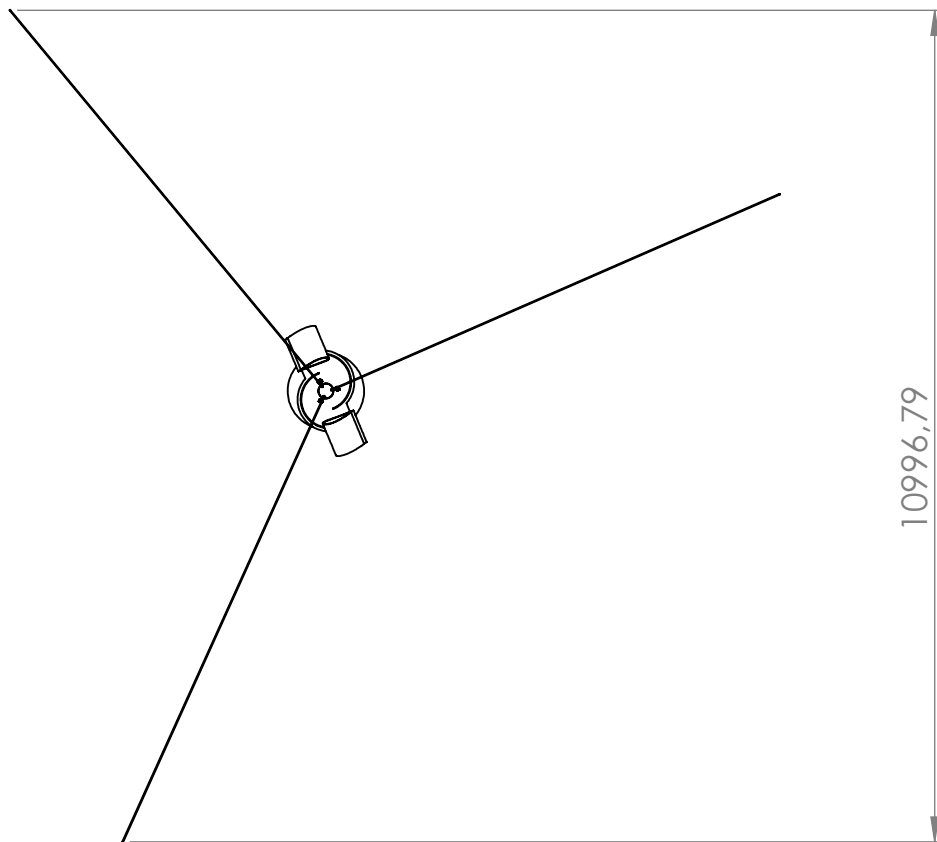
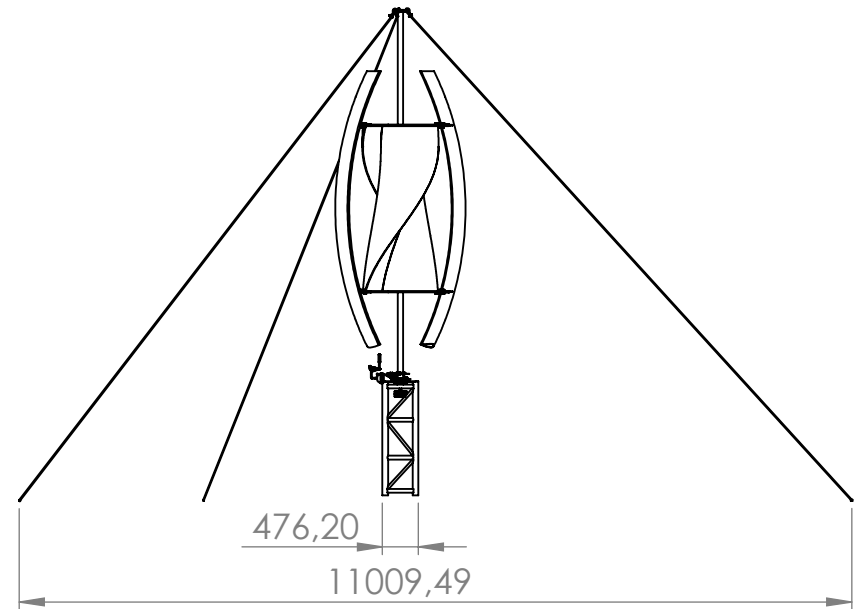
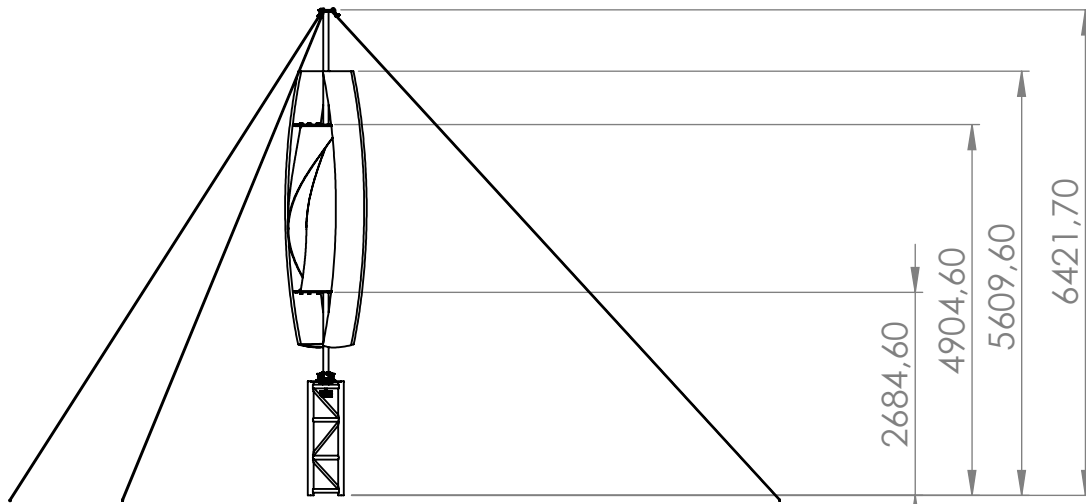
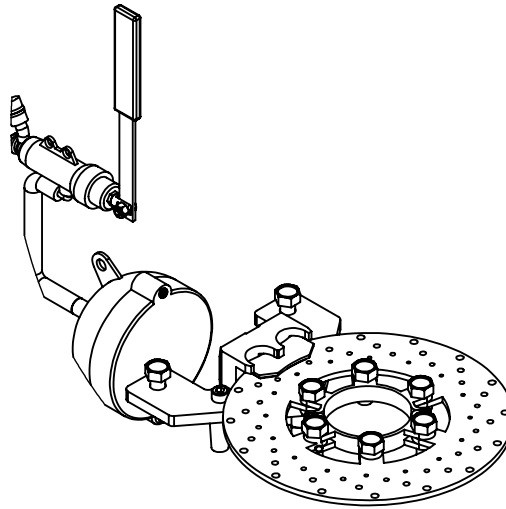
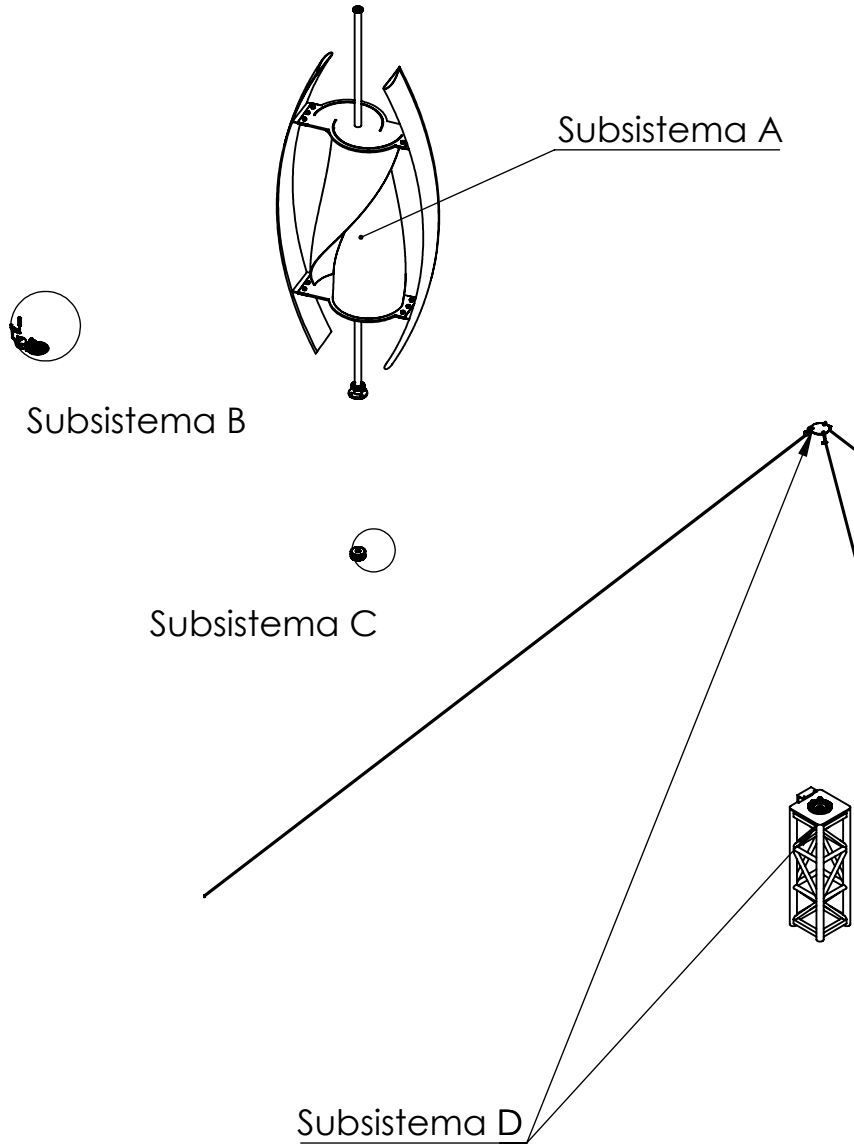


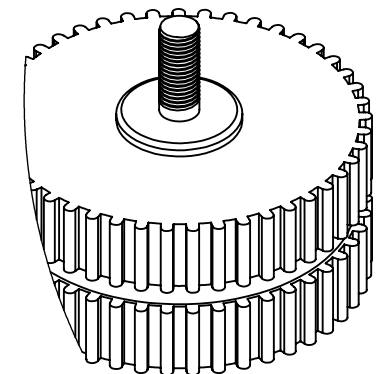
| | | | |
|---|---|--|-------------------|
|  |  | <p style="text-align: center;">UNIVERSIDAD INDUSTRIAL DE SANTANDER</p> | |
| <p>FECHA: 31/08/2023</p> | <p>TITULO:</p> | | |
| <p>ESCALA: 1:60</p> | <p style="text-align: center;">TURBINA EOLICA DE DOBLE HELICE</p> | | |
| <p>UNIDADES: mm</p> | <p>AUTOR: DIEGO ALEJANDRO CASAS JIMENEZ</p> | | |
| <p>A4</p> |  | <p>REVIS: ING. RICARDO A. JAIMES ROLON</p> | <p>HOJA: 1/12</p> |



| | | | |
|---|---|--|------------|
|   | | UNIVERSIDAD INDUSTRIAL DE SANTANDER | |
| FECHA: 06/08/2023 | | TITULO: | |
| ESCALA: 1:100 | | TURBINA EOLICA DE DOBLE HELICE | |
| UNIDADES: mm | | AUTOR: DIEGO ALEJANDRO CASAS JIMENEZ | |
| A4 |  | REVIS: ING. RICARDO A. JAIMES ROLON | HOJA: 2/12 |



DETALLE Subsistema B
ESCALA 1 : 6



DETALLE Subsistema C
ESCALA 1 : 3

| SUBSISTEMAS | CONJUNTO | CODIGO CONJUNTO |
|--------------|-----------|-----------------|
| Subsistema A | Helices | TEDH-A-.XXX |
| Subsistema B | Frenado | TEDH-B-.XXX |
| Subsistema C | Generador | TEDH-C-.XXX |
| Subsistema D | Soperte | TEDH-D-.XXX |



UNIVERSIDAD INDUSTRIAL DE SANTANDER

FECHA: 06/08/2023

TITULO:

ESCALA: 1:80

TURBINA EOLICA DE DOBLE HELICE

UNIDADES: mm

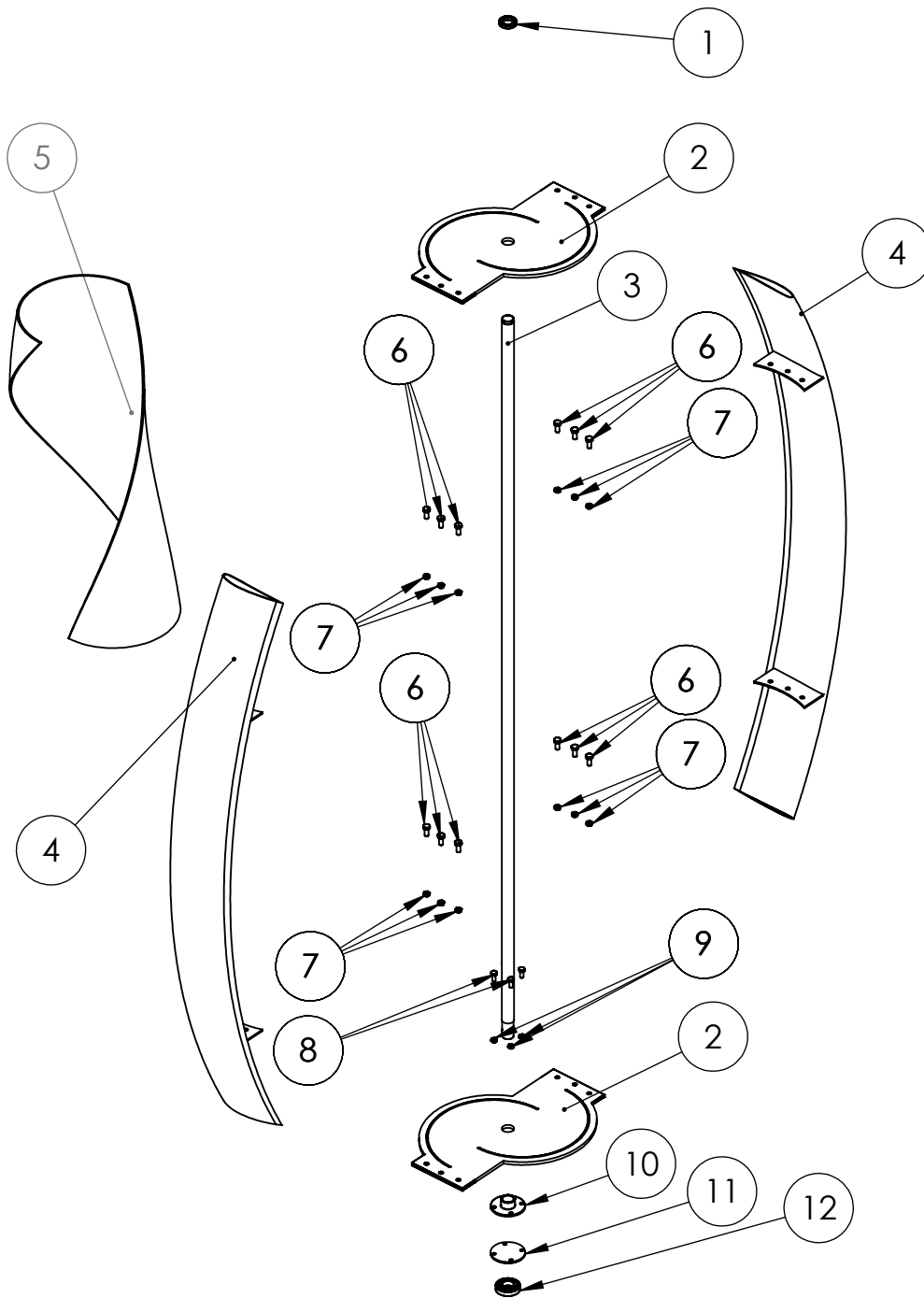
AUTOR: DIEGO ALEJANDRO CASAS JIMENEZ

A4



REVIS: ING. RICARDO A. JAIMES ROLON

HOJA: 3/12



SUBSISTEMA DE HELICES

| COMPONENTE N° | NOMBRE | CODIGO | CANTIDAD |
|---------------|-------------------------------------|-------------|----------|
| 1 | Rodamiento SKF_6013 | TEDH-A-.001 | 1 |
| 2 | Tapa de soporte de helices | TEDH-A-.002 | 2 |
| 3 | Eje principal | TEDH-A-.003 | 1 |
| 4 | Helice tipo Troposkien | TEDH-A-.004 | 2 |
| 5 | Helice tipo Helicoidal | TEDH-A-.005 | 2 |
| 6 | Tornillo HHFBOLD 0.875-14x2x2 | TEDH-A-.006 | 12 |
| 7 | Tuerca HJNUT 0.875-14-B | TEDH-A-.007 | 12 |
| 8 | Tornillo HHFBOLD 0.75-16x1.75x1.375 | TEDH-A-.008 | 4 |
| 9 | Tuerca HHJNUT 0.75-16-B | TEDH-A-.009 | 4 |
| 10 | Acople superior de eje | TEDH-A-.010 | 1 |
| 11 | Acople inferior de eje | TEDH-A-.011 | 1 |
| 12 | Rodamiento SKF_30313 | TEDH-A-.012 | 1 |



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FECHA: 15/08/2023

TITULO:

ESCALA: 1:40

TURBINA EOLICA DE DOBLE HELICE

UNIDADES: mm

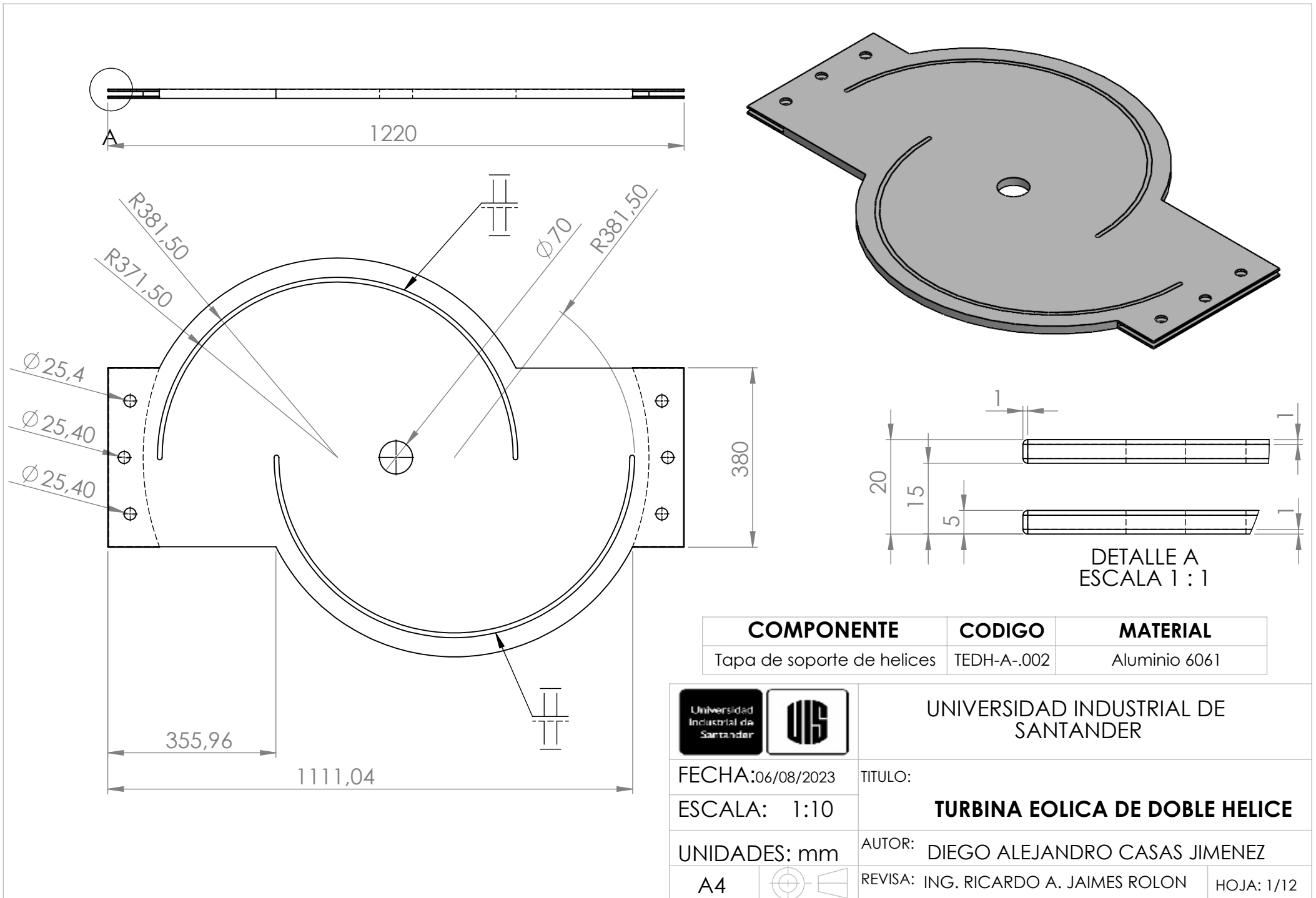
AUTOR: DIEGO ALEJANDRO CASAS JIMENEZ

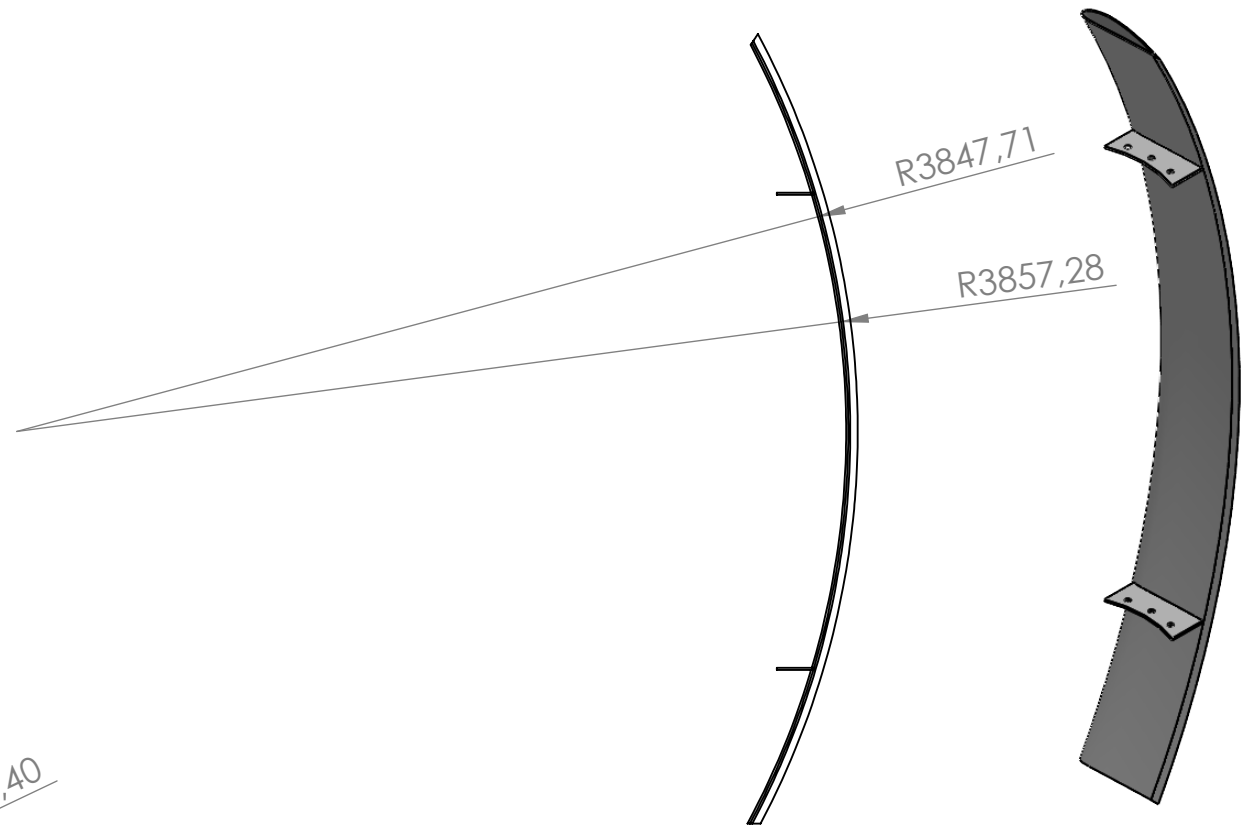
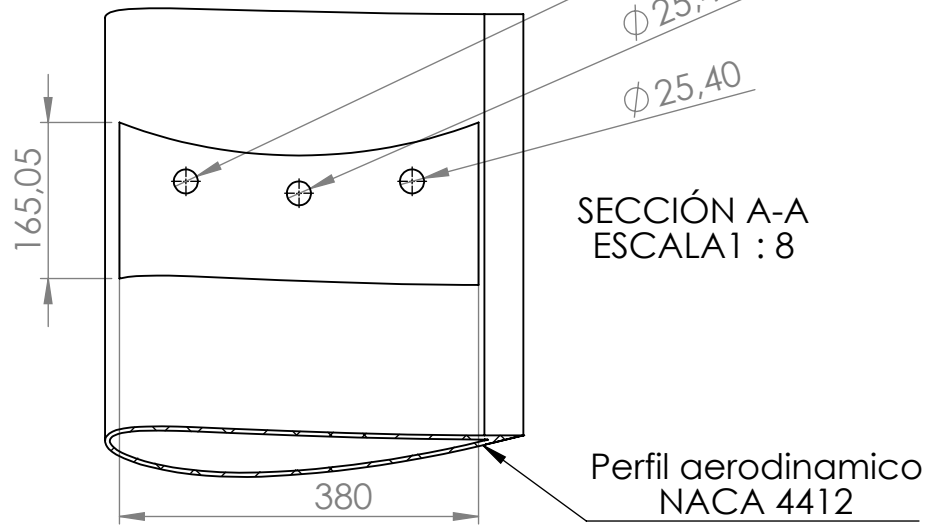
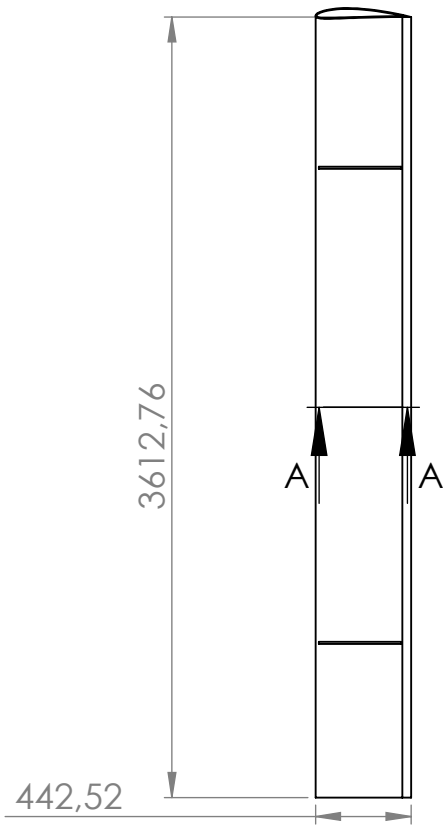
A4



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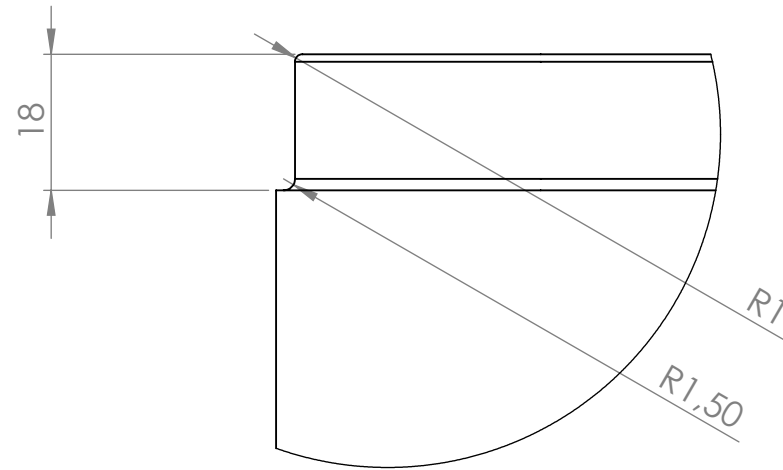
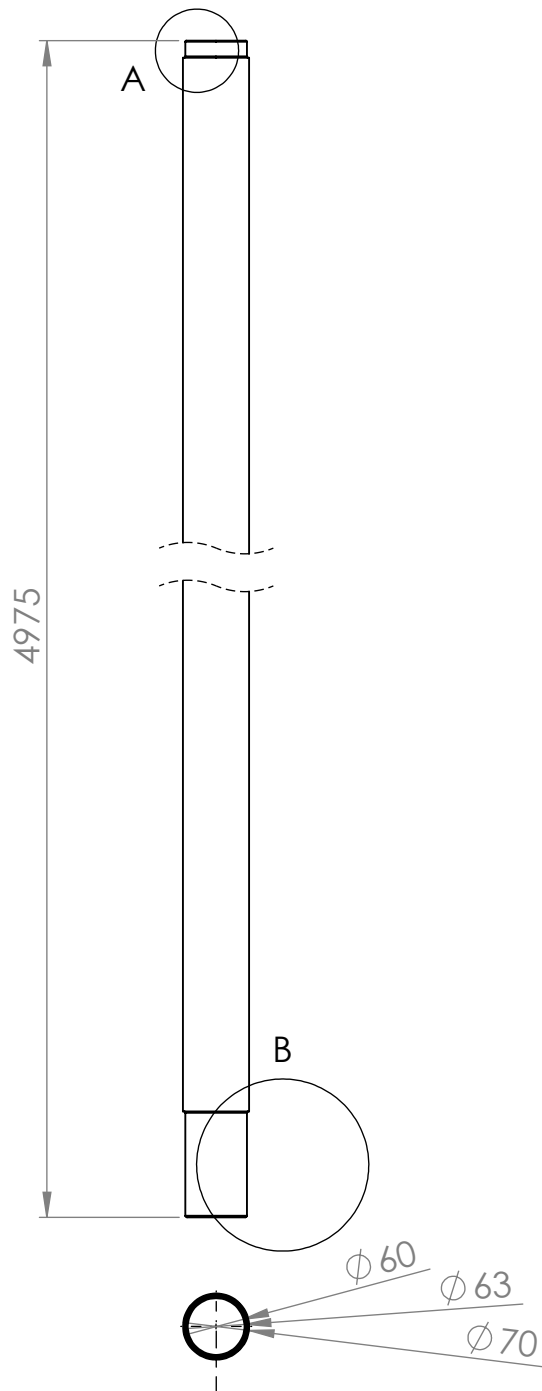
HOJA: 4/12



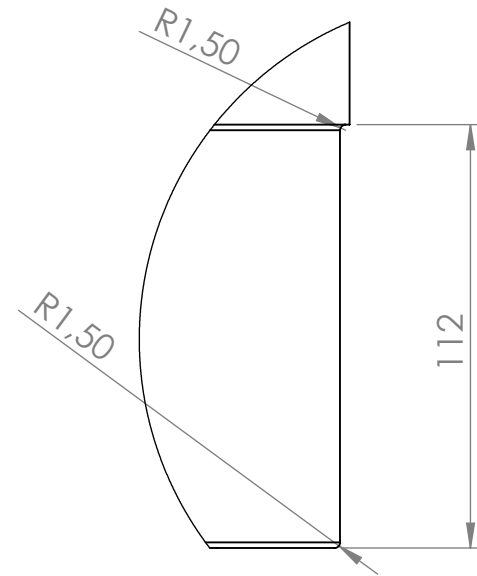


| COMPONENTE | CODIGO | MATERIAL |
|-------------------------|-------------|---------------|
| Helices tipo Troposkien | TEDH-A-.004 | Aluminio 6061 |

| | | |
|---|---|--|
|   | UNIVERSIDAD INDUSTRIAL DE SANTANDER | |
| FECHA: 06/08/2023 | TITULO: | |
| ESCALA: 1:35 | TURBINA EOLICA DE DOBLE HELICE | |
| UNIDADES: mm | AUTOR: DIEGO ALEJANDRO CASAS JIMENEZ | |
| A4 |  | REvisa: ING. RICARDO A. JAIMES ROLON HOJA: 1/12 |



DETALLE A
ESCALA 1 : 1

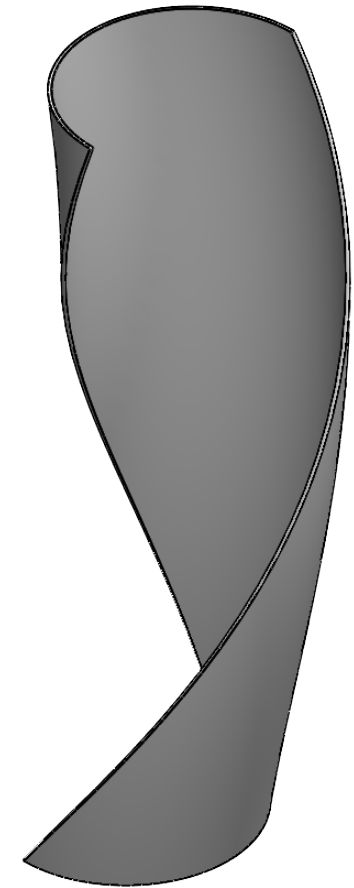
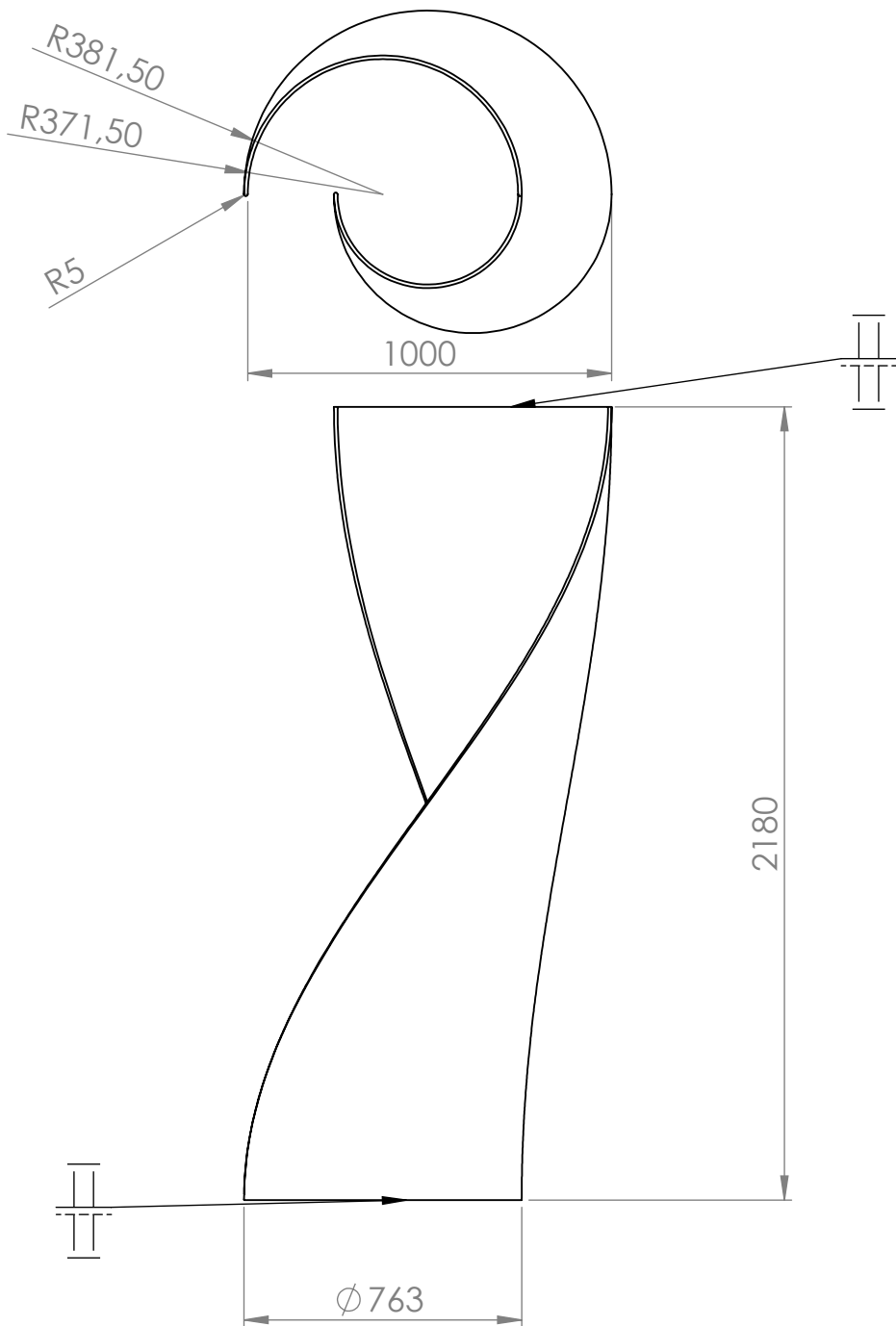


DETALLE B
ESCALA 1 : 2



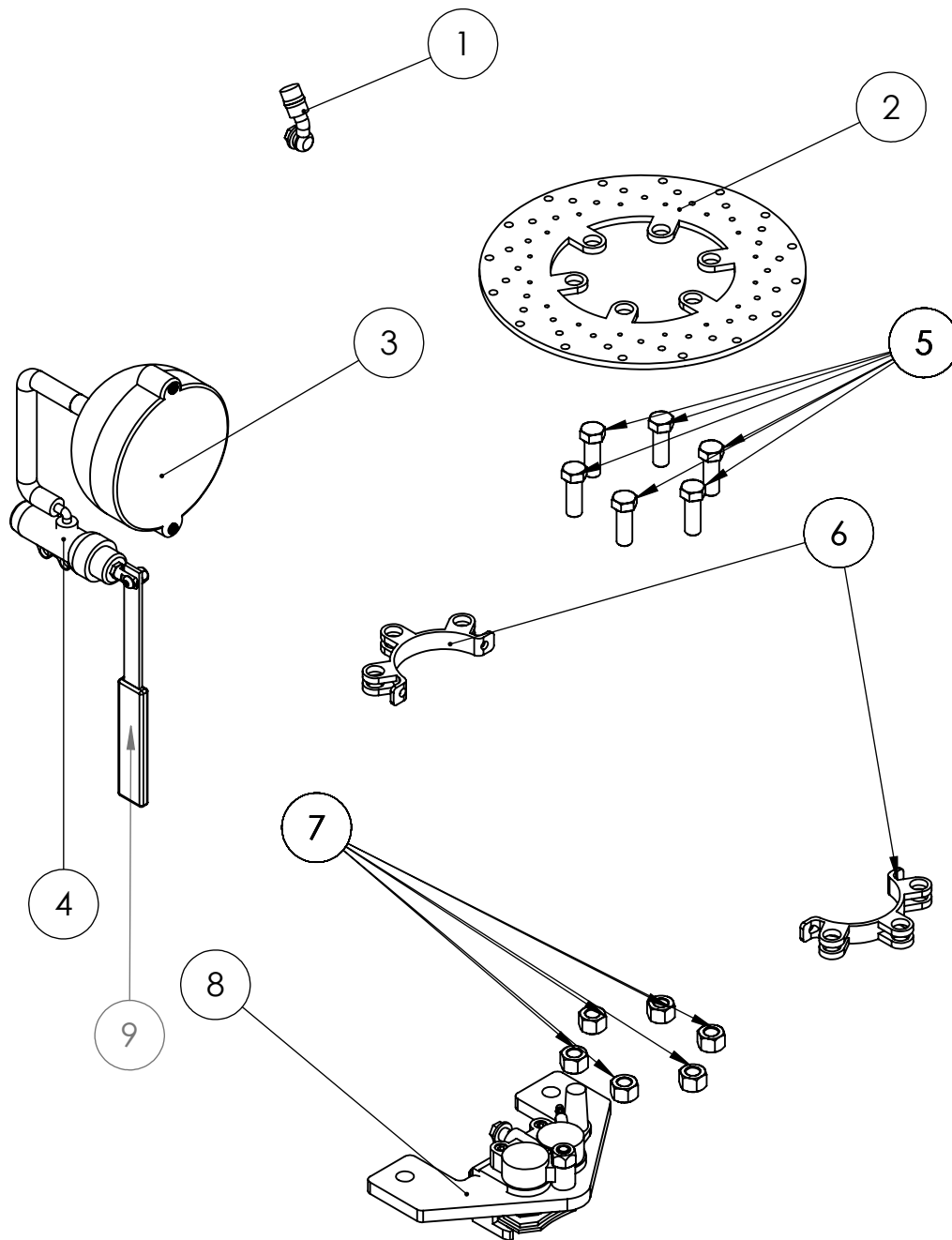
| COMPONENTE | CODIGO | MATERIAL |
|---------------|-------------|-------------------------|
| Eje principal | TEDH-A-.003 | Acero inoxidable 1.4313 |

| | | |
|---|---|--|
|   | UNIVERSIDAD INDUSTRIAL DE SANTANDER | |
| FECHA: 16/08/2023 | TITULO: | |
| ESCALA: 1:8 | TURBINA EOLICA DE DOBLE HELICE | |
| UNIDADES: mm | AUTOR: DIEGO ALEJANDRO CASAS JIMENEZ | |
| A4 |  | REvisa: ING. RICARDO A. JAIMES ROLON HOJA: 7/12 |



| COMPONENTE | CODIGO | MATERIAL |
|-------------------------|-------------|---------------|
| Helices tipo helicoidal | TEDH-A-.005 | Aluminio 6061 |

| | | |
|---|---|-------------------------------------|
|   | UNIVERSIDAD INDUSTRIAL DE SANTANDER | |
| FECHA: 16/08/2023 | TITULO: | |
| ESCALA: 1:20 | TURBINA EOLICA DE DOBLE HELICE | |
| UNIDADES: mm | AUTOR: DIEGO ALEJANDRO CASAS JIMENEZ | |
| A4 |  | REVIS: ING. RICARDO A. JAIMES ROLON |
| | | HOJA: 8/12 |



SUBSISTEMA DE FRENADO

| COMPONENTE N° | NOMBRE | CODIGO | CANTIDAD |
|---------------|-------------------------------------|-------------|----------|
| 1 | Cabezal hidraulico | TEDH-B-.001 | 1 |
| 2 | Disco de freno | TEDH-B-.002 | 1 |
| 3 | Tanque de freno | TEDH-B-.003 | 1 |
| 4 | Bomba de freno | TEDH-B-.004 | 1 |
| 5 | Tornillo HFBLOT 0.4375-20x1.75x1.75 | TEDH-B-.005 | 6 |
| 6 | Sujetador de Disco | TEDH-B-.006 | 2 |
| 7 | Tuerca HTNUT 0.4375-20 | TEDH-B-.007 | 6 |
| 8 | Caliper de freno | TEDH-B-.008 | 1 |
| 9 | Palanca de freno | TEDH-B-.009 | 1 |



UNIVERSIDAD INDUSTRIAL DE SANTANDER

FECHA: 16/08/2023

TITULO:

ESCALA: 1:5

TURBINA EOLICA DE DOBLE HELICE

UNIDADES: mm

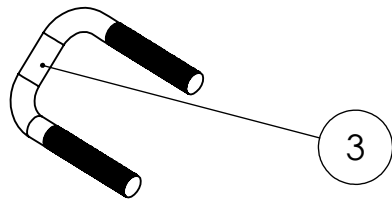
AUTOR: DIEGO ALEJANDRO CASAS JIMENEZ

A4

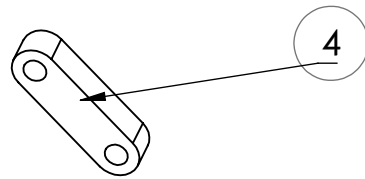


REVIS: ING. RICARDO A. JAIMES ROLON

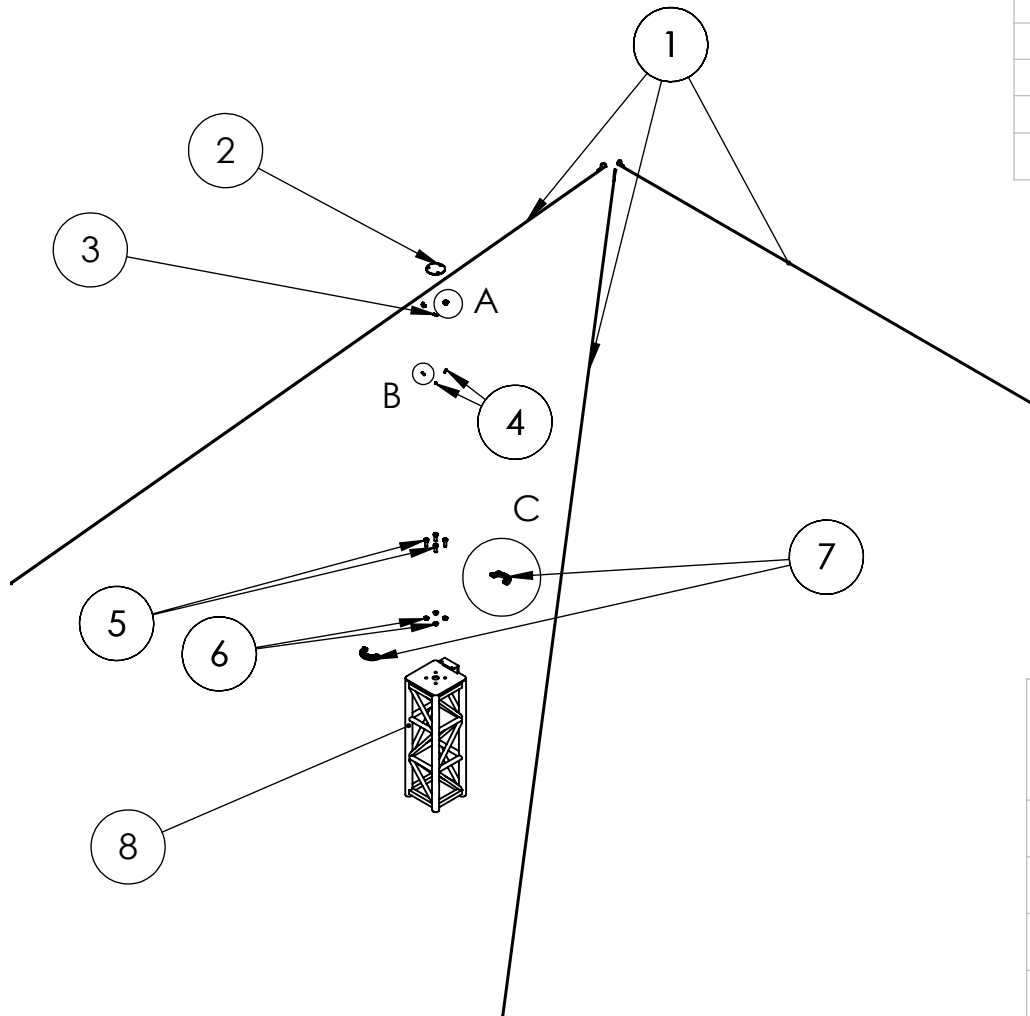
HOJA: 9/12



DETALLE A
ESCALA 1 : 2

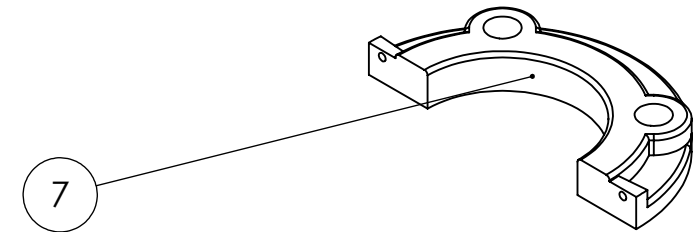


DETALLE B
ESCALA 1 : 2



SUBSISTEMA DE SOPORTE

| COMPONENTE N° | NOMBRE | CODIGO | CANTIDAD |
|---------------|---------------------------------|-------------|----------|
| 1 | Cuerdas de soporte | TEDH-D-.001 | 3 |
| 2 | Tapa superior | TEDH-D-.002 | 1 |
| 3 | Abrazadera de cuerda | TEDH-D-.003 | 3 |
| 4 | Sujetador de abrazadera | TEDH-D-.004 | 3 |
| 5 | Tornillo HHBLOT 1.0-8x2.75x1.75 | TEDH-D-.005 | 4 |
| 6 | Tuerca HHJNUT 1.0-8 | TEDH-D-.006 | 4 |
| 7 | Chumacera de Rodamiento | TEDH-D-.007 | 2 |
| 8 | Base | TEDH-D-.008 | 1 |



DETALLE C
ESCALA 1 : 5



UNIVERSIDAD INDUSTRIAL DE
SANTANDER

FECHA: 16/08/2023

TITULO:

ESCALA: 1:80

TURBINA EOLICA DE DOBLE HELICE

UNIDADES: mm

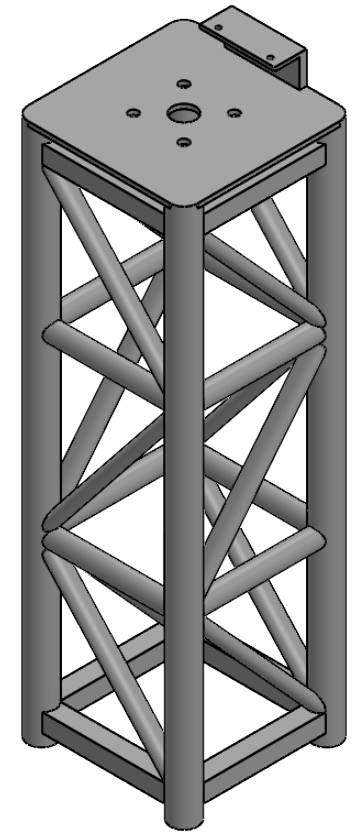
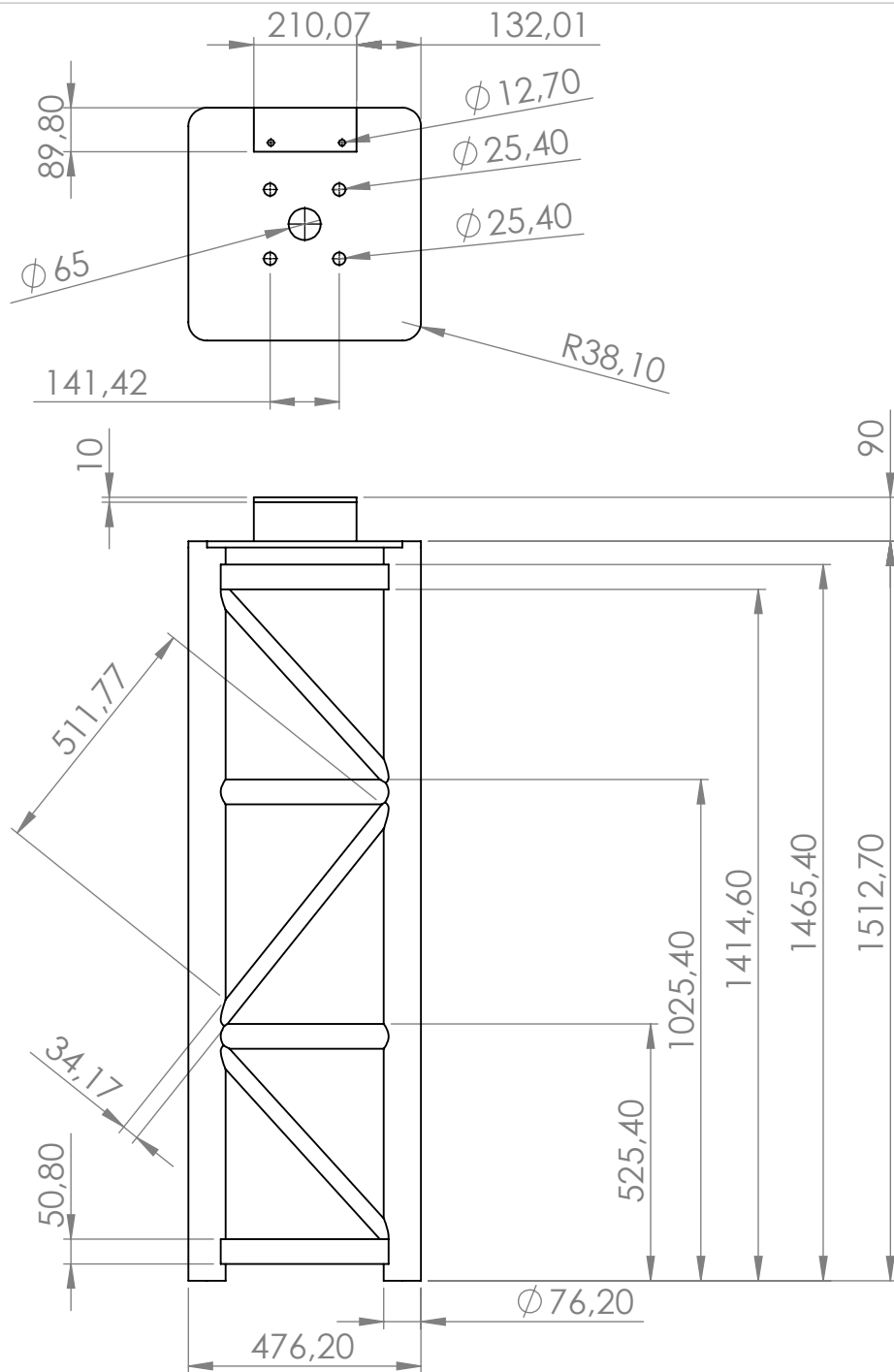
AUTOR: DIEGO ALEJANDRO CASAS JIMENEZ

A4



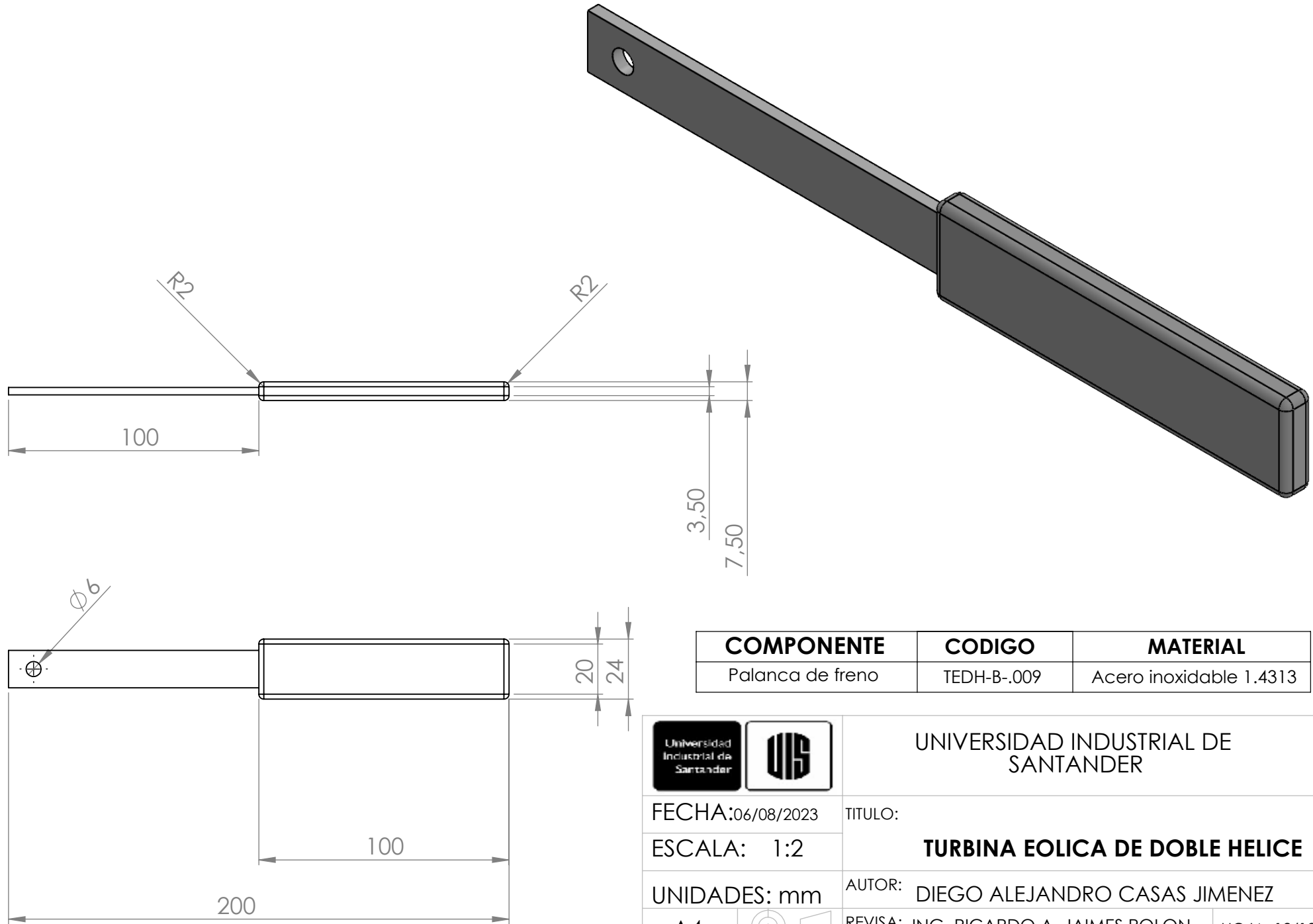
REVIS: ING. RICARDO A. JAIMES ROLON

HOJA: 10/12



| COMPONENTE | CODIGO | MATERIAL |
|------------|-------------|-------------------------|
| Base | TEDH-D-.008 | Acero inoxidable 1.4313 |

| | | |
|---|---|---|
|   | UNIVERSIDAD INDUSTRIAL DE SANTANDER | |
| FECHA: 06/08/2023 | TITULO: | |
| ESCALA: 1:15 | TURBINA EOLICA DE DOBLE HELICE | |
| UNIDADES: mm | AUTOR: DIEGO ALEJANDRO CASAS JIMENEZ | |
| A4 |  | REvisa: ING. RICARDO A. JAIMES ROLON HOJA: 11/12 |



| COMPONENTE | CODIGO | MATERIAL |
|------------------|-------------|-------------------------|
| Palanca de freno | TEDH-B-.009 | Acero inoxidable 1.4313 |

| | | |
|---|---|-------------------------------------|
|   | UNIVERSIDAD INDUSTRIAL DE SANTANDER | |
| FECHA: 06/08/2023 | TITULO: | |
| ESCALA: 1:2 | TURBINA EOLICA DE DOBLE HELICE | |
| UNIDADES: mm | AUTOR: DIEGO ALEJANDRO CASAS JIMENEZ | |
| A4 |  | REVIS: ING. RICARDO A. JAIMES ROLON |
| | | HOJA: 12/12 |