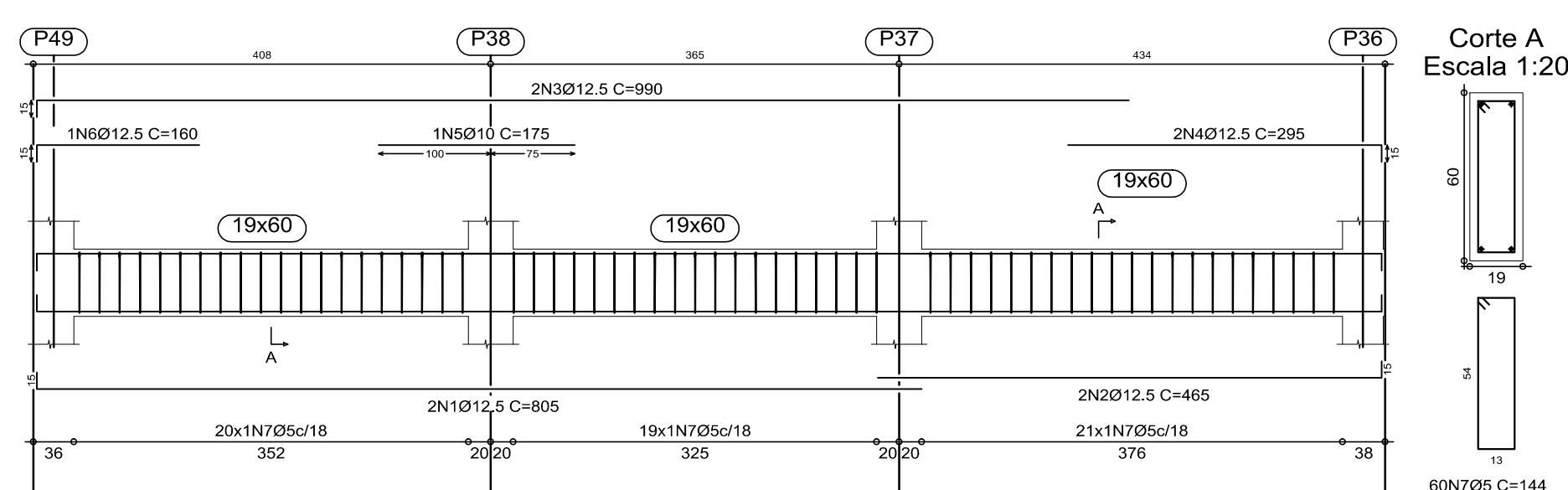
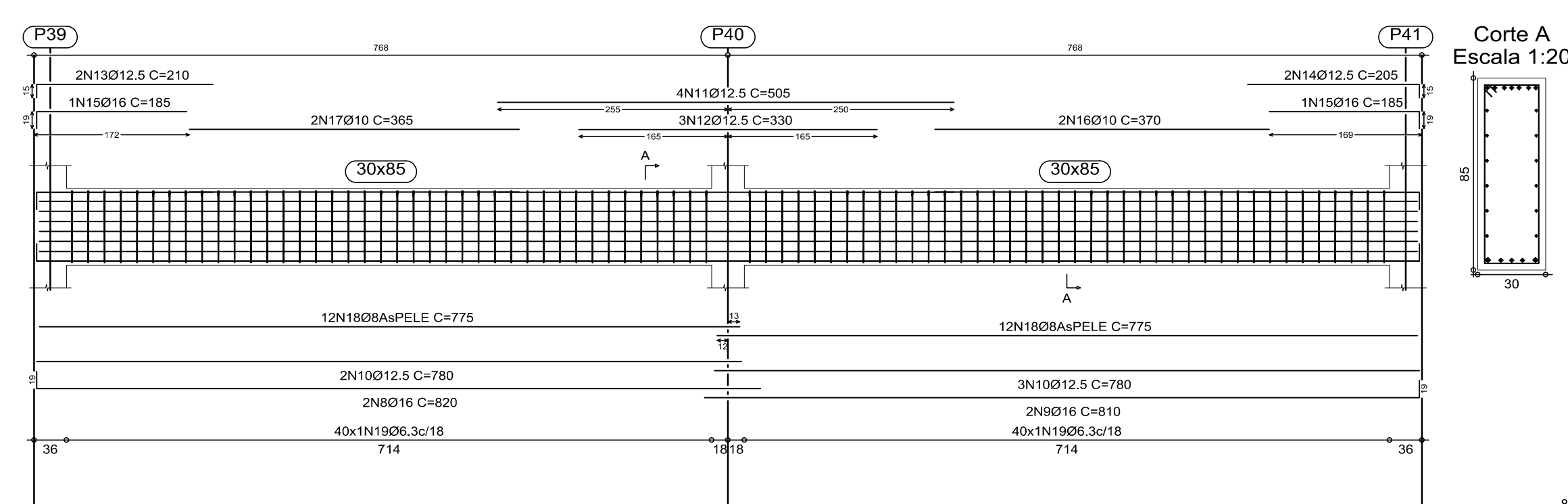


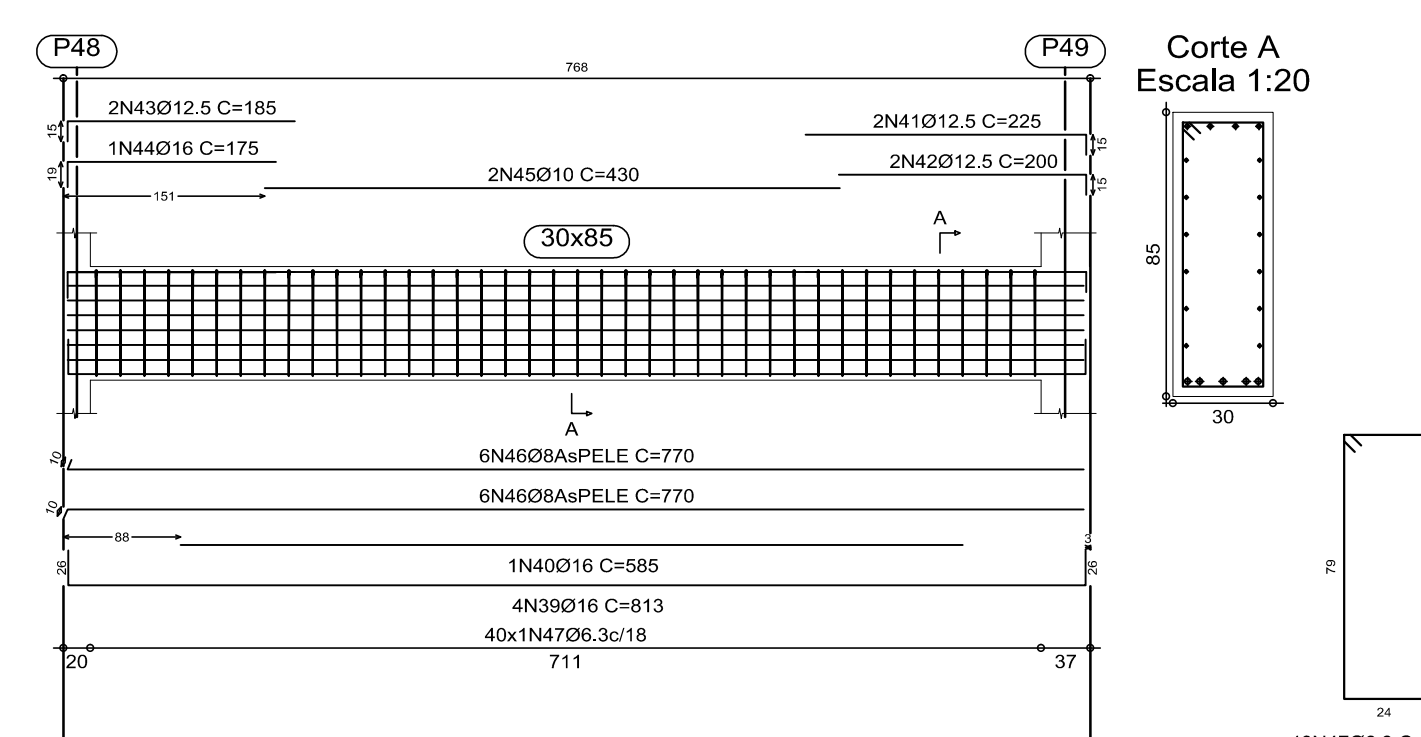
V 321
Escala 1:50



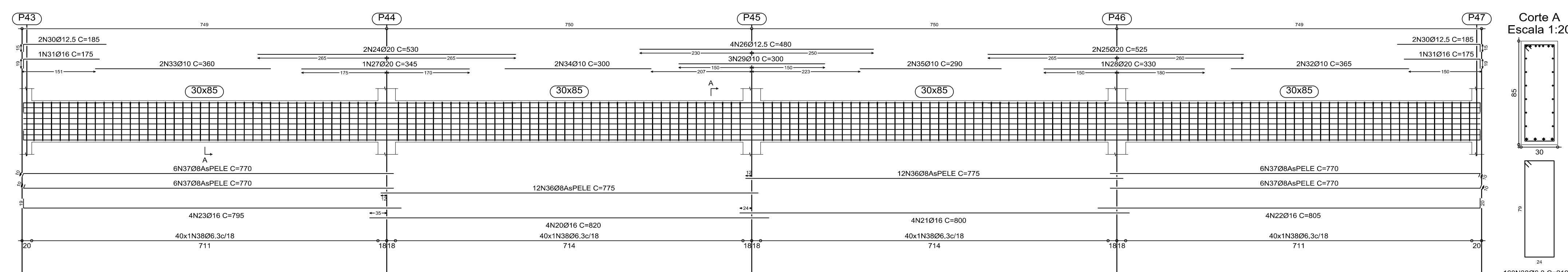
V 322
Escala 1:50



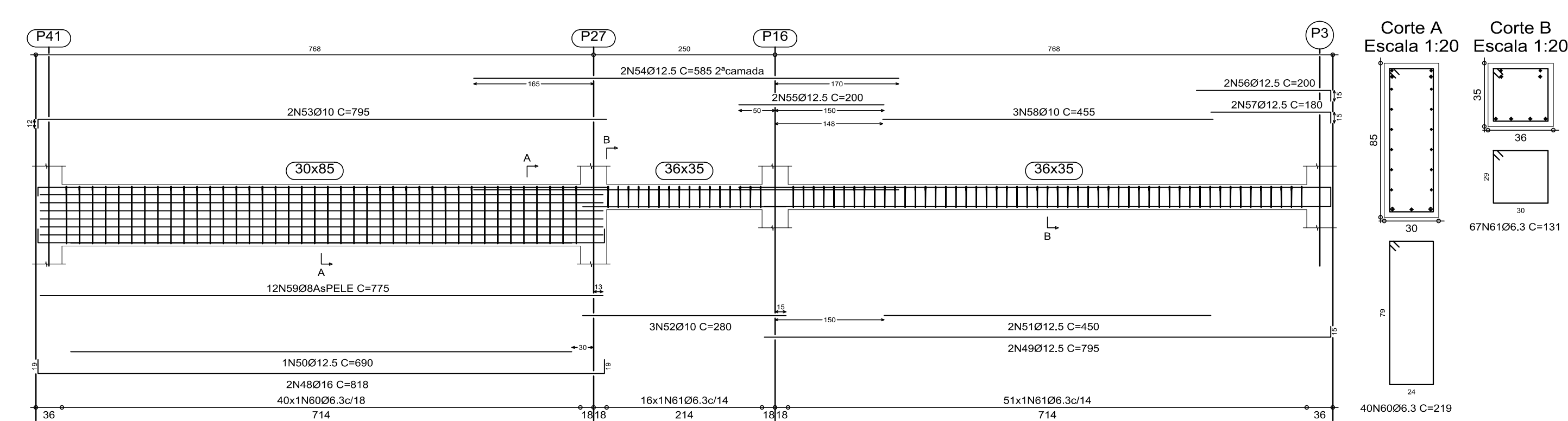
V 324
Escala 1:50



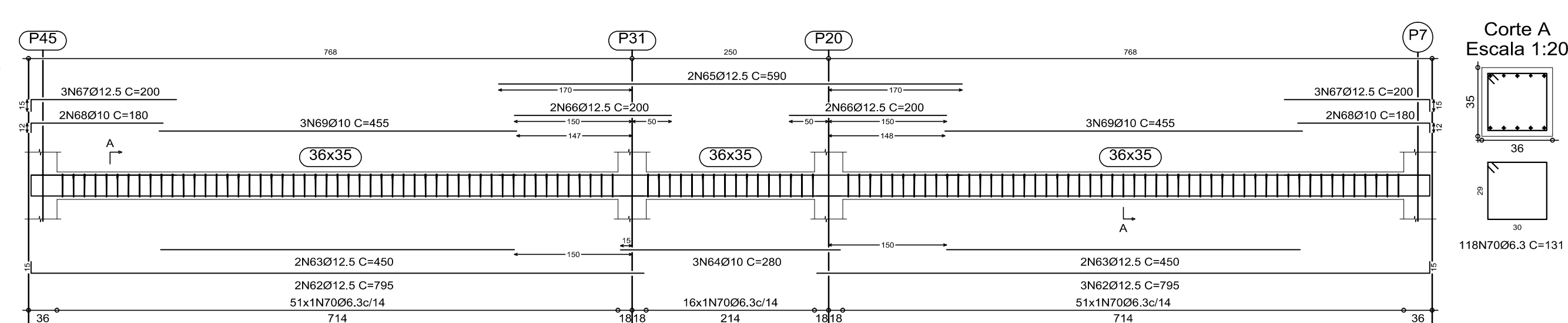
V 323
Escala 1:50



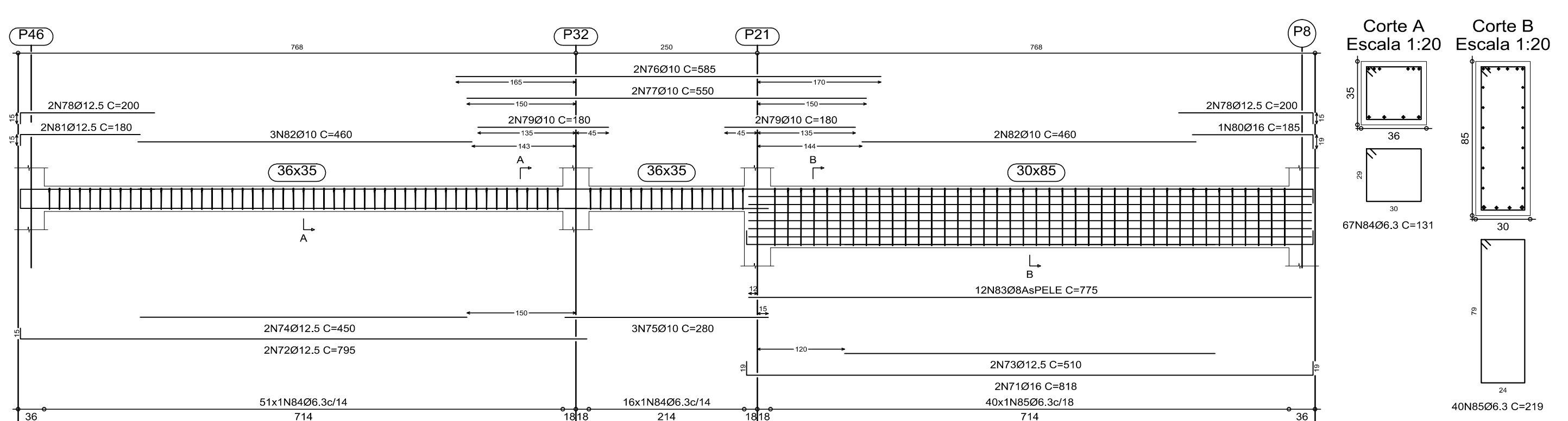
V 325
Escala 1:50



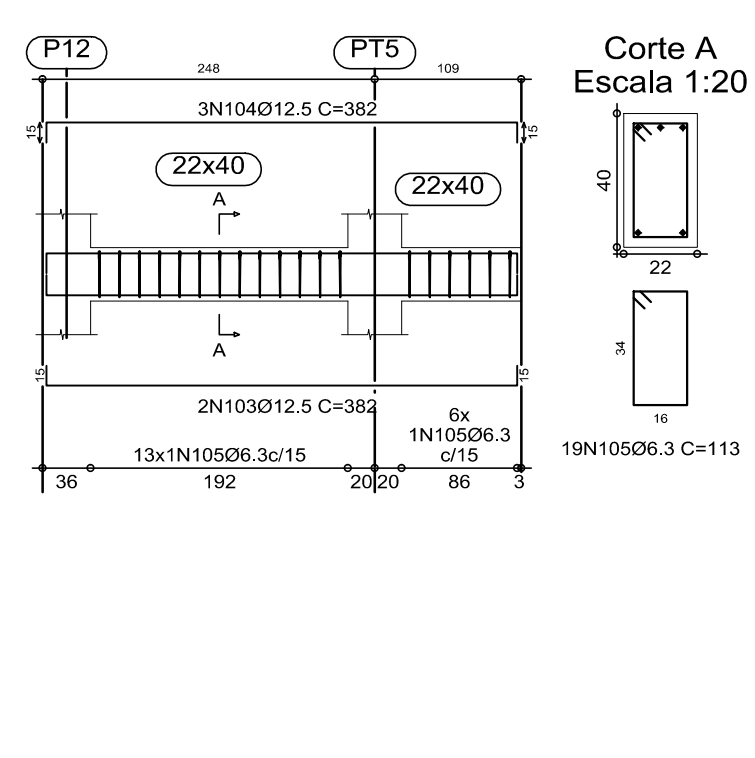
V 326
Escala 1:50



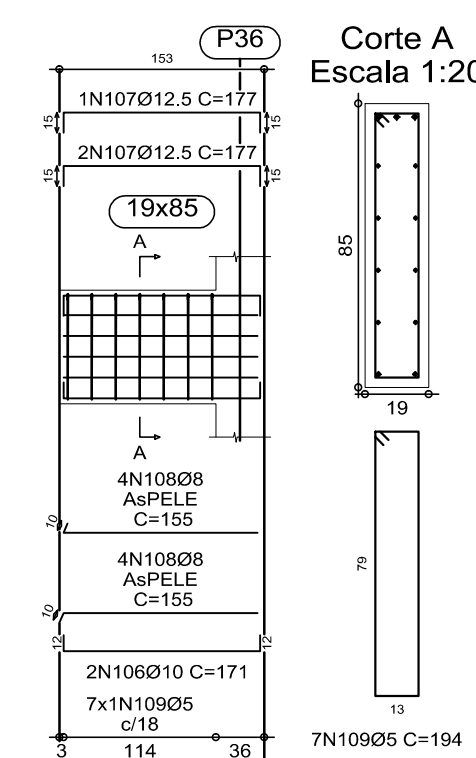
V 327
Escala 1:50



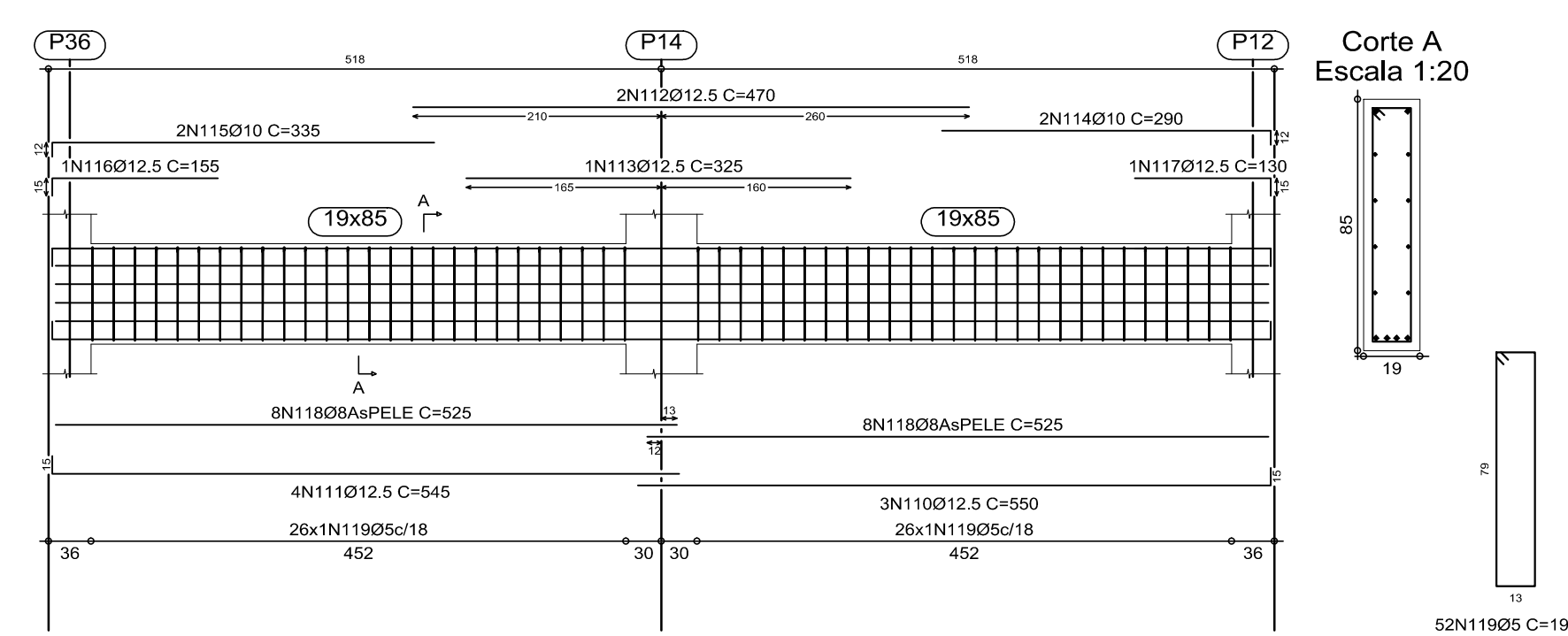
V 329
Escala 1:50



V 330
Escala 1:50

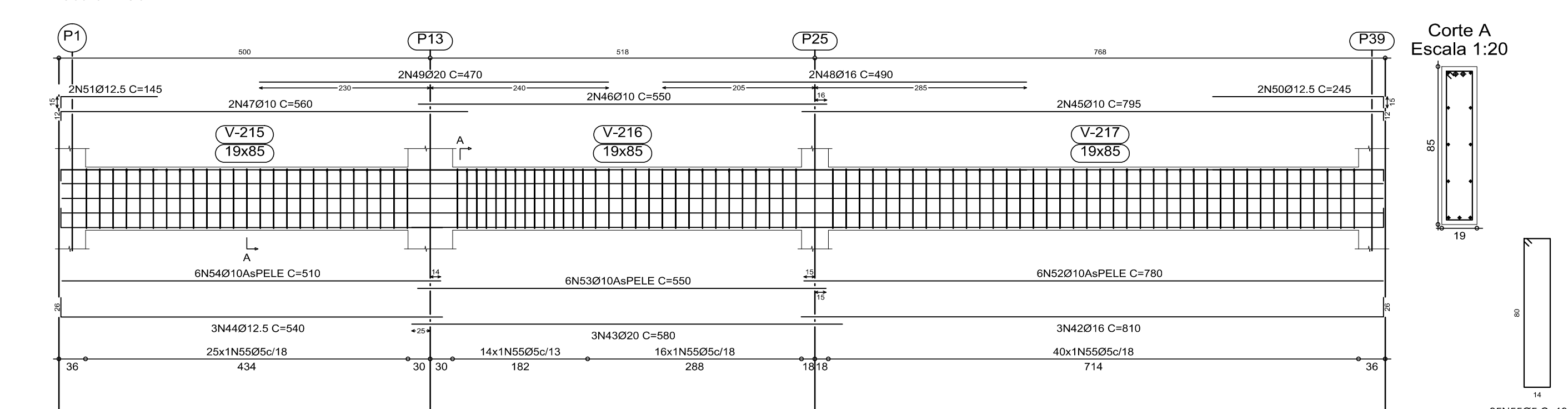


V 331
Escala 1:50

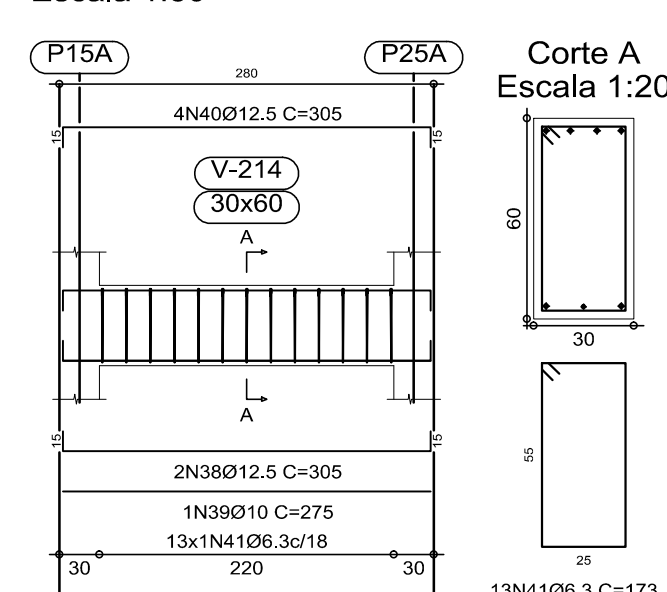


2 PAVIMENTO
Desenho de vigas
Concreto C30 sem grad.
Aço: CA-50A e CA-60-B
Escala: 1:50
Escala seções: 1:20

V 328
Escala 1:50



V 328A
Escala 1:50



| Elemento | Pos. | Diam. | Q. | Dob. | Reta | Dob. | Comp. | Total | CA-50-A | CA-60-B |
|-----------|------|-------|-----|------|------|------|-------|-------|---------|---------|
| | | | | | (cm) | (cm) | (cm) | (kg) | (kg) | (kg) |
| V 321 | 1 | Ø12,5 | 2 | 15 | 780 | | 805 | 1610 | 15,8 | |
| | 2 | Ø12,5 | 2 | 15 | 780 | | 805 | 1610 | 15,8 | |
| | 3 | Ø12,5 | 2 | 15 | 780 | | 805 | 1610 | 15,8 | |
| | 4 | Ø12,5 | 2 | 15 | 780 | | 805 | 1610 | 15,8 | |
| | 5 | Ø10 | 1 | 175 | | | 175 | 175 | 1,1 | |
| | 6 | Ø12,5 | 1 | 145 | | | 145 | 145 | 1,6 | |
| | 7 | Ø5 | 80 | | | | 144 | 144 | | 13,8 |
| Total+10% | | | | | | | | | 56,1 | 13,8 |
| V 332 | 8 | Ø16 | 2 | 19 | 801 | | 820 | 1640 | 25,7 | |
| | 9 | Ø16 | 2 | 19 | 801 | | 820 | 1640 | 25,7 | |
| | 10 | Ø12,5 | 2 | 15 | 780 | | 805 | 1610 | 15,8 | |
| | 11 | Ø12,5 | 2 | 15 | 780 | | 805 | 1610 | 15,8 | |
| | 12 | Ø12,5 | 2 | 15 | 780 | | 805 | 1610 | 15,8 | |
| | 13 | Ø12,5 | 2 | 15 | 780 | | 805 | 1610 | 15,8 | |
| | 14 | Ø12,5 | 2 | 15 | 780 | | 805 | 1610 | 15,8 | |
| | 15 | Ø10 | 2 | 19 | 180 | | 370 | 740 | 4,8 | |
| | 16 | Ø10 | 2 | 19 | 180 | | 370 | 740 | 4,8 | |
| | 17 | Ø10 | 2 | 19 | 180 | | 370 | 740 | 4,8 | |
| | 18 | Ø8 | 24 | 775 | | | 775 | 18600 | 73,0 | |
| | 19 | Ø6,3 | 80 | | | | 219 | 17520 | 43,3 | |
| Total+10% | | | | | | | | | 284,1 | |
| V 323 | 20 | Ø16 | 4 | 820 | | | 820 | 3280 | 51,5 | |
| | 21 | Ø16 | 4 | 820 | | | 820 | 3280 | 51,5 | |
| | 22 | Ø16 | 4 | 785 | 20 | | 805 | 3220 | 50,8 | |
| | 23 | Ø16 | 4 | 775 | | | 795 | 3180 | 49,8 | |
| | 24 | Ø20 | 2 | 530 | | | 530 | 1060 | 26,2 | |
| | 25 | Ø20 | 2 | 525 | | | 525 | 1050 | 26,0 | |
| | 26 | Ø12,5 | 4 | 480 | | | 480 | 1920 | 18,8 | |
| | 27 | Ø20 | 1 | 345 | | | 345 | 345 | 8,5 | |
| | 28 | Ø20 | 1 | 330 | | | 330 | 330 | 8,2 | |
| | 29 | Ø10 | 2 | 166 | | | 166 | 330 | 6,7 | |
| | 30 | Ø12,5 | 4 | 16 | 170 | | 165 | 740 | 7,3 | |
| | 31 | Ø16 | 2 | 19 | 166 | | 175 | 350 | 6,5 | |
| | 32 | Ø10 | 2 | 365 | | | 365 | 730 | 4,6 | |
| | 33 | Ø10 | 2 | 360 | | | 360 | 720 | 4,5 | |
| | 34 | Ø10 | 2 | 300 | | | 300 | 600 | 3,8 | |
| | 35 | Ø10 | 2 | 290 | | | 290 | 580 | 3,6 | |
| | 36 | Ø8 | 24 | 775 | | | 775 | 18600 | 73,0 | |
| | 37 | Ø8 | 24 | 760 | | | 770 | 18480 | 72,5 | |
| | 38 | Ø6,3 | 160 | | | | 219 | 17520 | 43,3 | |
| Total+10% | | | | | | | | | 812,7 | |
| V 334 | 39 | Ø16 | 4 | 26 | 761 | 26 | 813 | 3252 | 51,7 | |
| | 40 | Ø16 | 4 | 585 | | | 585 | 1170 | 9,2 | |
| | 41 | Ø12,5 | 2 | 210 | 15 | | 225 | 450 | 4,4 | |
| | 42 | Ø12,5 | 2 | 180 | 15 | | 195 | 390 | 3,8 | |
| | 43 | Ø12,5 | 2 | 15 | 170 | | 165 | 330 | 3,6 | |
| | 44 | Ø16 | 2 | 19 | 166 | | 175 | 350 | 6,5 | |
| | 45 | Ø10 | 2 | 430 | | | 430 | 860 | 5,4 | |
| | 46 | Ø8 | 12 | 180 | | | 180 | 360 | 2,3 | |
| | 47 | Ø6,3 | 40 | 780 | | | 219 | 17520 | 43,3 | |
| Total+10% | | | | | | | | | 812,7 | |
| V 325 | 48 | Ø16 | 2 | 19 | 780 | | 805 | 1610 | 15,8 | |
| | 49 | Ø12,5 | 2 | 780 | 15 | | 795 | 1590 | 15,6 | |
| | 50 | Ø12,5 | 1 | 680 | | | 680 | 680 | 6,8 | |
| | 51 | Ø12,5 | 2 | 400 | | | 400 | 800 | 8,8 | |
| | 52 | Ø10 | 3 | 280 | | | 280 | 560 | 5,3 | |
| | 53 | Ø10 | 2 | 12 | 783 | | 785 | 1590 | 10,0 | |
| | 54 | Ø12,5 | 2 | 180 | 15 | | 195 | 390 | 3,8 | |
| | 55 | Ø12,5 | 2 | 200 | | | 200 | 400 | 3,9 | |
| | 56 | Ø12,5 | 2 | 185 | 15 | | 195 | 390 | 3,8 | |
| | 57 | Ø12,5 | 2 | 165 | 15 | | 180 | 360 | 3,5 | |
| | 58 | Ø10 | 3 | 455 | | | 455 | 910 | 8,8 | |
| | 59 | Ø8 | 12 | 775 | | | 775 | 1550 | 36,5 | |
| | 60 | Ø6,3 | 40 | | | | 219 | 17520 | 43,3 | |
| | 61 | Ø6,3 | 67 | | | | 131 | 8777 | 21,7 | |
| Total+10% | | | | | | | | | 301,9 | |
| V 326 | 62 | Ø12,5 | 3 | 780 | 15 | | 795 | 3975 | 39,0 | |
| | 63 | Ø12,5 | 3 | 400 | | | 400 | 800 | 17,7 | |
| | 64 | Ø10 | 3 | 280 | | | 280 | 560 | 5,3 | |
| | 65 | Ø12,5 | 4 | 200 | | | 200 | 800 | 7,9 | |
| | 66 | Ø12,5 | 6 | 165 | | | 165 | 990 | 11,8 | |
| | 67 | Ø10 | 4 | 12 | 168 | | 180 | 360 | 4,5 | |
| | 68 | Ø10 | 4 | 12 | 168 | | 180 | 360 | 4,5 | |
| | 69 | Ø10 | 6 | 455 | | | 455 | 910 | 17,1 | |
| | 70 | Ø6,3 | 118 | | | | 131 | 15488 | 38,2 | |
| Total+10% | | | | | | | | | 168,4 | |
| V 327 | 71 | Ø16 | 2 | 19 | 780 | | 805 | 1610 | 15,8 | |
| | 72 | Ø12,5 | 2 | 15 | 780 | | 795 | 1590 | 15,6 | |
| | 73 | Ø12,5 | 2 | 810 | | | 810 | 1620 | 10,0 | |
| | 74 | Ø12,5 | 2 | 400 | | | 400 | 800 | 8,8 | |
| | 75 | Ø10 | 3 | 280 | | | 280 | 560 | 5,3 | |
| | 76 | Ø10 | 2 | 585 | | | 585 | 1170 | 7,3 | |
| | 77 | Ø10 | 2 | 550 | | | 550 | 1100 | 6,9 | |
| | 78 | Ø12,5 | 4 | 185 | | | 185 | 740 | 4,5 | |
| | 79 | Ø10 | 4 | 180 | | | 180 | 720 | 4,5 | |
| | 80 | Ø16 | 1 | 166 | | | 166 | 166 | 2,9 | |
| | 81 | Ø12,5 | 2 | 165 | 15 | | 180 | 360 | 3,5 | |
| | 82 | Ø10 | 5 | 460 | | | 460 | 920 | 14,4 | |
| | 83 | Ø8 | 12 | 775 | | | 775 | 1550 | 36,5 | |
| | 84 | Ø6,3 | 67 | | | | 131 | 8777 | 21,7 | |
| Total+10% | | | | | | | | | 212,0 | |
| V 328 | 85 | Ø12,5 | 3 | 780 | | | 805 | 1610 | 15,8 | |
| | 86 | Ø16 | 2 | 555 | | | 555 | 1110 | 17,4 | |
| | 87 | Ø12,5 | 2 | 515 | | | 515 | 1030 | 16,6 | |
| | 88 | Ø10 | 2 | 515 | | | 515 | 1030 | 16,6 | |
| | 89 | Ø10 | 2 | 470 | | | 470 | 940 | 10,2 | |
| | 90 | Ø12,5 | 2 | 420 | | | 420 | 840 | 8,2 | |
| | 91 | Ø12,5 | 2 | 420 | | | 420 | 840 | 8,2 | |
| | 92 | Ø12,5 | 1 | 310 | | | 310 | 310 | 3,9 | |
| | 93 | Ø10 | 1 | 275 | | | 275 | 275 | 3,7 | |
| | 94 | Ø10 | 1 | 275 | | | 275 | 275 | 3,7 | |
| | 95 | Ø12,5 | 1 | 15 | 165 | | 165 | 165 | 1,8 | |
| | 96 | Ø10 | 2 | 275 | 12 | | 287 | 574 | 3,8 | |
| | 97 | Ø12,5 | 1 | 115 | 130 | | 130 | 130 | 1,3 | |
| | 98 | Ø10 | 2 | 160 | | | 160 | 320 | 3,8 | |
| | 99 | Ø8 | 8 | 775 | | | 775 | 1550 | 36,5 | |
| | 100 | Ø8 | 8 | 505 | | | 505 | 1010 | 15,9 | |
| | 101 | Ø8 | 8 | 505 | | | 505 | 1010 | 15,9 | |
| | 102 | Ø5 | 92 | | | | 131 | 17520 | 43,3 | |
| Total+10% | | | | | | | | | 171,5 | |
| V 329 | 103 | Ø12,5 | 2 | 15 | 352 | 15 | 367 | 764 | 7,5 | |
| | 104 | Ø12,5 | 3 | 15 | 352 | 15 | 367 | 764 | 7,5 | |
| | 105 | Ø6,3 | 19 | | | | 113 | 2147 | 5,3 | |
| Total+10% | | | | | | | | | 26,4 | |
| V 330 | 106 | Ø10 | 2 | 12 | 147 | 12 | 171 | 342 | 2,1 | |
| | 107 | Ø12,5 | 3 | 15 | 147 | 15 | 177 | 531 | 5,2 | |
| | 108 | Ø8 | 8 | 10 | 145 | | 125 | 1240 | 4,8 | |
| | 109 | Ø5 | 7 | | | | 144 | 1398 | | 2,1 |
| Total+10% | | | | | | | | | 13,4 | |
| V 331 | 110 | Ø12,5 | 3 | 535 | 15 | | 550 | 1650 | 16,2 | |
| | 111 | Ø10 | 3 | 320 | | | 320 | 640 | 6,2 | |
| | 112 | Ø12,5 | 2 | 470 | | | 470 | 940 | 9,2 | |
| | 113 | Ø12,5 | 1 | 320 | | | 320 | 320 | 3,9 | |
| | 114 | Ø10 | 2 | 278 | 12 | | 290 | 580 | 3,6 | |
| | 115 | Ø12,5 | 1 | 115 | 130 | | 130 | 130 | 1,3 | |
| | 116 | Ø12,5 | 1 | 140 | | | 140 | 140 | 1,5 | |
| | 117 | Ø10 | 2 | 194 | | | 194 | 388 | 3,9 | |
| | 118 | Ø8 | 8 | 525 | | | 525 | 1050 | 10,8 | |
| | 119 | Ø5 | 92 | | | | 131 | 17520 | 43,3 | |
| Total+10% | | | | | | | | | 103,0 | 15,8 |
| | | | | | | | | | 35 | 0,0 |
| | | | | | | | | | 36,3 | 0,0 |
| | | | | | | | | | 38 | 0,0 |
| | | | | | | | | | 39 | 0,0 |
| | | | | | | | | | 40 | 0,0 |
| | | | | | | | | | 41 | 0,0 |
| | | | | | | | | | 42 | 0,0 |
| | | | | | | | | | 43 | 0,0 |
| | | | | | | | | | 44 | 0,0 |
| | | | | | | | | | 45 | 0,0 |
| | | | | | | | | | 46 | 0,0 |
| | | | | | | | | | 47 | 0,0 |
| | | | | | | | | | 48 | 0,0 |
| | | | | | | | | | 49 | 0,0 |
| | | | | | | | | | 50 | 0,0 |
| | | | | | | | | | 51 | 0,0 |
| | | | | | | | | | 52 | 0,0 |
| | | | | | | | | | 53 | 0,0 |
| | | | | | | | | | 54 | 0,0 |
| | | | | | | | | | 55 | 0,0 |
| | | | | | | | | | 56 | 0,0 |
| | | | | | | | | | 57 | 0,0 |
| | | | | | | | | | 58 | 0,0 |
| | | | | | | | | | 59 | 0,0 |
| | | | | | | | | | 60 | 0,0 |
| | | | | | | | | | 61 | 0,0 |
| | | | | | | | | | 62 | 0,0 |
| | | | | | | | | | 63 | 0,0 |
| | | | | | | | | | 64 | 0,0 |
| | | | | | | | | | 65 | 0,0 |
| | | | | | | | | | 66 | 0,0 |
| | | | | | | | | | 67 | 0,0 |
| | | | | | | | | | 68 | 0,0 |
| | | | | | | | | | 69 | 0,0 |
| | | | | | | | | | 70 | 0,0 |
| | | | | | | | | | 71 | 0,0 |
| | | | | | | | | | 72 | 0,0 |
| | | | | | | | | | 73 | 0,0 |
| | | | | | | | | | 74 | 0,0 |
| | | | | | | | | | 75 | 0,0 |
| | | | | | | | | | 76 | 0,0 |
| | | | | | | | | | 77 | 0,0 |
| | | | | | | | | | 78 | 0,0 |
| | | | | | | | | | 79 | 0,0 |
| | | | | | | | | | 80 | 0,0 |
| | | | | | | | | | 81 | 0,0 |
| | | | | | | | | | 82 | 0,0 |
| | | | | | | | | | 83 | 0,0 |
| | | | | | | | | | 84 | 0,0 |
| | | | | | | | | | 85 | 0,0 |
| | | | | | | | | | 86 | 0,0 |
| | | | | | | | | | 87 | 0,0 |
| | | | | | | | | | 88 | 0,0 |
| | | | | | | | | | 89 | 0,0 |
| | | | | | | | | | 90 | 0,0 |
| | | | | | | | | | 91 | 0,0 |
| | | | | | | | | | 92 | 0,0 |
| | | | | | | | | | 93 | 0,0 |
| | | | | | | | | | 94 | 0,0 |
| | | | | | | | | | 95 | 0,0 |
| | | | | | | | | | 96 | 0,0 |
| | | | | | | | | | 97 | 0,0 |
| | | | | | | | | | 98 | 0,0 |
| | | | | | | | | | 99 | 0,0 |
| | | | | | | | | | 100 | 0,0 |
| | | | | | | | | | 101 | 0,0 |
| | | | | | | | | | 102 | 0,0 |
| | | | | | | | | | 103 | 0,0 |
| | | | | | | | | | 104 | 0,0 |
| | | | | | | | | | 105 | 0,0 |
| | | | | | | | | | 106 | 0,0 |
| | | | | | | | | | 107 | 0,0 |
| | | | | | | | | | 108 | 0,0 |
| | | | | | | | | | 109 | 0,0 |
| | | | | | | | | | 110 | 0,0 |
| | | | | | | | | | 111 | 0,0 |
| | | | | | | | | | 112 | 0,0 |
| | | | | | | | | | 113 | 0,0 |
| | | | | | | | | | 114 | 0,0 |
| | | | | | | | | | 115 | 0,0 |
| | | | | | | | | | 116 | 0,0 |
| | | | | | | | | | 117 | 0,0 |
| | | | | | | | | | 118 | 0,0 |
| | | | | | | | | | 119 | 0,0 |
| | | | | | | | | | 120 | 0,0 |
| | | | | | | | | | 121 | 0,0 |
| | | | | | | | | | 122 | 0,0 |
| | | | | | | | | | 123 | 0,0 |
| | | | | | | | | | 124 | 0,0 |
| | | | | | | | | | 125 | 0,0 |
| | | | | | | | | | 126 | 0,0 |
| | | | | | | | | | 127 | 0,0 |
| | | | | | | | | | 128 | 0,0 |
| | | | | | | | | | 129 | 0,0 |
| | | | | | | | | | 130 | 0,0 |
| | | | | | | | | | 131 | 0,0 |
| | | | | | | | | | 132 | 0,0 |
| | | | | | | | | | 133 | 0,0 |
| | | | | | | | | | 134 | 0,0 |
| | | | | | | | | | 135 | 0,0 |
| | | | | | | | | | 136 | 0,0 |
| | | | | | | | | | 137 | 0,0 |
| | | | | | | | | | 138 | 0,0 |
| | | | | | | | | | 139 | 0,0 |
| | | | | | | | | | 140 | 0,0 |
| | | | | | | | | | 141 | 0,0 |
| | | | | | | | | | 142 | 0,0 |
| | | | | | | | | | 143 | 0,0 |
| | | | | | | | | | 144 | 0,0 |
| | | | | | | | | | 145 | 0,0 |
| | | | | | | | | | 146 | 0,0 |
| | | | | | | | | | 147 | 0,0 |
| | | | | | | | | | 148 | 0,0 |
| | | | | | | | | | 149 | 0,0 |
| | | | | | | | | | 150 | 0,0 |
| | | | | | | | | | 151 | 0,0 |
| | | | | | | | | | 152 | 0,0 |
| | | | | | | | | | 153 | 0,0 |
| | | | | | | | | | 154 | 0,0 |
| | | | | | | | | | 155 | 0,0 |
| | | | | | | | | | 156 | 0,0 |