



ICC-ES Listing Report ESL-1584

Reissued January 2025

This listing is subject to renewal in January 2026.

CSI: DIVISION: 31 00 00—EARTHWORK
Section: 31 63 00—Bored Piles

Product Certification System:

The ICC-ES product-certification system includes evaluating reports of tests of standard manufactured product, prepared by accredited testing laboratories and provided by the listee, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

Product: SGU BEAM, SGS POST, SGC ADAPTER AND SGX MODEL GROUND SCREWS

Listee: SLUTA GRÄV AB

Evaluation: The SGU Beam, SGS Post and SGC Adapter Ground Screws consist of a tubular steel shaft, with one end formed into a cone, with a single continuous helical-shaped screw thread, extending along the entirety of the coned-tip up on to the shaft. The top of the shaft comes with a factory-welded bracket with predrilled holes. The SGX model ground screws come in three pieces as shown in Figures 6, 7 and 8 which are bolted together. The shaft and brackets described in Table 1 are made from structural steel complying with either GB/T 700 Q235B or ISO 630 Grade Fe 360A. See Figures 1 through 8 of this listing report for additional product information. The ground screws described in Figures 1 through 5 as described in this listing report were evaluated based on axial compression and axial tension testing of the full-size ground screws using test equipment complying with the following standard:

- ISO 7500-1: 2018 Metallic Materials – Calibration and Verification of Static Uniaxial Testing Machines, Part 1: Tension/Compression Testing Machines, ISO International Standard

Findings: The ultimate axial tension and ultimate axial compression load values for the SGU Beam, SGS Post and SGC Adapter Ground Screws, are shown in Tables 2 and 3 of this listing report.

Identification:

1. The ICC-ES mark of conformity, electronic labeling, or the listing report number (ICC-ES ESL-1584), and when applicable, the ICC-ES Listing Mark, along with the name, registered trademark, or registered logo of the listee must be included in the product label.
2. In addition, packaging of the SGU Beam, SGS Post, SGC Adapter and SGX Model Ground Screws carry a label indicating the manufacturer's address, and the product name.
3. The report holder's contact information is the following:

SLUTA GRÄV AB
GRUSTAGSGATAN 1C
HELSINGBORG, 25465
SWEDEN
010-110 34 02
info@stopdigging-groundscrew.com

Installation: The product must be installed in accordance with the Sluta Grav AB published installation instructions and applicable codes.

Conditions of listing:

1. The listing addresses only conformance with the standards and code sections noted above.
2. Approval of the product's use is the sole responsibility of the local code official.
3. The listing applies only to the materials tested and as submitted for review by ICC-ES.
4. The ultimate load capacity values reported in Table 2 and 3 are not intended to be used as design values. Design values based on a safety factor may be established by the registered design professional and approved by the authority having jurisdiction.
5. Installation of ground screws to supported structural elements and soil are outside the scope of this listing report.
6. Sluta Grav AB ground screws as described in this listing report are manufactured under a quality control program with inspections by ICC-ES.

TABLE 1 – GROUND SCREW MODELS

GROUND SCREW MODEL	CORRESPONDING FIGURE
SGU Beam Screw 68x765	See Figure 1
SGS Post Screw 95x935	See Figure 2
SGC Adapter Screw 76x865	See Figure 3
SGC Adapter Screw 76x1200	See Figure 4
SGC Adapter Screw 76x1600	See Figure 5
SGX Head 76 M20 ¹	See Figure 6
SGX Ext 76x1000 ¹	See Figure 7
SGX Tip 76x2000 ¹	See Figure 8

For **Imperial**: 1 mm = 0.0394 inch

¹SGX models have not been tested for axial tension or compression load capacities.

TABLE 2 – GROUND SCREW ULTIMATE AXIAL TENSION LOAD CAPACITY¹

GROUND SCREW MODELS	QUANTITY AND SIZE OF BOLT/SCREWS USED TO ATTACH BRACKET TO TIMBER SUPPORT	ULTIMATE LOAD (kN)
SGU 68x765	Six (6) M10 by 90 mm Coach Screws	32.2
SGU 68x765	Three (3) M10 Standard Engineering Through Bolts with matching nuts	67.4
SGU 68x765	Five (5) M10 Standard Engineering Through Bolts with matching nuts	61.8
SGS 95x935	Three (3) M10 Standard Engineering Through Bolts with matching nuts	50.7
SGS 95x935	Three (3) M10 Standard Engineering Through Bolts with matching nuts	55.8
SGC 76x865, 76x1200, 76x1600	Four (4) M12 Standard Engineering Through Bolts with matching nuts	75.5

For **Imperial**: 1 mm = 0.0394 inch, 1 kN = 224.8 lbf

¹Tabulated ultimate load values based on testing of full-size ground screws. The top of the ground screws (bracket) is fastened to a timber member as indicated in the table. The bottom of the ground screw (tip) is clamped to the test fixture.

TABLE 3 – GROUND SCREW ULTIMATE AXIAL COMPRESSION LOAD CAPACITY¹

GROUND SCREW MODEL	GROUND SCREW UNSUPPORTED LENGTH (MM)	ULTIMATE LOAD (kN)
SGC 76x865	865	212.5

For **Imperial**: 1 mm = 0.0394 inch, 1 kN = 224.8 lbf

¹Tabulated ultimate load values based on testing of full-size ground screws. The top of the ground screws (bracket) is bearing on test fixture. The bottom of the ground screw (tip) is clamped to the test fixture.

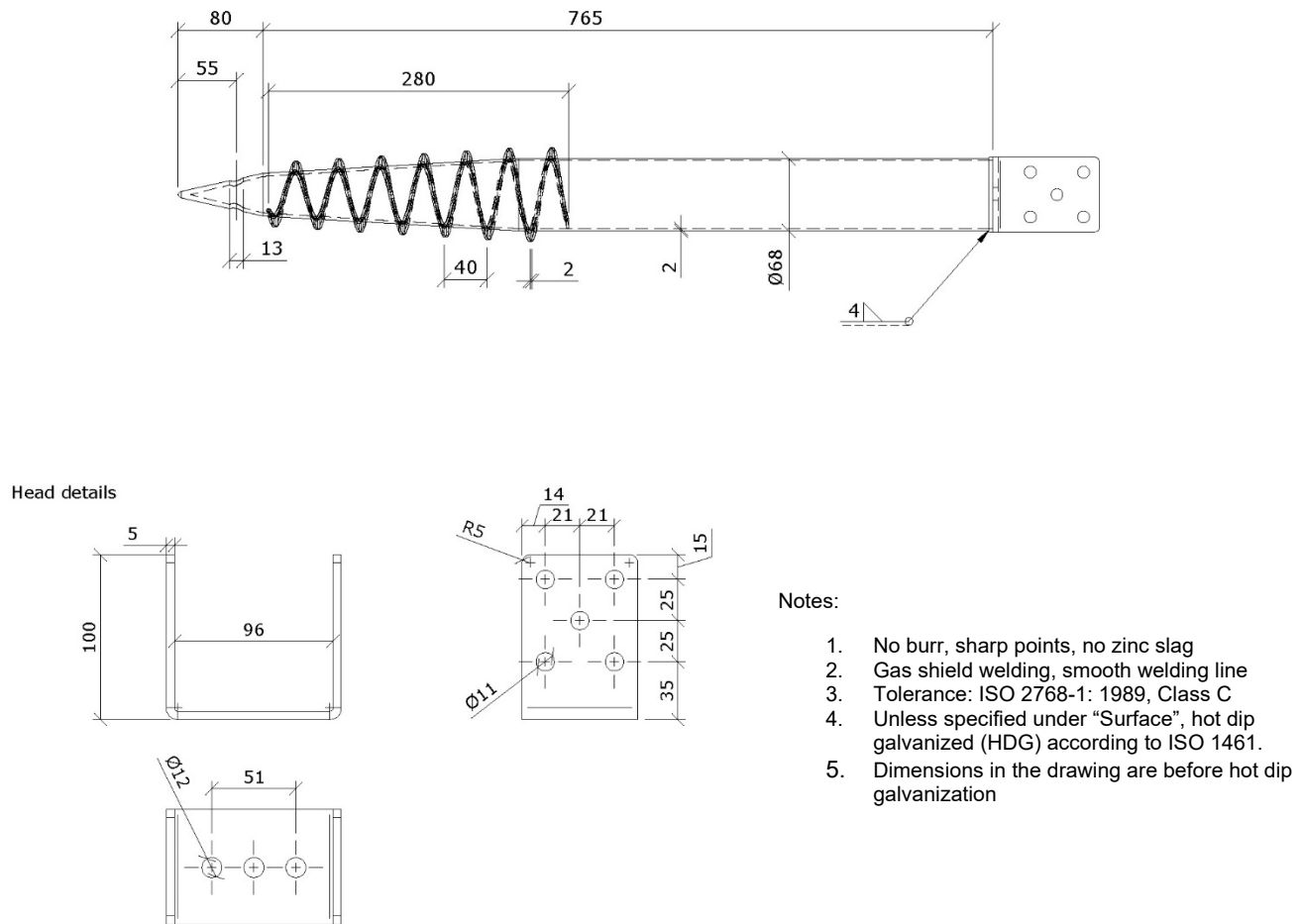
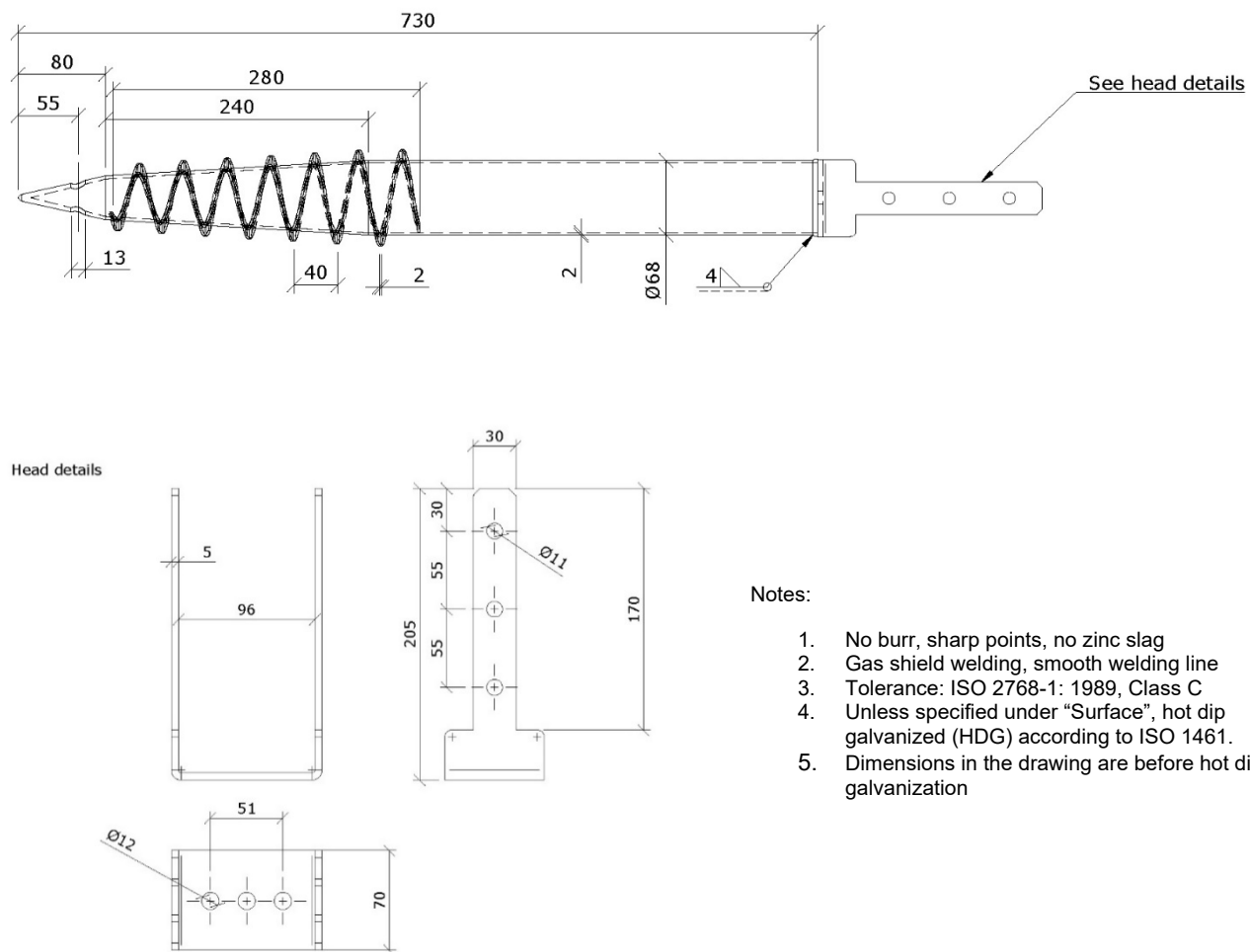


FIGURE 1. SGU 68x765 H95x100 v4 (dimensions shown in millimeters)



Notes:

1. No burr, sharp points, no zinc slag
2. Gas shield welding, smooth welding line
3. Tolerance: ISO 2768-1: 1989, Class C
4. Unless specified under "Surface", hot dip galvanized (HDG) according to ISO 1461.
5. Dimensions in the drawing are before hot dip galvanization

FIGURE 2. SGS 95x935 v2 (dimensions shown in millimeters)

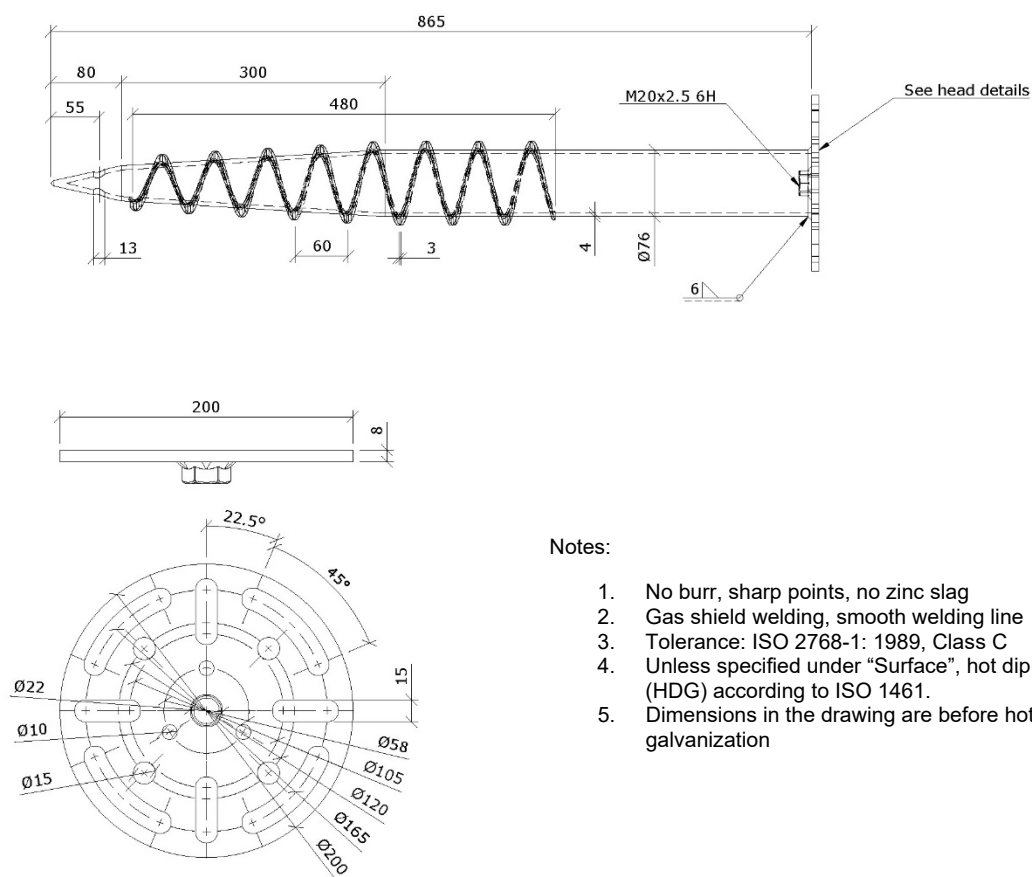
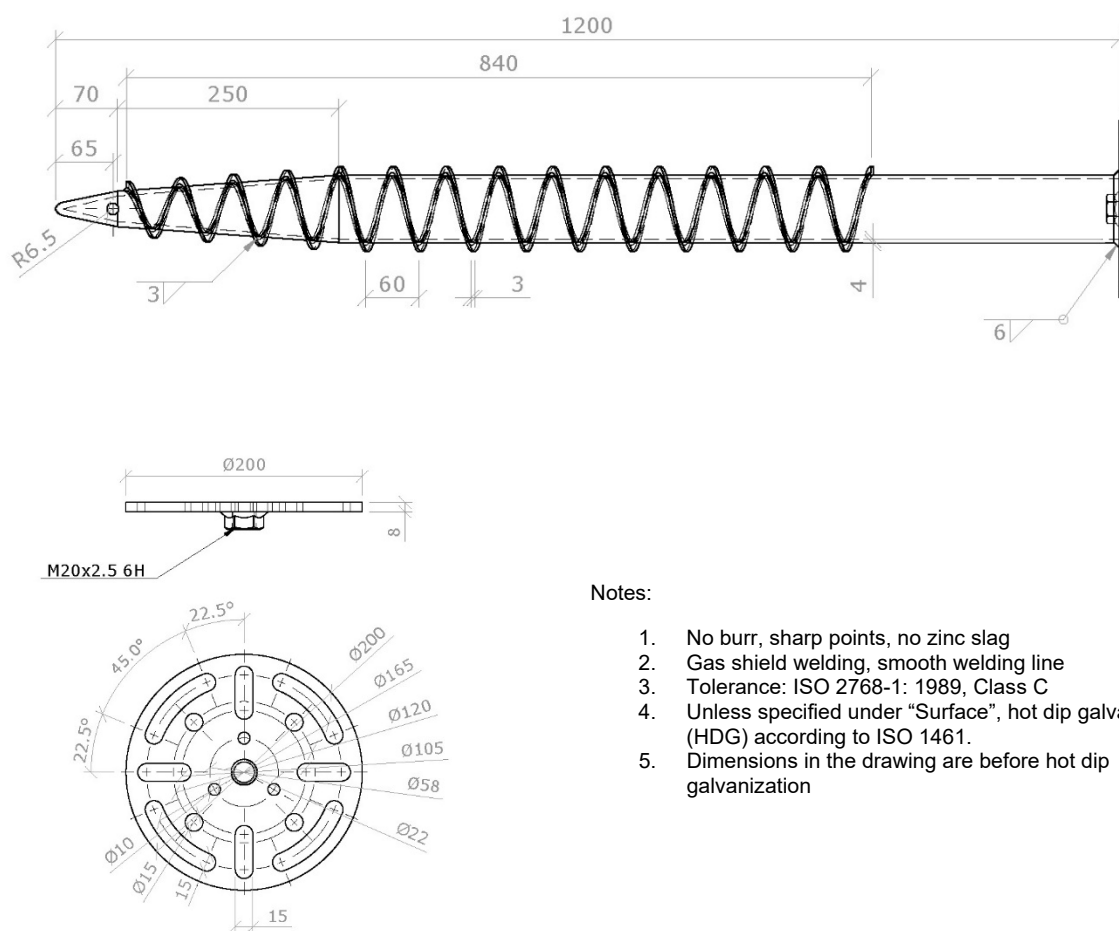


FIGURE 3. SGC 76x865 H200 v7 (dimensions shown in millimeters)



Notes:

1. No burr, sharp points, no zinc slag
2. Gas shield welding, smooth welding line
3. Tolerance: ISO 2768-1: 1989, Class C
4. Unless specified under "Surface", hot dip galvanized (HDG) according to ISO 1461.
5. Dimensions in the drawing are before hot dip galvanization

FIGURE 4. SGC 76x1200 H200 v8 (dimensions shown in millimeters)

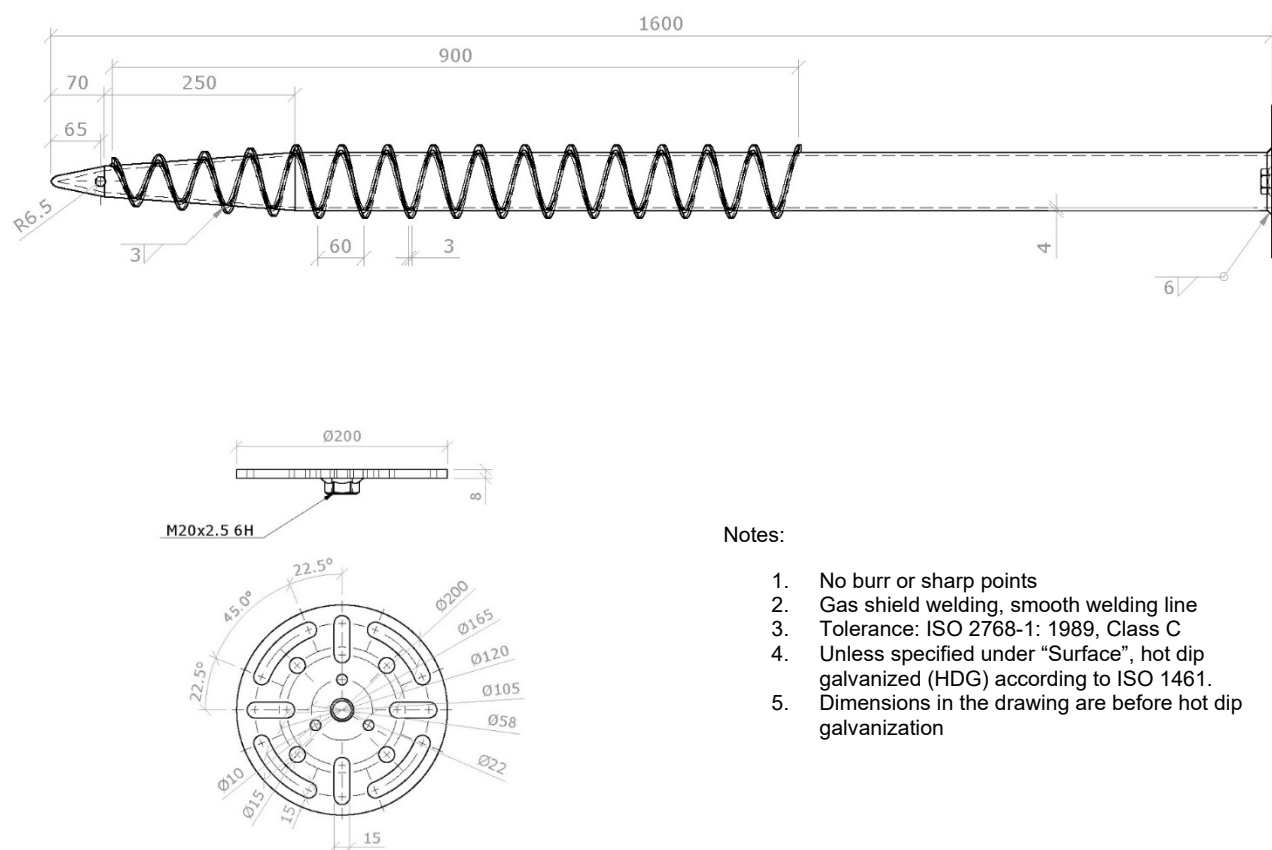
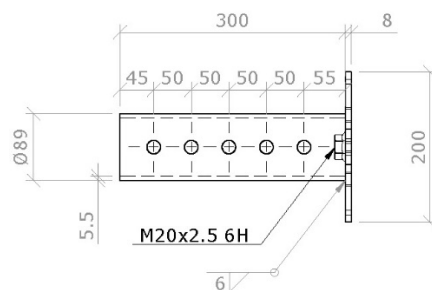
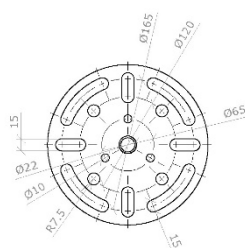


FIGURE 5. SGC 76x1600 H200 v8 (dimensions shown in millimeters)



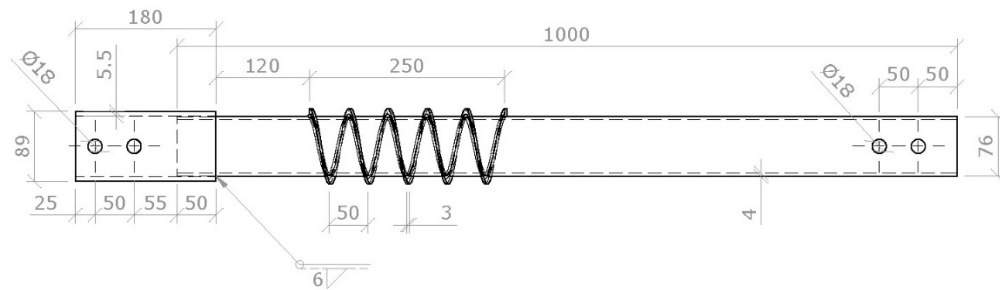
Head details
1:4



Notes:

1. No burr or sharp points
2. Gas shield welding, smooth welding line
3. Tolerance: ISO 2768-1: 1989, Class C
4. Unless specified under "Surface", hot dip galvanized (HDG) according to ISO 1461.
5. Dimensions in the drawing are before hot dip galvanization

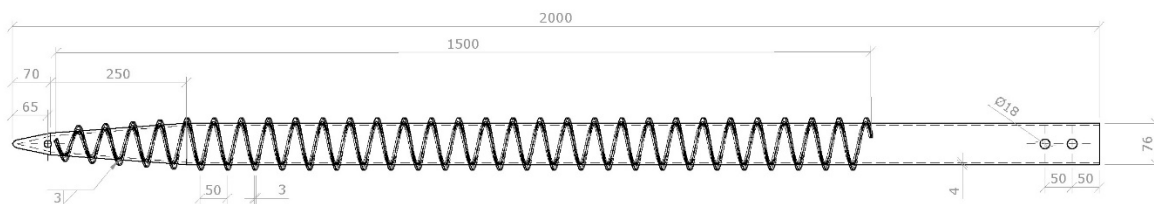
FIGURE 6. SGX Head 76 M20 v7 (dimensions shown in millimeters)



Notes:

1. No burr or sharp points
2. Gas shield welding, smooth welding line
3. Tolerance: ISO 2768-1: 1989, Class C
4. Unless specified under "Surface", hot dip galvanized (HDG) according to ISO 1461.
5. Dimensions in the drawing are before hot dip galvanization

FIGURE 7. SGX Ext 76x1000 v4 (dimensions shown in millimeters)



Notes:

1. No burr or sharp points
2. Gas shield welding, smooth welding line
3. Tolerance: ISO 2768-1: 1989, Class C
4. Unless specified under "Surface", hot dip galvanized (HDG) according to ISO 1461.
5. Dimensions in the drawing are before hot dip galvanization

FIGURE 8. SGX Tip 76x2000 v3 (dimensions shown in millimeters)