535	28745	27950	27155	
31125	30965	30805	30650	30490	30170	29855	29535	28745	27950	27155	
31125	30965	30805	30650	30490	30170	29855	29535	28745	27950	27155	26360
31125	30965	30805	30650	30490	30170	29855	29535	28745	27950	27155	26360
34005	33835	33660	33485	33315	32965	32620	32270	30930			
34005	33835	33660	33485	33315	32965	32620	32270	31405	30535		
34005	33835	33660	33485	33315	32965	32620	32270	31405	30535	29670	
34005	33835	33660	33485	33315	32965	32620	32270	31405	30535	29670	
34005	33835	33660	33485	33315	32965	32620	32270	31405	30535	29670	28800
34005	33835	33660	33485	33315	32965	32620	32270	31405	30535	29670	28800
34300	34140	33985	33560	32860	31475						
34300	34140	33985	33825	33665	33350	33030	32715	31920	29670		
34300	34140	33985	33825	33665	33350	33030	32715	31920	31125	30330	
34300	34140	33985	33825	33665	33350	33030	32715	31920	31125	30330	
34300	34140	33985	33825	33665	33350	33030	32715	31920	31125	30330	29535
34300	34140	33985	33825	33665	33350	33030	32715	31920	31125	30330	29535
37475	37305	37130	36955	36785	35910						
37475	37305	37130	36955	36785	36435	36090	35740	34875	33850		
37475	37305	37130	36955	36785	36435	36090	35740	34875	34005	33140	
37475	37305	37130	36955	36785	36435	36090	35740	34875	34005	33140	
37475	37305	37130	36955	36785	36435	36090	35740	34875	34005	33140	32270
37475	37305	37130	36955	36785	36435	36090	35740	34875	34005	33140	32270
43360	42595	41830	41070	40320	38825	37355	35905				
44215	44030	43840	43655	43465	43090	42715	42345	40375	37205	34140	
44215	44030	43840	43655	43465	43090	42715	42345	41405	40470	39530	
44215	44030	43840	43655	43465	43090	42715	42345	41405	40470	39530	38595
44215	44030	43840	43655	43465	43090	42715	42345	41405	40470	39530	38595
44215	44030	43840	43655	43465	43090	42715	42345	41405	40470	39530	38595
55460	55225	54990	54755	54520	54050	53580	53110	51935	50760	47655	
55460	55225	54990	54755	54520	54050	53580	53110	51935	50760	49585	
55460	55225	54990	54755	54520	54050	53580	53110	51935	50760	49585	48410
55460	55225	54990	54755	54520	54050	53580	53110	51935	50760	49585	48410
55460	55225	54990	54755	54520	54050	53580	53110	51935	50760	49585	48410
55460	55225	54990	54755	54520	54050	53580	53110	51935	50760	49585	48410
55460	55225	54990	54755	54520	54050	53580	53110	51935	50760	49585	48410





• **FRANCE**  
bridge over the Rhine river

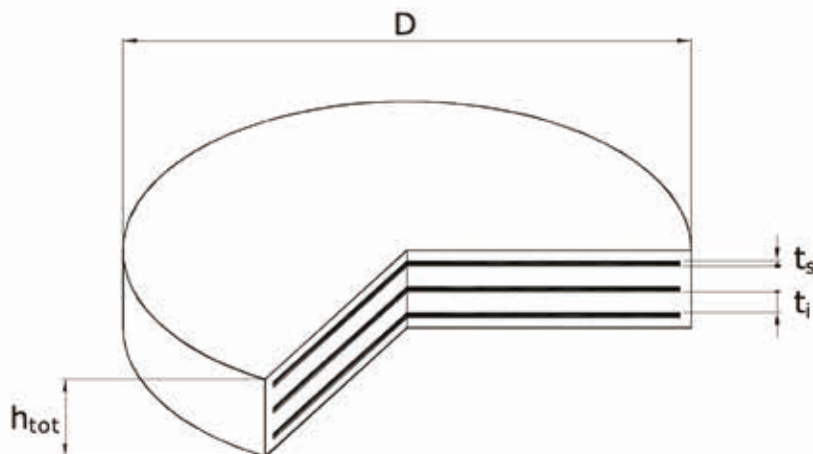




• U.K. - Barnstaple Western Bypass, Taw bridge

# TABLES NEOARM CIRCULAR TYPE

CHARACTERISTICS								
Diameter	Height	Steel reinf. plates	Elastomer		Shear stiffness	Volume	Weight	Bearing code
<b>D</b> mm	<b>h<sub>tot</sub></b> mm	<b>t<sub>s</sub></b> mm	<b>t<sub>i</sub></b> mm	<b>n</b> n	<b>K<sub>o</sub></b> kN/mm	<b>Vol</b> dm <sup>3</sup>	<b>W</b> kg	<b>NEOARM Ø</b>
<b>200</b>	23	2	6	2	1,66	0,7	2	<b>200 x 23</b>
	31			3	1,23	1,0	3	<b>200 x 31</b>
	39			4	0,97	1,2	4	<b>200 x 39</b>
<b>250</b>	23	2	6	2	2,60	1,1	3	<b>250 x 23</b>
	31			3	1,92	1,5	4	<b>250 x 31</b>
	39			4	1,52	1,9	6	<b>250 x 39</b>
<b>300</b>	31	2	6	3	2,77	2,2	6	<b>300 x 31</b>
	39			4	2,19	2,8	8	<b>300 x 39</b>
	47			5	1,82	3,3	10	<b>300 x 47</b>
	55			6	1,55	3,9	11	<b>300 x 55</b>
<b>350</b>	37	2	8	3	2,99	3,6	10	<b>350 x 37</b>
	47			4	2,34	4,5	12	<b>350 x 47</b>
	57			5	1,92	5,5	14	<b>350 x 57</b>
	67			6	1,63	6,4	17	<b>350 x 67</b>
<b>400</b>	37	2	8	3	3,90	4,6	12	<b>400 x 37</b>
	47			4	3,06	5,9	16	<b>400 x 47</b>
	57			5	2,51	7,2	19	<b>400 x 57</b>
	67			6	2,13	8,4	22	<b>400 x 67</b>
<b>450</b>	60	3	10	4	3,18	9,5	28	<b>450 x 60</b>
	73			5	2,60	11,6	33	<b>450 x 73</b>
	86			6	2,20	13,7	39	<b>450 x 86</b>
	99			7	1,91	15,7	45	<b>450 x 99</b>
<b>500</b>	60	3	10	4	3,93	11,8	34	<b>500 x 60</b>
	73			5	3,21	14,3	41	<b>500 x 73</b>
	86			6	2,72	16,9	48	<b>500 x 86</b>
	99			7	2,36	19,4	55	<b>500 x 99</b>
<b>550</b>	60	3	10	4	4,75	14,3	41	<b>550 x 60</b>
	73			5	3,89	17,3	50	<b>550 x 73</b>
	86			6	3,29	20,4	58	<b>550 x 86</b>
	99			7	2,85	23,5	67	<b>550 x 99</b>
<b>600</b>	60	3	10	4	5,65	17,0	49	<b>600 x 60</b>
	73			5	4,63	20,6	59	<b>600 x 73</b>
	86			6	3,91	24,3	70	<b>600 x 86</b>
	99			7	3,39	28,0	80	<b>600 x 99</b>



MAXIMUM VERTICAL LOAD											
$v (\pm mm)$											
0	5	10	15	20	30	40	50	75	100	125	150
$F_{z \text{ ULS}}$ kN											
608	558	510	465								
672	629	588	548	509							
704	666	628	591	556							
1014	923	835									
1230	1155	1080	1005	935							
1300	1270	1205	1140	1075							
1840	1715	1595	1475	1360							
2135	2025	1915	1810	1705							
2175	2135	2095	2010	1915	1735						
2175	2135	2095	2055	2020	1885	1720					
2265	2230	2195	2160	2075							
2265	2230	2195	2160	2125	2060						
2265	2230	2195	2160	2125	2060	1990					
2265	2230	2195	2160	2125	2060	1990	1920				
3005	2965	2925	2840								
3005	2965	2925	2885	2845	2765						
3005	2965	2925	2885	2845	2765	2685					
3005	2965	2925	2885	2845	2765	2685	2610				
4615	4560	4505	4450	4305	4005	3715					
4615	4560	4505	4450	4400	4290	4150	3890				
4615	4560	4505	4450	4400	4290	4185	4075				
4615	4560	4505	4450	4400	4290	4185	4075	3810			
5750	5690	5630	5570	5485	5095	4715					
5750	5690	5630	5570	5510	5390	5270	5090				
5750	5690	5630	5570	5510	5390	5270	5150				
5750	5690	5630	5570	5510	5390	5270	5150	4850			
7010	6945	6875	6810	6615	6120	5635					
7010	6945	6875	6810	6745	6615	6480	6325				
7010	6945	6875	6810	6745	6615	6480	6350				
7010	6945	6875	6810	6745	6615	6480	6350	6015			
8395	8325	8185	7865								
8395	8325	8250	8180	8105	7960	7815	7490				
8395	8325	8250	8180	8105	7960	7815	7670				
8395	8325	8250	8180	8105	7960	7815	7670	7310			

## LEGEND

<b>D</b>	overall diameter
<b><math>h_{\text{tot}}</math></b>	total height
<b><math>t_s</math></b>	thickness of steel reinforcing plates
<b><math>t_l</math></b>	thickness of an individual elastomer layer
<b>n</b>	number of elastomer layers
<b><math>K_o</math></b>	shear stiffness
<b>Vol</b>	volume
<b>W</b>	weight
<b>v</b>	maximum horizontal relative displacement
<b><math>F_{z \text{ ULS}}</math></b>	maximum vertical load

# TABLES NEOARM CIRCULAR TYPE

CHARACTERISTICS								
Diameter	Height	Steel reinf. plates	Elastomer		Shear stiffness	Volume	Weight	Bearing code
<b>D</b> <i>mm</i>	<b>h<sub>tot</sub></b> <i>mm</i>	<b>t<sub>s</sub></b> <i>mm</i>	<b>t<sub>i</sub></b> <i>mm</i>	<b>n</b> <i>n</i>	<b>K<sub>o</sub></b> <i>kN/mm</i>	<b>Vol</b> <i>dm<sup>3</sup></i>	<b>W</b> <i>kg</i>	<b>NEOARM Ø</b>
<b>650</b>	68	3	12	4	5,63	22,6	61	<b>650 x 68</b>
	83			5	4,59	27,5	74	<b>650 x 83</b>
	98			6	3,88	32,5	87	<b>650 x 98</b>
	113			7	3,36	37,5	99	<b>650 x 113</b>
<b>700</b>	80	3	15	4	5,33	30,8	77	<b>700 x 80</b>
	98			5	4,33	37,7	93	<b>700 x 98</b>
	116			6	3,65	44,6	109	<b>700 x 116</b>
	134			7	3,15	51,6	125	<b>700 x 134</b>
<b>750</b>	80	3	15	4	6,12	35,3	88	<b>750 x 80</b>
	98			5	4,97	43,3	107	<b>750 x 98</b>
	116			6	4,19	51,2	125	<b>750 x 116</b>
	134			7	3,61	59,2	144	<b>750 x 134</b>
<b>800</b>	85	4	15	4	6,96	42,7	120	<b>800 x 85</b>
	104			5	5,65	52,3	145	<b>800 x 104</b>
	123			6	4,76	61,8	170	<b>800 x 123</b>
	142			7	4,11	71,4	195	<b>800 x 142</b>
	161			8	3,62	80,9	221	<b>800 x 161</b>
<b>850</b>	85	4	15	4	7,86	48,2	135	<b>850 x 85</b>
	104			5	6,38	59,0	164	<b>850 x 104</b>
	123			6	5,38	69,8	192	<b>850 x 123</b>
	142			7	4,64	80,6	221	<b>850 x 142</b>
	161			8	4,09	91,4	249	<b>850 x 161</b>
<b>900</b>	97	4	18	4	7,44	61,7	161	<b>900 x 97</b>
	119			5	6,03	75,7	195	<b>900 x 119</b>
	141			6	5,07	89,7	230	<b>900 x 141</b>
	163			7	4,37	103,7	264	<b>900 x 163</b>
	185			8	3,84	117,7	298	<b>900 x 185</b>
<b>1000</b>	97	4	18	4	9,18	76,2	199	<b>1000 x 97</b>
	119			5	7,44	93,5	241	<b>1000 x 119</b>
	141			6	6,26	110,7	284	<b>1000 x 141</b>
	163			7	5,40	128,0	326	<b>1000 x 163</b>
	185			8	4,74	145,3	368	<b>1000 x 185</b>
<b>1100</b>	125	5	18	5	9,00	118,8	337	<b>1100 x 125</b>
	148			6	7,57	140,6	395	<b>1100 x 148</b>
	171			7	6,53	162,5	454	<b>1100 x 171</b>
	194			8	5,74	184,4	513	<b>1100 x 194</b>
	217			9	5,12	206,2	571	<b>1100 x 217</b>
	240			10	4,62	228,1	630	<b>1100 x 240</b>
<b>1200</b>	135	5	20	5	9,69	152,7	415	<b>1200 x 135</b>
	160			6	8,14	181,0	487	<b>1200 x 160</b>
	185			7	7,02	209,2	560	<b>1200 x 185</b>
	210			8	6,17	237,5	633	<b>1200 x 210</b>
	235			9	5,50	265,8	705	<b>1200 x 235</b>
	260			10	4,97	294,1	778	<b>1200 x 260</b>

MAXIMUM VERTICAL LOAD											
$v (\pm mm)$											
0	5	10	15	20	30	40	50	75	100	125	150
$F_z$ ULS kN											
9055	8985	8910	8840	8765	8620	8415	7845				
9055	8985	8910	8840	8765	8620	8475	8330				
9055	8985	8910	8840	8765	8620	8475	8330	7965			
9055	8985	8910	8840	8765	8620	8475	8330	7965			
9930	9860	9785	9710	9640	9495	9345	9200				
9930	9860	9785	9710	9640	9495	9345	9200	8835			
9930	9860	9785	9710	9640	9495	9345	9200	8835			
9930	9860	9785	9710	9640	9495	9345	9200	8835	8470		
11445	11365	11290	11210	11130	10975	10820	10660				
11445	11365	11290	11210	11130	10975	10820	10660	10270			
11445	11365	11290	11210	11130	10975	10820	10660	10270			
11445	11365	11290	11210	11130	10975	10820	10660	10270	9880		
13490	13405	13320	13230	13145	12975	12800	12625				
13490	13405	13320	13230	13145	12975	12800	12625	12195			
13490	13405	13320	13230	13145	12975	12800	12625	12195			
13490	13405	13320	13230	13145	12975	12800	12625	12195	11760		
13490	13405	13320	13230	13145	12975	12800	12625	12195	11760	11330	
15275	15185	15095	15000	14910	14725						
15275	15185	15095	15000	14910	14725	14540	14355	13895			
15275	15185	15095	15000	14910	14725	14540	14355	13895			
15275	15185	15095	15000	14910	14725	14540	14355	13895	13435		
15275	15185	15095	15000	14910	14725	14540	14355	13895	13435	12975	
18475	18370	18265	18160	18055	17845	17635	17285	15440			
18475	18265	18265	18160	18055	17845	17635	17425	16900			
18475	18265	18265	18160	18055	17845	17635	17425	16900	16375		
18475	18265	18265	18160	18055	17845	17635	17425	16900	16375	15850	
18475	18265	18265	18160	18055	17845	17635	17425	16900	16375	15850	
22915	22795	22680	22560	22445	22210	21870	20875				
22915	22795	22680	22560	22445	22210	21980	21745	21160			
22915	22795	22680	22560	22445	22210	21980	21745	21160	20575		
22915	22795	22680	22560	22445	22210	21980	21745	21160	20575	19990	
22915	22795	22680	22560	22445	22210	21980	21745	21160	20575	19990	
26940	26815	26690	26565	26440	26190	25940	25690	25070			
26940	26815	26690	26565	26440	26190	25940	25690	25070	24445		
26940	26815	26690	26565	26440	26190	25940	25690	25070	24445	23820	
26940	26815	26690	26565	26440	26190	25940	25690	25070	24445	23820	
26940	26815	26690	26565	26440	26190	25940	25690	25070	24445	23820	23195
26940	26815	26690	26565	26440	26190	25940	25690	25070	24445	23820	23195
28945	28820	28700	28575	28455	28210	27960					
28945	28820	28700	28575	28455	28210	27960	27715	27105	26490	25875	
28945	28820	28700	28575	28455	28210	27960	27715	27105	26490	25875	
28945	28820	28700	28575	28455	28210	27960	27715	27105	26490	25875	25265
28945	28820	28700	28575	28455	28210	27960	27715	27105	26490	25875	25265
28945	28820	28700	28575	28455	28210	27960	27715	27105	26490	25875	25265



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