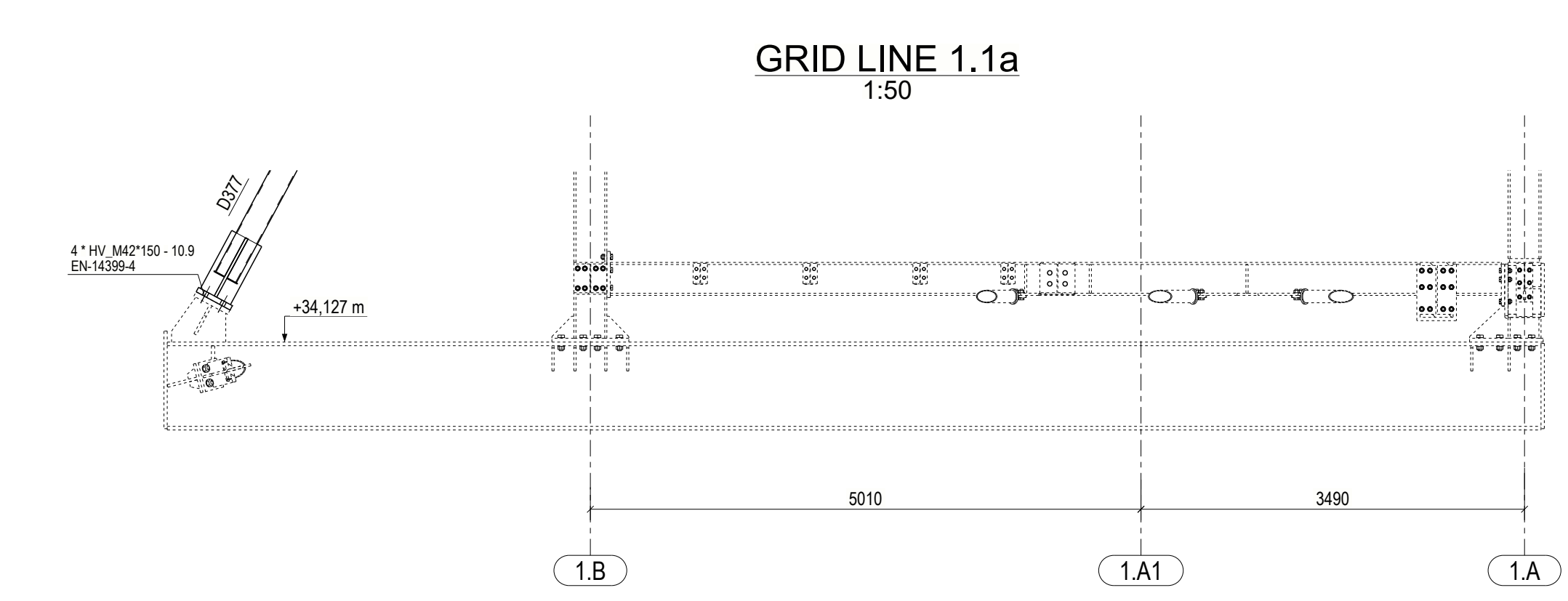
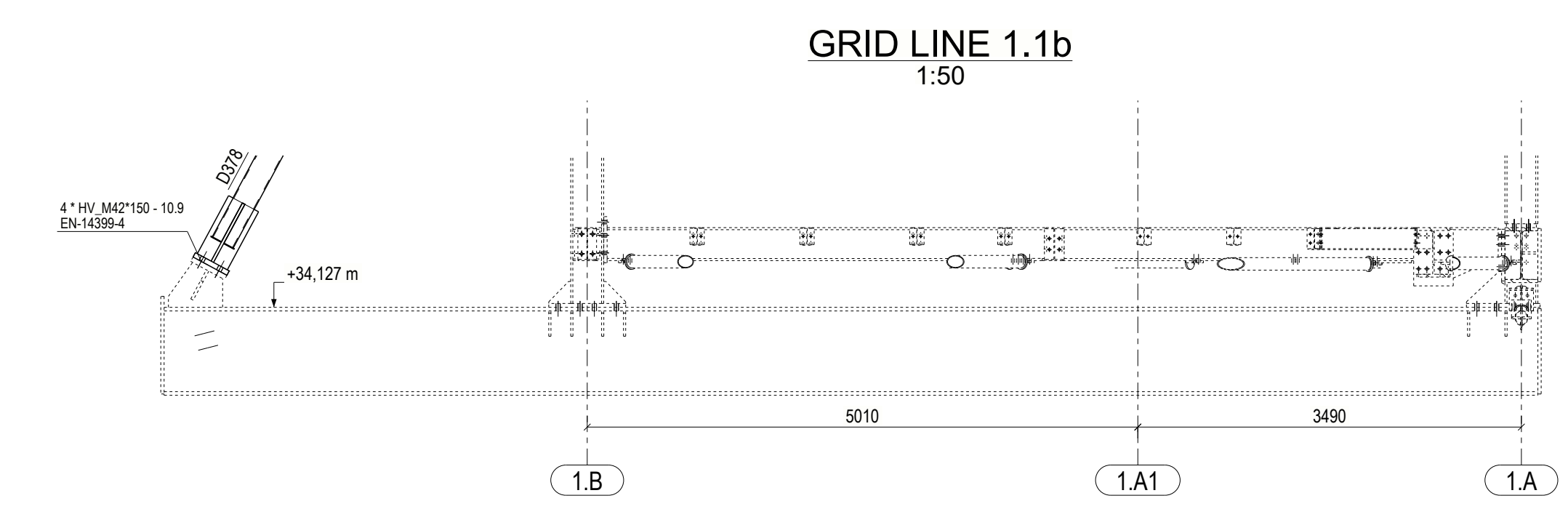
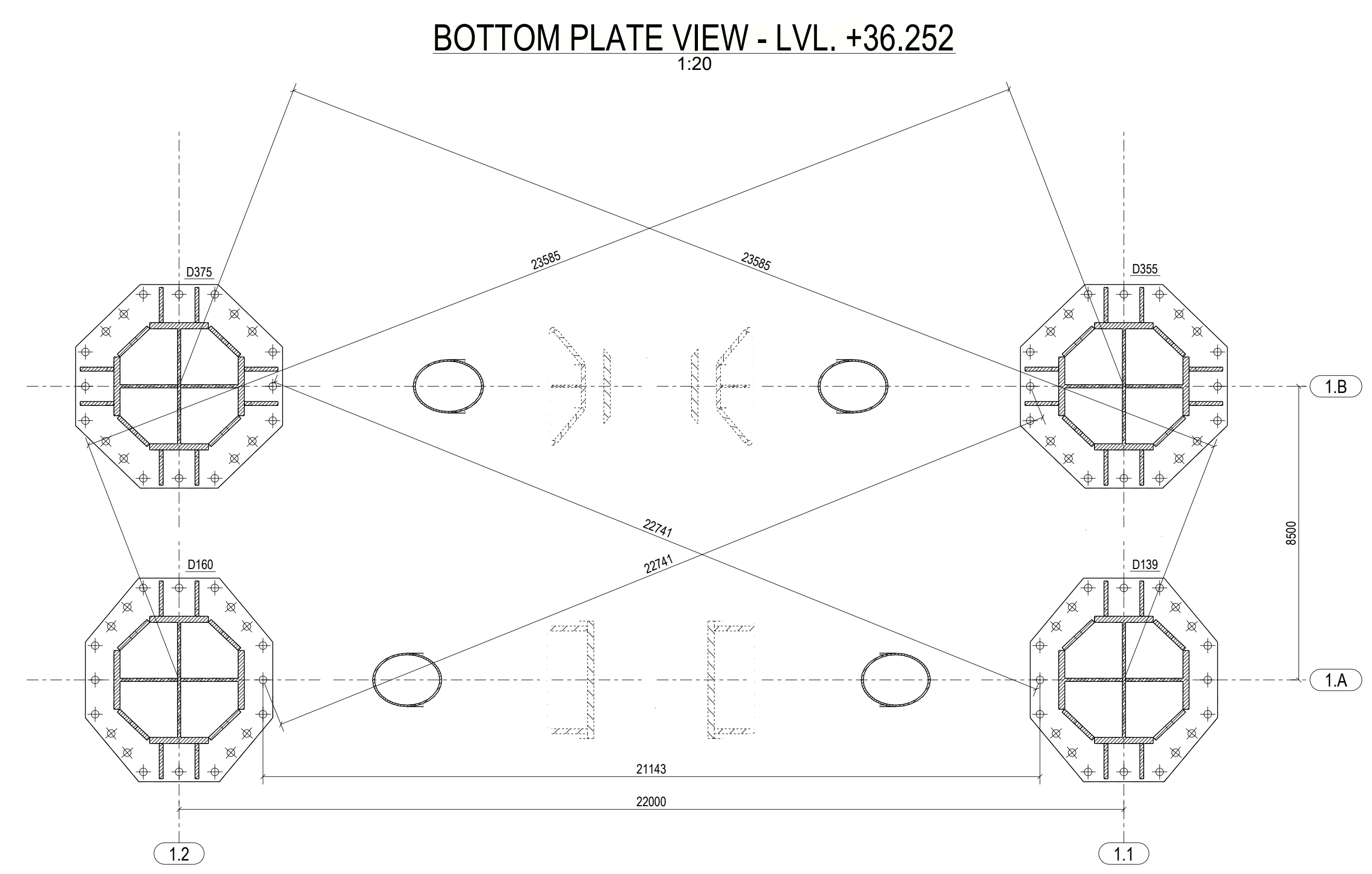
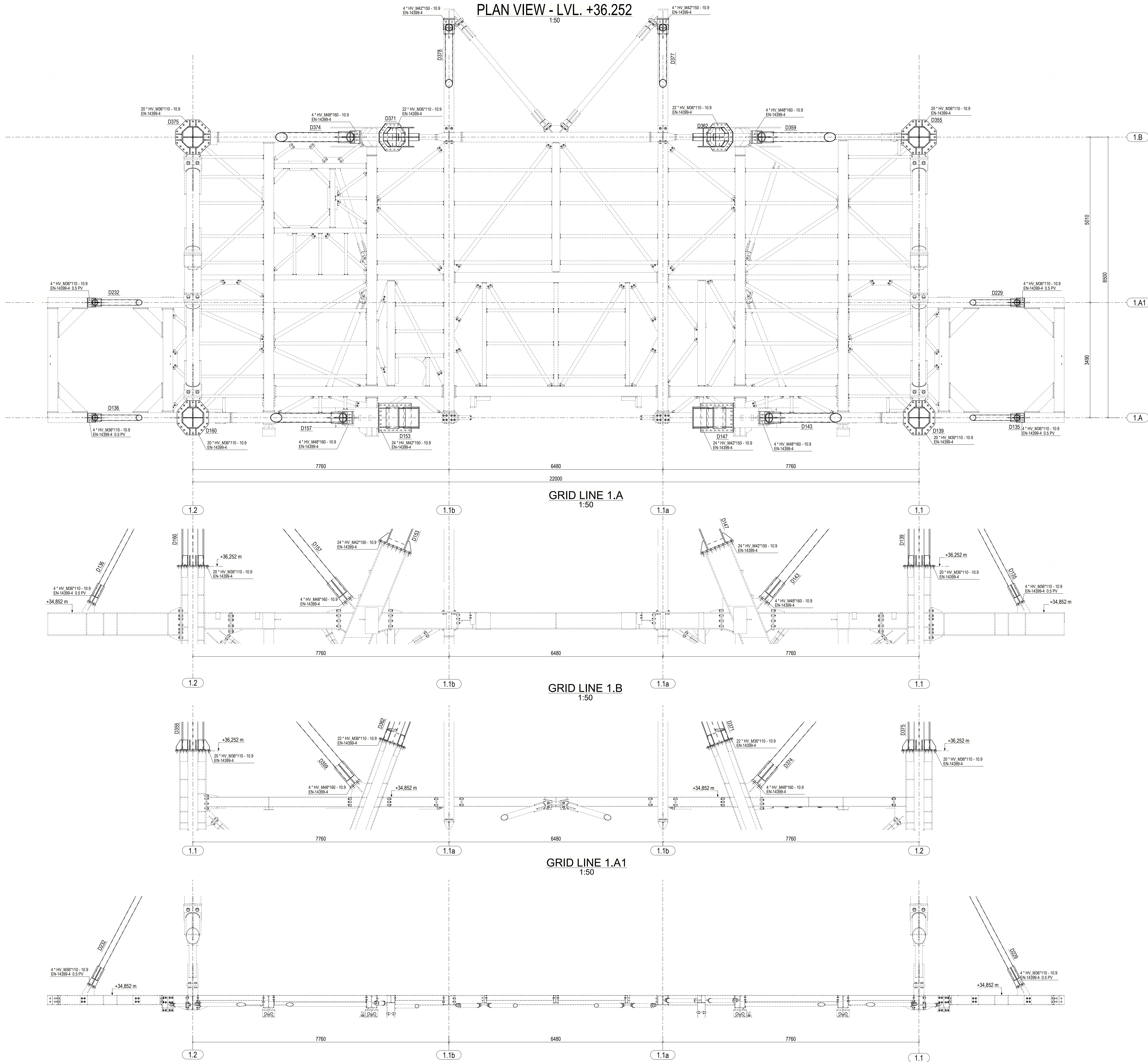




| Preload and tightening torques for 10.9 compressed connections<br>Torque method for bolts K1<br>EN 1090-2:2016 |                                                                                           |                                                    |                                        |  |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------|----------------------------------------|--|
| Screw                                                                                                          | Required preloading force<br>Approximate value<br>$F_{p,C} = 0.7 \cdot f_{t,k} \cdot A_s$ | First step<br>Torque<br>required<br>$0.75 M_{t,C}$ | Second step<br>Additional<br>rotation  |  |
|                                                                                                                | N                                                                                         | Nm                                                 | Degrees                                |  |
| M12 10.9 HV - K1                                                                                               | 99                                                                                        | $M_{t,C} = 0.125 \cdot d^3 \cdot F_{p,C}$          | According to table 7 of EN 1090-2:2016 |  |
| M16 10.9 HV - K1                                                                                               | 110                                                                                       |                                                    |                                        |  |
| M20 10.9 HV - K1                                                                                               | 172                                                                                       |                                                    |                                        |  |
| M22 10.9 HV - K1                                                                                               | 212                                                                                       |                                                    |                                        |  |
| M24 10.9 HV - K1                                                                                               | 247                                                                                       |                                                    |                                        |  |
| M27 10.9 HV - K1                                                                                               | 321                                                                                       |                                                    |                                        |  |
| M30 10.9 HV - K1                                                                                               | 393                                                                                       |                                                    |                                        |  |
| M36 10.9 HV - K1                                                                                               | 572                                                                                       |                                                    |                                        |  |
| M42 10.9 HV - K1                                                                                               | 710                                                                                       |                                                    |                                        |  |
| M48 10.9 HV - K1                                                                                               | 930                                                                                       |                                                    |                                        |  |
| M56 10.9 HV - K1                                                                                               | 1280                                                                                      |                                                    |                                        |  |

GENERAL NOTES:  
1. MATERIAL GRADES:  
- ALL PLATES WITH THICKNESS: <15mm TO BE S355J2+N, >=15mm TO BE S355J2+N-Z25, PLATES 55mm THICK TO BE S355J2+N-Z35;  
- CHS406 4x10 AND x16 TO BE S235J2H, ALL OTHER HOLLOW SECTIONS TO BE S355J2H;  
- ALL OTHER PROFILES (I/H) WITH FLANGE THICKNESS: <15 TO BE S355J2, 19-15mm TO BE S355J2+N-Z15, >19mm TO BE S355J2+N-Z25;  
- FOR BALUSTRADES: HOLLOW SECTIONS S355J2H, CONNECTIONS S355J2+N, KICK PLATES S235JR;  
- CHECKER PLATES TO BE S235JR (WITH WELDED STIFFENERS UNDERNEATH);  
2. ALL BOLTS TO COMPLY WITH EN ISO 4017 AND DIN EN 14398-4 STANDARD;  
3. CORROSION PROTECTION - STRUCTURE TO BE PAINTED:  
- RAL7002: WHOLE MAIN STRUCTURE (INCLUDING HOIST RAILS), STAIRS, LADDERS AND FLOOR COVERING;  
- RAL1034: BALUSTRADES;  
4. SELECTION OF EXECUTION CLASS:  
- CONSEQUENCE CLASS: CC2 (EN 1990:2023 4.3);  
- TYPE OF LOADING: SEISMIC, DC2 (EN 1996-1-1:2024);  
- EXECUTION CLASS: EXC2 (EN 1993-1-1:2022 TABLE A.1);  
5. ALL PLATFORM LEVELS DONOTES TOS LEVELS (NOT FFL);  
6. ABBREVIATIONS:  
- FFL - FINISH FLOOR LEVEL  
- TOS - TOP OF STEEL  
- U.N.O. - UNLESS NOTED OTHERWISE