


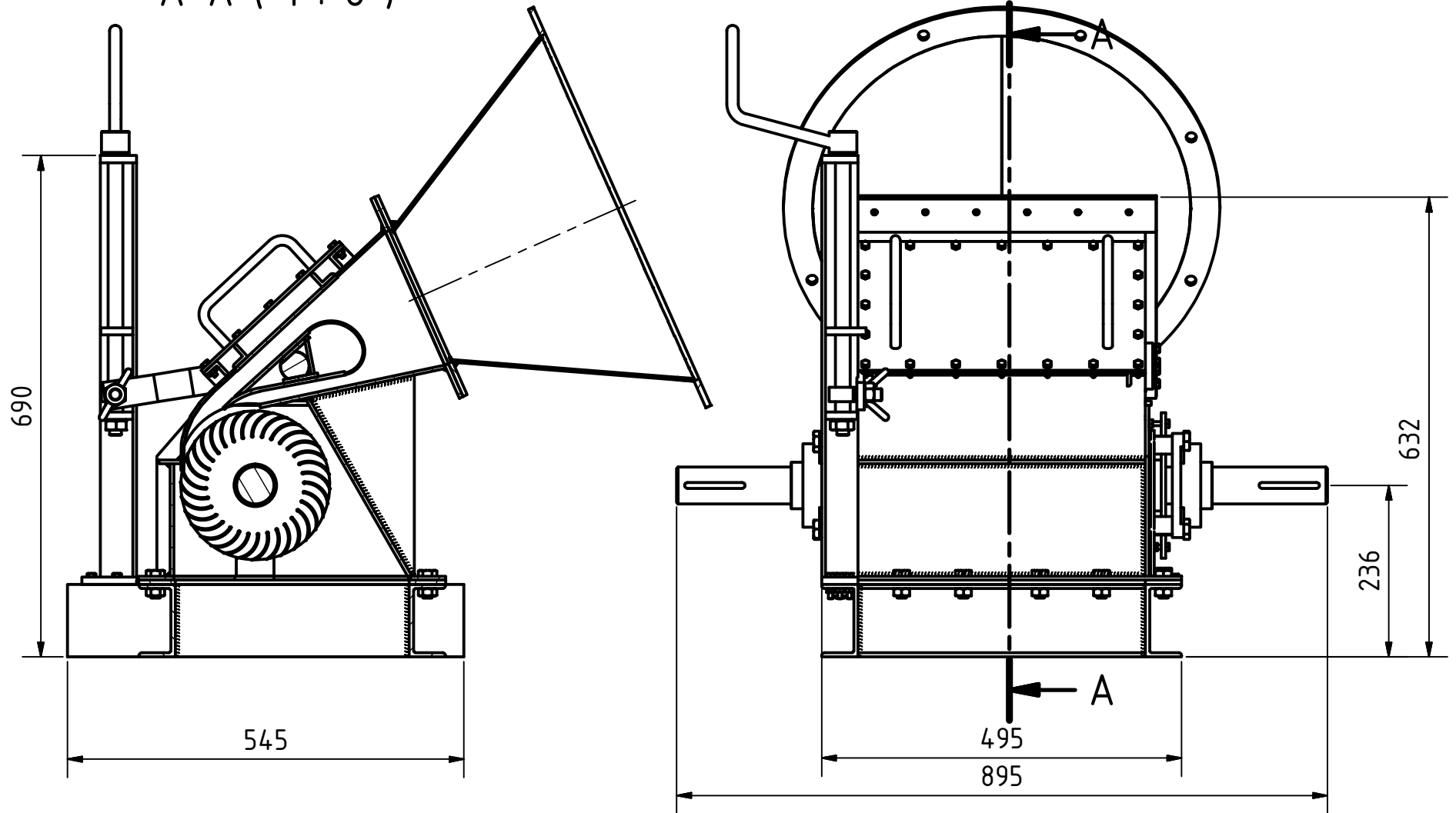



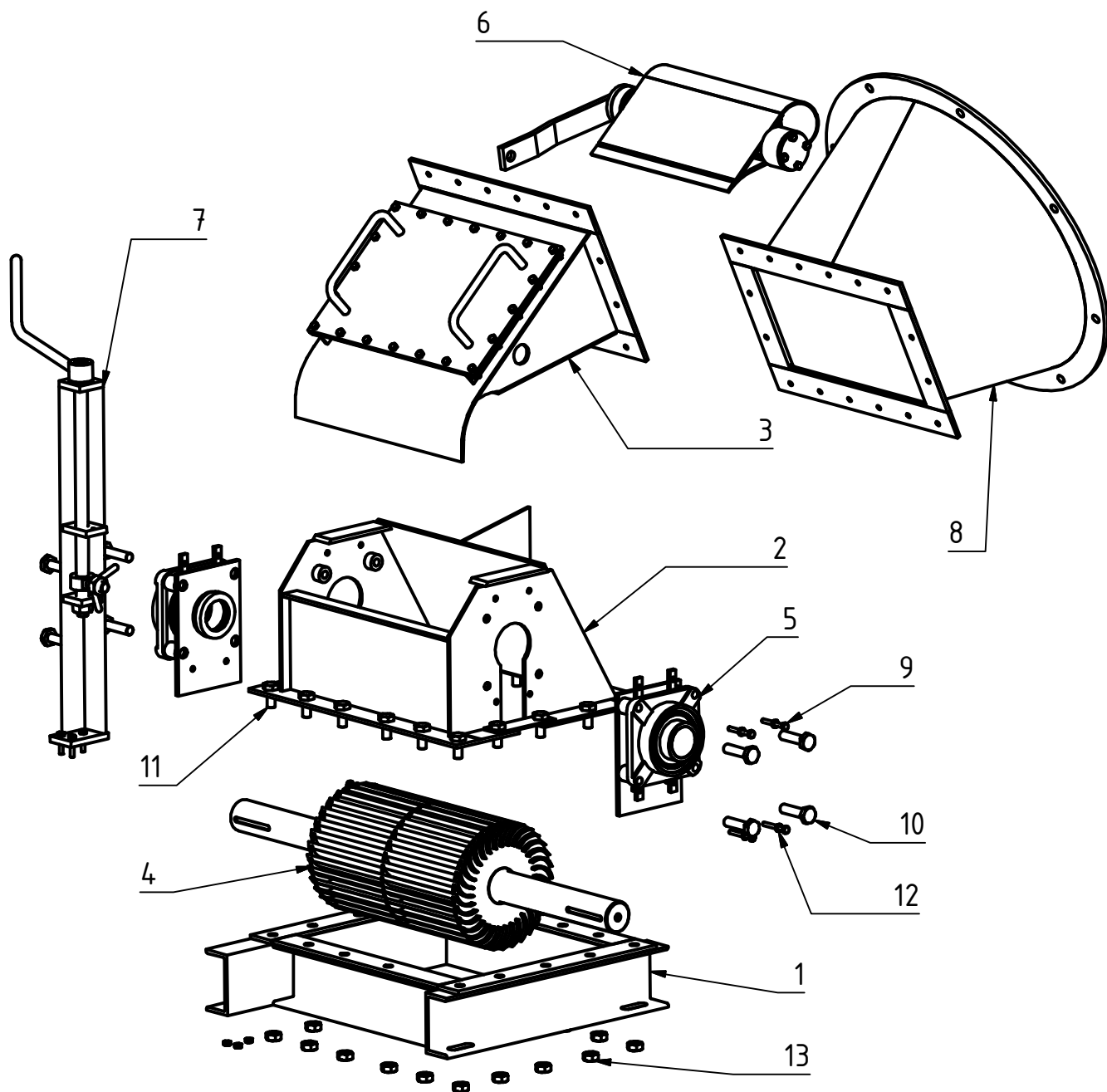






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|--|---|---|--------------|----------|-----------|
| PROJECT | | CREATED BY | APPROVED BY | DATE | VERSION |
| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Cross flow turbine | | oseg_cft_A1_Cross-flow-turbine.iam | | | A1 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  |  | ASSEMBLY | | 1 |
| | | | LICENCE | SCALE | SHEET |
| | | | CC.BY.SA 4.0 | 1:7 | 1 /90 |

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|--|--|---|--|---|--|--------------|--|-----------|--|
| PROJECT | | CREATED BY | | APPROVED BY | | DATE | | VERSION | |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Cross flow turbine | | oseg_cft_A1_Cross-flow-turbine.iam | | | | | | A1 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  STIFTUNG | | ASSEMBLY | | | |
| | | | | | | LICENCE | | SCALE | |
| | | | | | | CC.BY.SA 4.0 | | 1:8 | |
| | | | | | | | | QUANTITY | |
| | | | | | | | | 1 | |
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|---|---|---|---------------------|----------|-----------|
| PROJECT | | CREATED BY | APPROVED BY | DATE | VERSION |
| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Cross-flow-turbine | | oseg_cft_A1_Cross-flow-turbine.ipn | | | A2 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  OPEN SOURCE ECOLOGY GERMANY |   | ASSEMBLY LICENCE | | 1 |
| | OSEG | | CC.BY.SA 4.0 | SCALE | SHEET |
| | | | | 1:10 | 3 /90 |




| PART LIST | | | | | | | |
|-----------|------------|-----|----------------------------|--|------------|----------------------------|-------|
| POS | POS.OLD | QTY | PART NAME | FILE NAME | PART TYPE | SPECIFICATIONS | SHEET |
| A1 | T3 | 1 | Cross flow turbine | oseg_cft_A1_Cross-flow-turbine.iam | | | 1 |
| A1 | T3 | 1 | Cross flow turbine | oseg_cft_A1_Cross-flow-turbine.iam | | | 2 |
| A2 | | 1 | Cross-flow-turbine | oseg_cft_A1_Cross-flow-turbine.ipn | | | 3 |
| B1 | | | PART LIST | oseg_cft_B_Cross-flow-turbine-parts-list.xls | | | 4 |
| B2 | | | PART LIST | oseg_cft_A1_Cross-flow-turbine.iam | | | 5 |
| B3 | | | PART LIST | oseg_cft_A1_Cross-flow-turbine.iam | | | 6 |
| C1 | | | TECH NOTES | | | | 7 |
| C2 | | | TECH NOTES | | | | 8 |
| 1.0 | T3/01/00 | 1 | Base frame | oseg_cft_Base-frame.iam | | | 9 |
| 1 | T3/01/00 | 1 | Base frame | oseg_cft_Base-frame.ipn | Production | | 10 |
| 1.1 | T3/01/01 | 2 | Channel100x50x70 | oseg_cft_channel100x50x395.ipt | Production | structural steel, ASTM-A36 | 11 |
| 1.2 | T3/01/02 | 1 | Channel100x50x475 | oseg_cft_channel100x50x475.ipt | Production | structural steel, ASTM-A36 | 12 |
| 1.3 | T3/01/03 | 1 | Channel100x50x545 | oseg_cft_channel100x50x545.ipt | Production | structural steel, ASTM-A36 | 13 |
| 1.4 | T3/02/01 | 2 | Rubber6mmx425 | oseg_cft_rubber-6mmx425.ipt | Production | rubber | 14 |
| 1.5 | T3/02/02 | 2 | Rubber-6mmx395 | oseg_cft_rubber-6mmx395.ipt | Production | rubber | 15 |
| 2.0 | T3/03/00 | 1 | Rotor-housing | oseg_cft_Rotor-housing.iam | | | 16 |
| 2.0 | T3/03/00 | 1 | Rotor housing | oseg_cft_Rotor-housing.ipn | | | 17 |
| 2.1 | T3/03/01 | 2 | Side plate | oseg_cft_side-plate.ipt | Production | steel C45 | 18 |
| 2.2 | T3/03/02 | 1 | Baffle plate | oseg_cft_baffle-plate.ipt | Production | steel C45 | 19 |
| 2.3 | T3/03/03 | 1 | oseg_cft_spacer-plate | oseg_cft_spacer-plate.ipt | Production | steel C45 | 20 |
| 2.4 | T3/03/04 | 1 | oseg_cft_rear-baffle-plate | oseg_cft_rear-baffle-plate.ipt | Production | steel C45 | 21 |
| 2.5 | T3/03/05 | 1 | Houseing base front | oseg_cft_houseing-base-front.ipt | Production | steel C45 | 22 |
| 2.6 | T3/03/06 | 1 | Houseing-base-rear | oseg_cft_houseing-base-rear.ipt | Production | steel C45 | 23 |
| 2.7 | T3/03/07 | 8 | Thear-stub | oseg_cft_thear-stub.ipt | Production | steel C45 | 24 |
| 2.8 | T3/04/00 | 1 | Rib | oseg_cft_rib.ipt | Production | steel C45 | 25 |
| 2.9 | T3/05/00 | 2 | Bracing plate | oseg_cft_bracing-plate.ipt | Production | steel C45 | 26 |
| 3.0.0 | T3/06/00 | 1 | Inlet top | oseg_cft_Inlet-top.iam | | | 27 |
| 3.0.0 | T3/06/01 | 1 | Inlet top | oseg_cft_Inlet-top.ipn | | | 28 |
| 3.1.0 | T3/06/01 | 1 | Hatch door | oseg_cft_Hatch-door.iam | | | 29 |
| 3.1.0 | T3/06/01 | 1 | Hatch door | oseg_cft_Hatch-door.ipn | | | 30 |
| 3.1.1 | T3/06/01 | 1 | Hatch door sheet02 | oseg_cft_Hatch-door-sheet02.ipt | Production | Steel C45 | 31 |
| 3.1.2 | T3/06/01-3 | 2 | Hatch door frame L25x325 | oseg_cft_Hatch-door-frame03.ipt | Production | ASTM-A36 | 32 |

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|--|---|---|--------------|----------|-----------|
| PROJECT | | CREATED BY | APPROVED BY | DATE | VERSION |
| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| PART LIST | | oseg_cft_B_Cross-flow-turbine-parts-list.xls | | | B1 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  |  | PART LIST | | |
| | OSEG | | LICENCE | SCALE | SHEET |
| | | | CC.BY.SA 4.0 | | 4 /90 |

| PART LIST | | | | | | | |
|-----------|-------------|-----|---------------------------|------------------------------------|------------|--------------------------------|-------|
| POS | POS.OLD | QTY | PART NAME | FILE NAME | PART TYPE | SPECIFICATIONS | SHEET |
| 3.1.3 | T3/06/01-3 | 1 | oseg_cft_Hatch-door-sheet | oseg_cft_Hatch-door-sheet.ipt | Production | Steel C45 | 33 |
| 3.1.4 | T3/06/01,5 | 2 | Handle | oseg_cft_Handle.ipt | Production | ASTM-A36 | 34 |
| 3.1.5 | | 20 | Bolt-M6x20 | oseg_cft_bolt-M6x20.ipt | Standard | | 35 |
| 3.1.6 | | 20 | Nut M6 | oseg_cft_nut-M6.ipt | Standard | | 36 |
| 3.2.0 | T3/06/01 | 2 | Hatch door frame L25x260 | oseg_cft_Hatch-door-frame01.ipt | Production | structural steel, ASTM A-36 | 37 |
| 3.3.0 | T3/06/01-2 | 2 | Hatch door frame L25x345 | oseg_cft_Hatch-door-frame02.ipt | Production | Angle 25x25x5, ASTM A-36 | 38 |
| 3.4.0 | T3/06/04 | 2 | Inlet side plate | oseg_cft_inlet-side-plate.ipt | Production | Steel C45 | 39 |
| 3.5.0 | T3/06/01-1 | 1 | Inlet top guide | oseg_cft_Inlet-top-guide.ipt | Production | Steel C45 | 40 |
| 3.6.0 | T3/06/03 | 2 | Inlet flange | oseg_cft_Inlet-flange.ipt | Production | Steel C45 | 41 |
| 3.7.0 | T3/06/03 | 2 | Inlet flange2 | oseg_cft_Inlet-flange2.ipt | Production | Steel C45 | 42 |
| 3.8.0 | T3/06/02 | 1 | Inlet bottom plate | oseg_cft_Inlet-bottom-plate.ipt | Production | Steel C45 | 43 |
| 3.9.0 | T3/07/01 | 1 | Inle-gasket | oseg_cft_Inle-gasket.ipt | Production | Rubber | 44 |
| 4 | T3/08/00 | 1 | Rotor | oseg_cft_Rotor.iam | | | 45 |
| 4 | T3/08/00 | 1 | Rotor | oseg_cft_Rotor.ipn | | | 46 |
| 4.1 | T3/08/01 | 1 | Rotor shaft | oseg_cft_Rotor-shaft.ipt | Production | Steel C45 hardened | 47 |
| 4.2 | T3/08/02 | 3 | Rotor disc | oseg_cft_Rotor-disc.ipt | Production | Steel C45 | 48 |
| 4.3 | T3/08/03 | 32 | Blade | oseg_cft_Blade.ipt | Production | Steel C45 | 49 |
| 5 | T3/10/00 | 2 | Stuffing box | oseg_cft_Stuffing box.iam | | | 50 |
| 5 | T3/10/00 | 2 | Stuffing box | oseg_cft_Stuffing box.ipn | | | 51 |
| 5.1 | T3/10/00 | 2 | Stuffing box02 | oseg_cft_Stuffing box02.ipt | Production | Steel C45 | 52 |
| 5.2 | T3/13/00 | 2 | Stuffin plate gasket | oseg_cft_Stuffin-plate-gasket.ipt | Production | Rubber | 53 |
| 5.3 | T3/10/00 | 2 | Stuffing box01 | oseg_cft_Stuffing box01.ipt | Production | Steel C45 | 54 |
| 5.4 | T3/12/00 | 2 | Press ring | oseg_cft_press-ring.ipt | Production | Steel C45 | 55 |
| 5.5 | T3/11/00 | 4 | Spacer | oseg_cft_Spacer.ipt | Production | Steel C45 | 56 |
| 5.6 | T3/09/00 | 2 | Rotor bearing | oseg_cft_rotor-bearing.iam | Buy | BEARING NUMBER FYH F210J UCSIO | 57 |
| 6.0.0 | T3/16/00 | 1 | Butterfly Valve | oseg_cft_Butterfly-Valve.iam | | | 58 |
| 6.0.0 | T3/17.23/00 | 1 | Butterfly Valve | oseg_cft_Butterfly-Valve.ipn | | | 59 |
| 6.1.0 | T3/24/00 | 1 | Cover | oseg_cft_cover.ipt | Production | Steel C45 | 60 |
| 6.2.0 | T3/23/00 | 1 | Gasket | oseg_cft_gasket.ipt | Production | Rubber | 61 |
| 6.3.0 | T3/25/00 | 2 | Washer | oseg_cft_washer.ipt | Production | Steel C45 | 62 |
| 6.4.0 | T3/21/00 | 1 | Bush casing 2 | oseg_cft_bush-casing-2.ipt | | Steel C45 | 63 |
| 6.5.0 | T3/20/00 | 1 | Bush casing | oseg_cft_bush-casing.ipt | Production | Steel C45 | 64 |
| 6.6.0 | T3/16/00 | 1 | Valve shaft | oseg_cft_butterfly-valve-shaft.ipt | Production | Steel C45 hardened | 65 |




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|--|--|---|--|---|--|-----------|-----------|
| PROJECT | | CREATED BY | | APPROVED BY | | DATE | VERSION |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | | | PART CODE |
| PART LIST | | oseg_cft_A1_Cross-flow-turbine.iam | | | | | B2 |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | MATERIAL |
|  | |  | |  | | PART LIST | |
| | | | | LICENCE | | SCALE | SHEET |
| | | | | CC.BY.SA 4.0 | | | 5 /90 |




| PART LIST | | | | | | | |
|-----------|----------|-----|-----------------------|------------------------------------|------------|----------------------------|-------|
| POS | POS.OLD | QTY | PART NAME | FILE NAME | PART TYPE | SPECIFICATIONS | SHEET |
| 6.7.0 | T3/35/00 | 1 | Butterfly Valve shaft | oseg_cft_Butterfly-Valve-shaft.iam | | | 66 |
| 6.7.0 | T3/35/00 | 1 | Butterfly Valve shaft | oseg_cft_Butterfly-Valve-shaft.ipn | | | 67 |
| 6.7.1 | T3/35/00 | 1 | shaft valve 1 | oseg_cft_shaft-valve-1.ipt | Production | Steel C45 | 68 |
| 6.7.2 | T3/35/00 | 1 | shaft valve 2 | oseg_cft_shaft-valve-2.ipt | | Steel C45 | 69 |
| 6.7.3 | T3/35/00 | 3 | Shaft valve 3 | oseg_cft_shaft-valve-3.ipt | Production | Steel C45 | 70 |
| 6.7.4 | T3/35/00 | 1 | shaft valve 4 | oseg_cft_shaft-valve-4.ipt | Production | Steel C45 | 71 |
| 6.8 | T3/26/00 | 1 | Lever | oseg_cft_lever.ipt | | Steel C45 | 72 |
| 7 | T3/29/00 | 1 | Support | oseg_cft_Support.iam | | | 73 |
| 7 | T3/29/00 | 1 | Support | oseg_cft_Support.ipn | | | 74 |
| 7 | T3/29/00 | 1 | Support | oseg_cft_Support.iam | | | 75 |
| 7.1 | T3/29/02 | 1 | Support angle | oseg_cft_support-angle.ipt | | Structural steel, ASTM-A36 | 76 |
| 7.2 | T3/29/05 | | Stopper top plate | oseg_cft_stopper-top-plate.ipt | | Steel C45 | 77 |
| 7.3 | T3/29/04 | 1 | Stopper plate top | oseg_cft_stopper-plate-top.ipt | | Steel C45 | 78 |
| 7.4 | T3/29/03 | 1 | Stopper plate bottom | oseg_cft_stopper-plate-bottom.ipt | | Steel C45 | 79 |
| 7.5 | T3/29/01 | 1 | Base plate | oseg_cft_base-plate.ipt | | Steel C45 | 80 |
| 7.6 | T3/30/00 | 1 | Handle bar | oseg_cft_handle-bar.ipt | | Steel C45 | 81 |
| 7.7 | T3/31/00 | 1 | Knob ring | oseg_cft_knob-ring.ipt | | Steel C45 | 82 |
| 7.8 | T3/32/00 | 1 | Bush | oseg_cft_bush.ipt | | Steel C45 | 83 |
| 7.9 | T3/32/00 | 1 | Spindle | oseg_cft_spindle.ipt | | Steel C45 | 84 |
| 7.10 | T3/32/00 | 1 | Lock-nut | oseg_cft_lock-nut.ipt | | Steel C45 | 85 |
| 7.11 | T3/32/00 | 1 | Wing nutM16 | oseg_cft_wing-nutM16.ipt | | Steel C45 | 86 |
| 8 | | 8 | Bolt M6x50 | oseg_cft_bolt-M6x50.ipt | Standard | Bolt M6x50 | |
| 9 | | 8 | screw 10Mx50 | oseg_cft_bolt-M14x70.ipt | Standard | screw 10Mx50 | |
| 10 | | 18 | Bolt M12x30 | oseg_cft_bolt-M12x30.ipt | Standard | Bolt M12x30 | |
| 11 | | 8 | Nut M6 | oseg_cft_nut-M6.ipt | Standard | Nut M6 | |
| 12 | | 18 | Nut M12 | oseg_cft_nut-M12.ipt | Standard | Nut M12 | |
| 13 | T3/38/00 | 1 | Adapter | oseg_cft_Adapter | | | 87 |
| 13 | T3/36/00 | 1 | Adapter | oseg_cft_Adapter | | | 88 |
| 13.1 | | 2 | Sdapter flange | oseg_cft_adapter-flange | | Steel C45 | 89 |
| 13.2 | | 2 | Adapter flange2 | oseg_cft_adapter-flange2 | | Steel C45 | 90 |
| 13.3 | | 1 | Shaft-adapter | oseg_cft_shaft-adapter | | Steel C45 | 91 |
| 13.4 | | 1 | Penstock-flange | oseg_cft_penstock-flange | | Steel C45 | 92 |

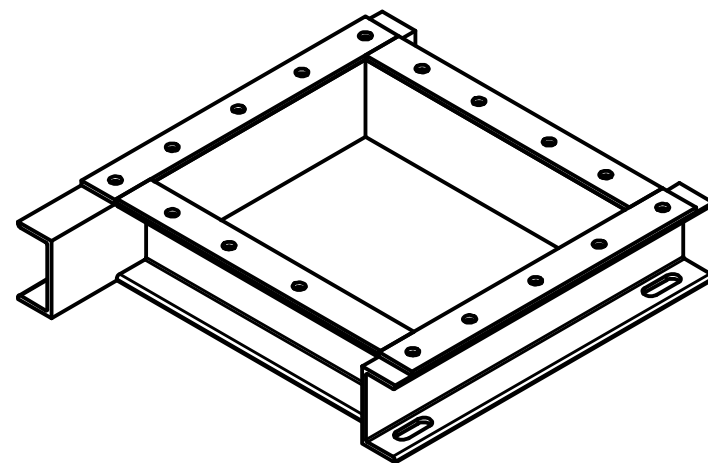
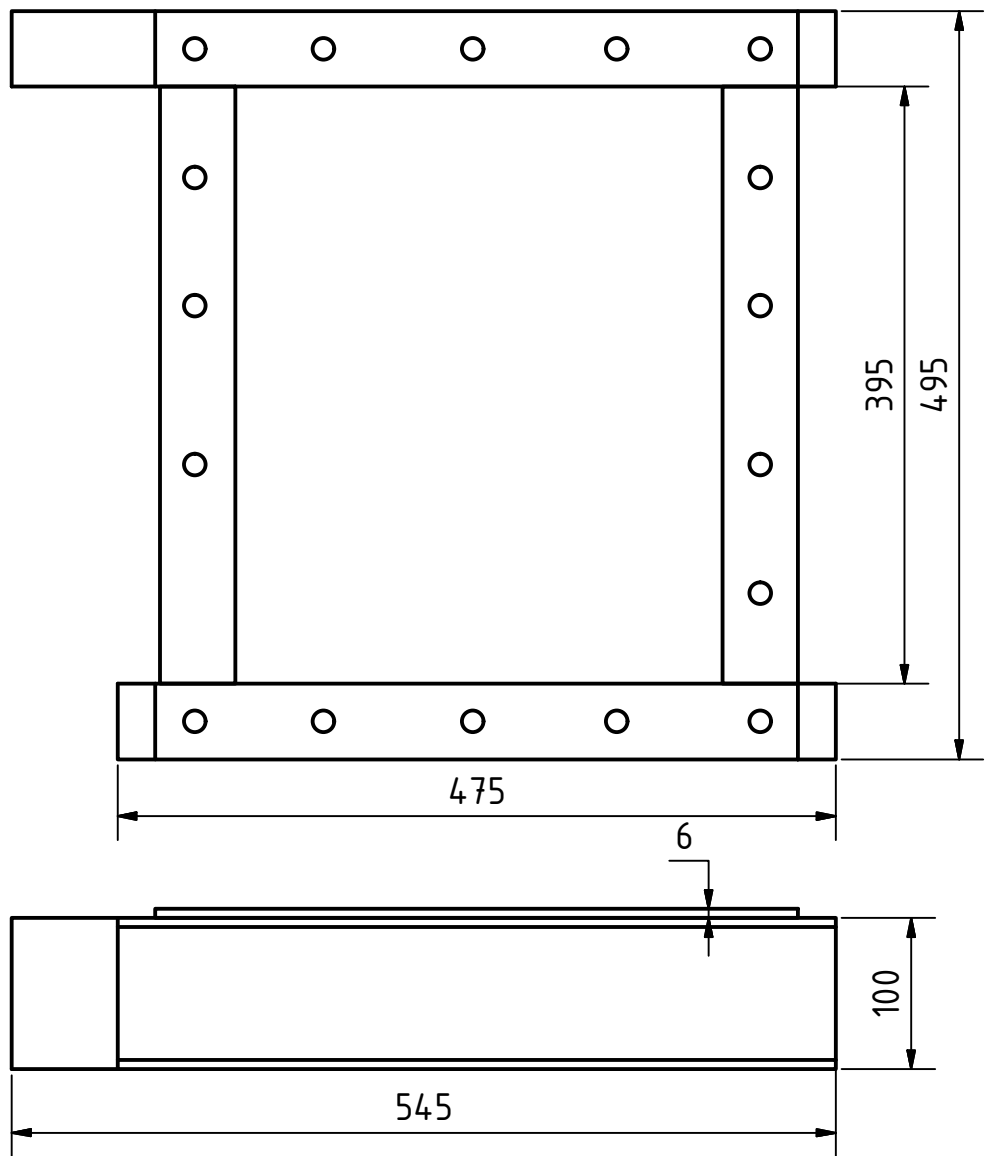
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|--|---|---|--------------|----------|-----------|
| PROJECT | | CREATED BY | APPROVED BY | DATE | VERSION |
| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| PART LIST | | oseg_cft_A1_Cross-flow-turbine.iam | | | B3 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  |  | PART LIST | | |
| | OPEN SOURCE ECOLOGY GERMANY OSEG | | LICENCE | SCALE | SHEET |
| | | | CC.BY.SA 4.0 | | 6 /90 |




TECHNICAL NOTES

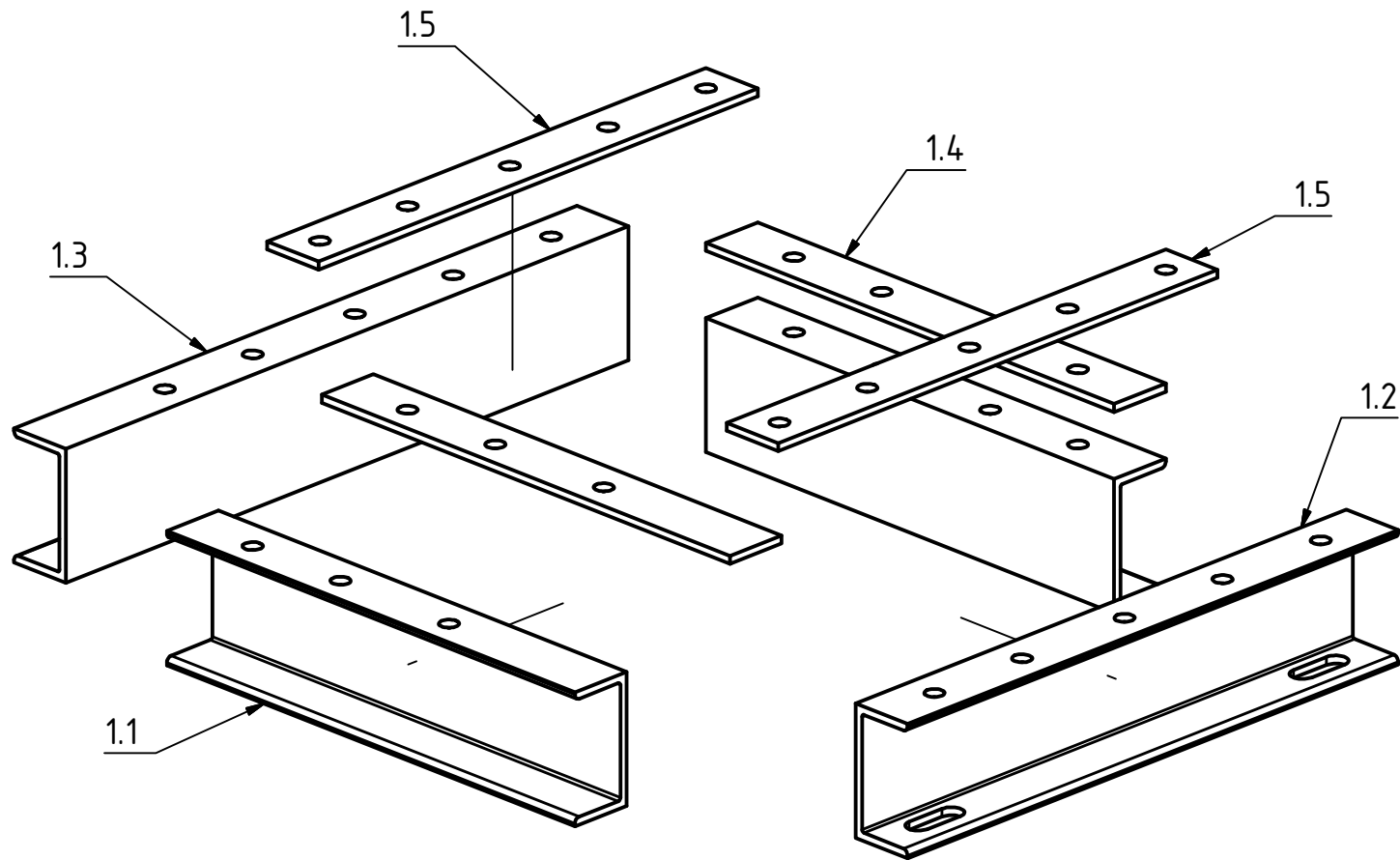
| NOTES | CONTENT |
|---------------------------|---|
| GENERAL NOTES | |
| Metal structure treatment | Iron structures should be painted to prevent rust and improve equipment life. - Remove loose rust with a wire brush, sandpaper or chemical rust remover. - If applicable, sand areas where paint is chipping until surface is smooth. - Remove dust or oil with a degreaser or denatured alcohol. - Prime surface to protect against rust and corrosion |
| Foundations fixing | - The ground must be stable and have a low water table. - The structure must be fixed on firm oncrete soil or on poured footings with steel reinforcement. - The anchorage can be bolted with expansive ramplugs or welded. |
| Wood treatment | - The wood must be treated with pesticides and kiln-dried to ensure adequate humidity. - Wood sealer should be applied for later use. |
| ... | ... |
| ... | ... |




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| PROJECT | | CREATED BY | APPROVED BY | DATE | VERSION |
| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| TECH NOTES | | oseg_cft_A1_Cross-flow-turbine.iam | | | C1 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  |  | TECH NOTES | | |
| | | | LICENCE | SCALE | SHEET |
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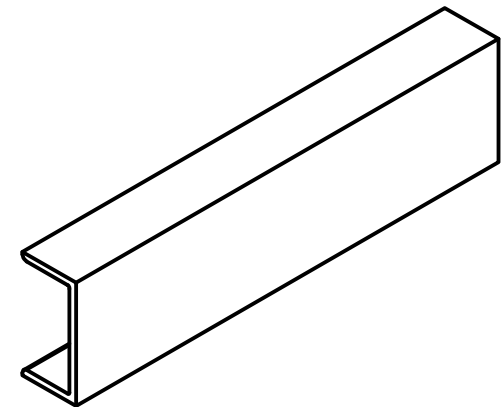
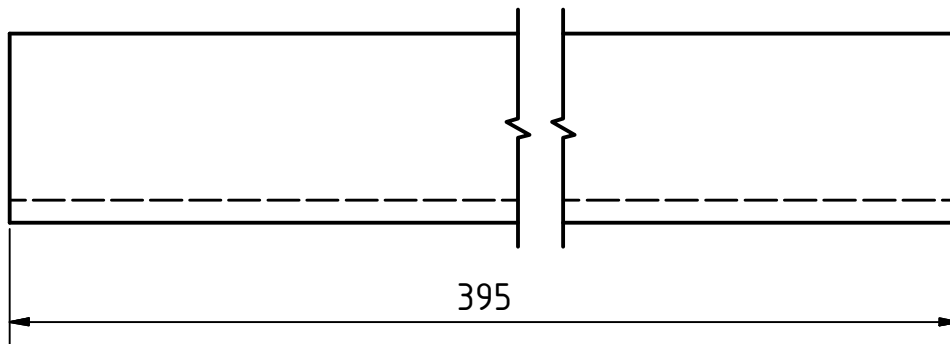
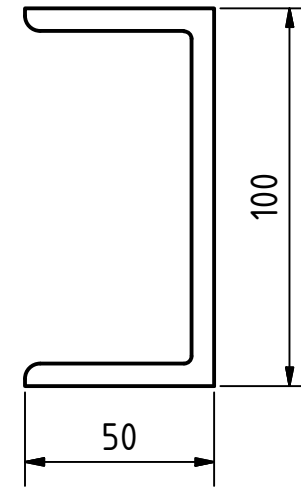
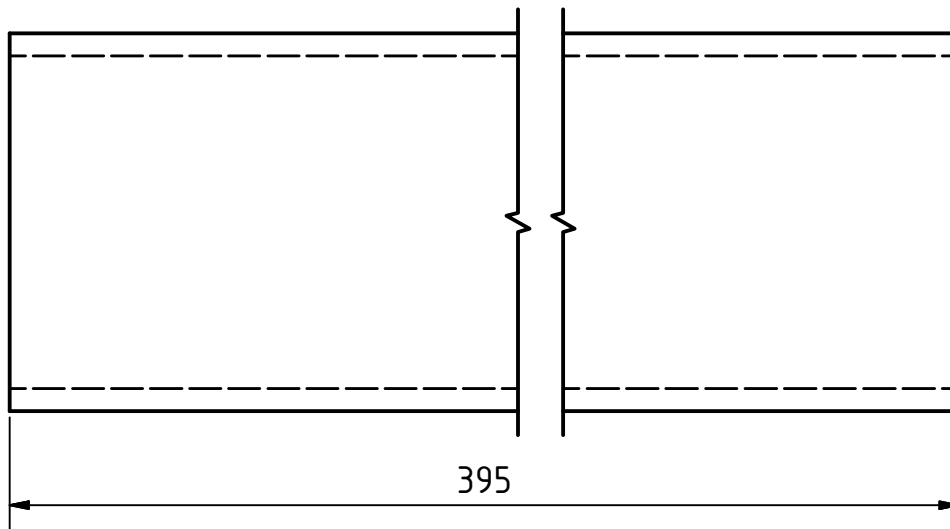
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| PROJECT | | CREATED BY | APPROVED BY | DATE | VERSION |
| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| TECH NOTES | | oseg_cft_A1_Cross-flow-turbine.iam | | | C2 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  OPEN SOURCE ECOLOGY GERMANY OSEG |  | TECH NOTES | | |
| | | | LICENCE | SCALE | SHEET |
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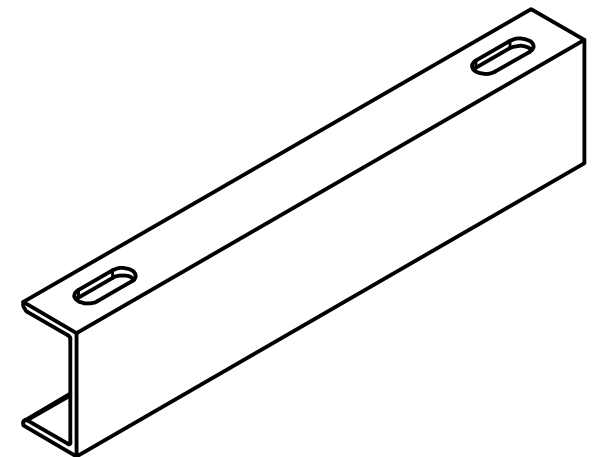
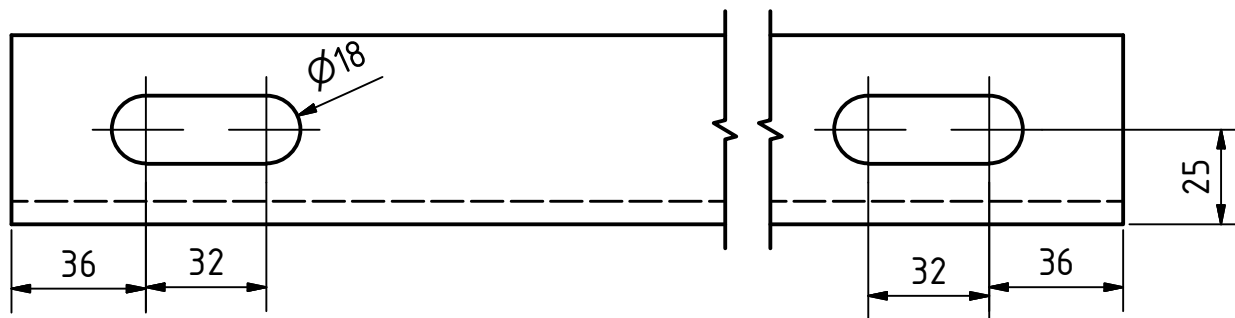
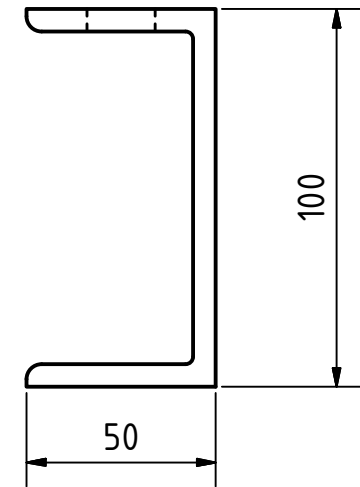
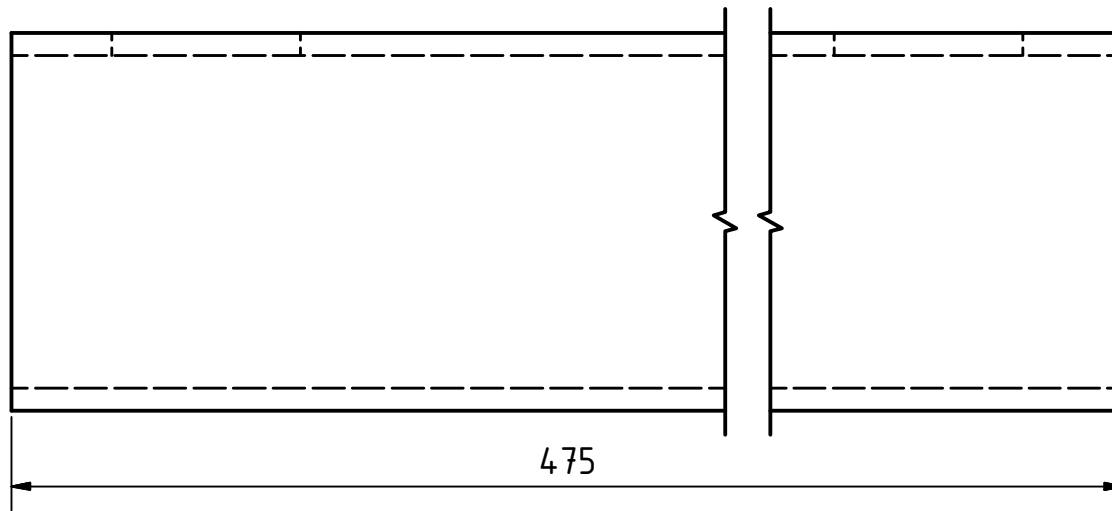
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| PROJECT | | CREATED BY | APPROVED BY | DATE | VERSION |
| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Base frame | | oseg_cft_Base-frame.iam | | | 1.0 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  OSEG |  | ASSEMBLY | | 1 |
| | | | LICENCE | SCALE | SHEET |
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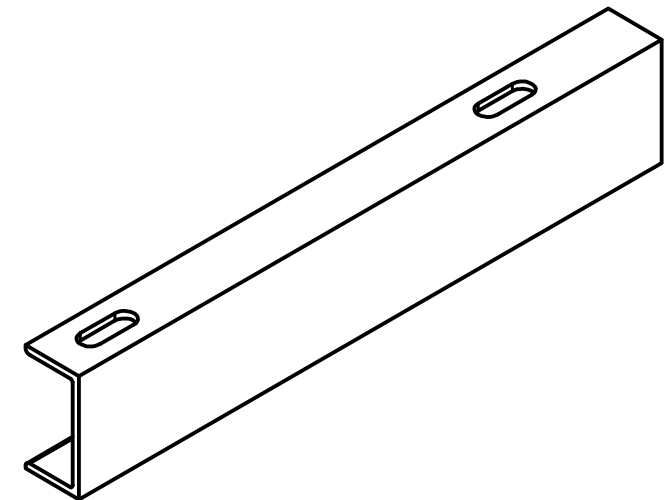
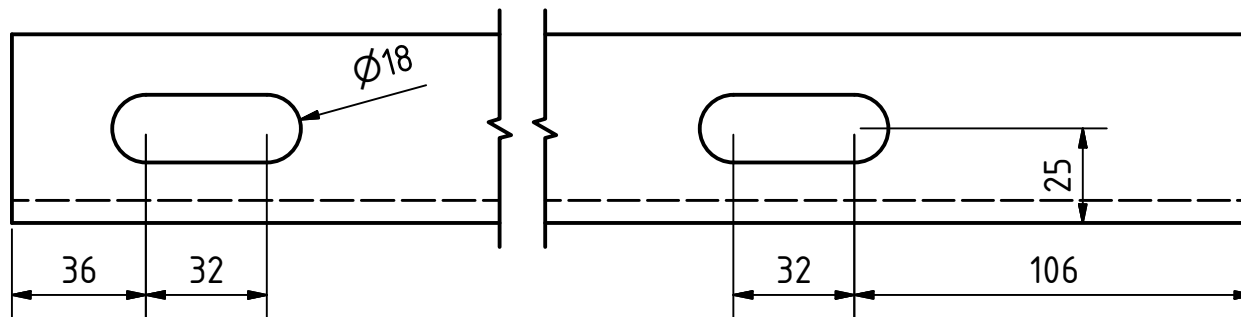
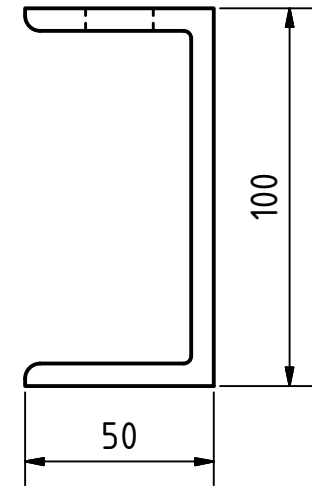
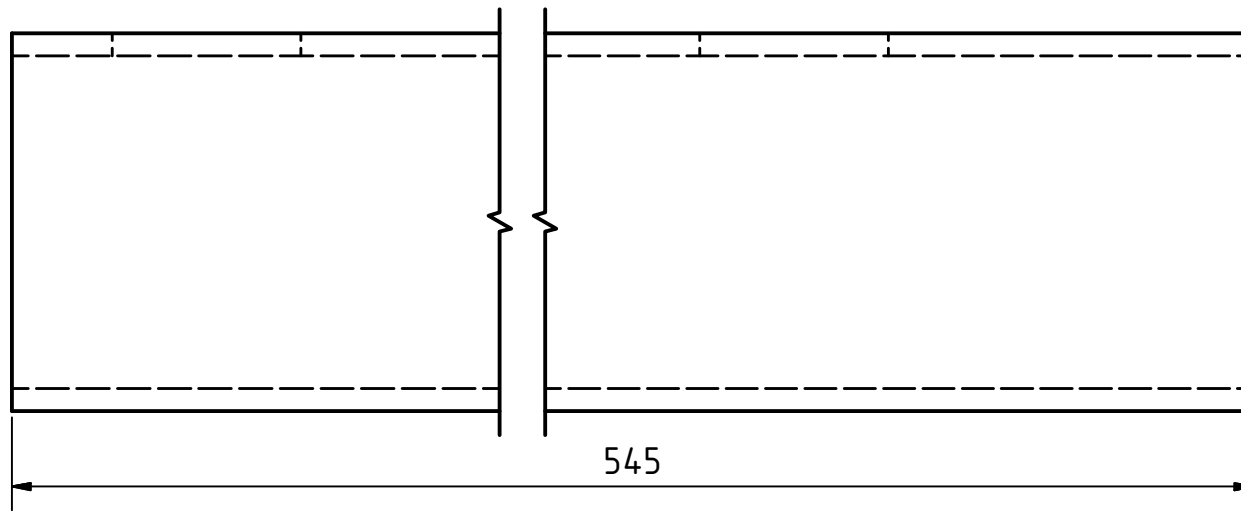
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| PROJECT | | CREATED BY | | APPROVED BY | | DATE | | VERSION | |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | | | FILE NAME | | | | PART CODE | |
| Base frame | | | | oseg_cft_Base-frame.ipn | | | | 1 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | QUANTITY | |
| | | | | | | CC.BY.SA 4.0 | | 1 | |
| | | | | | | SCALE | | SHEET | |
| | | | | | | 1:5 | | 10 /90 | |






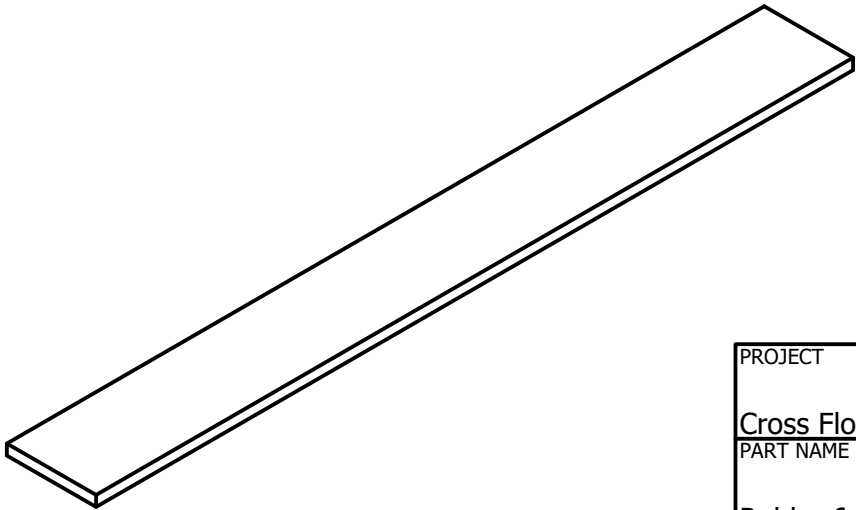
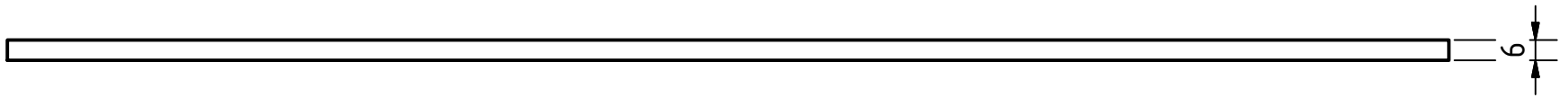
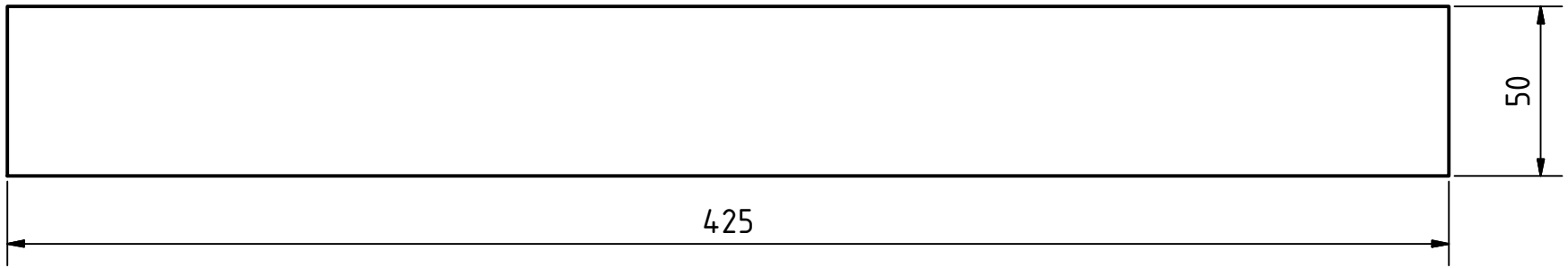
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| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Channel100x50x70 | | oseg_cft_channel100x50x395.ipt | | | 1.1 |
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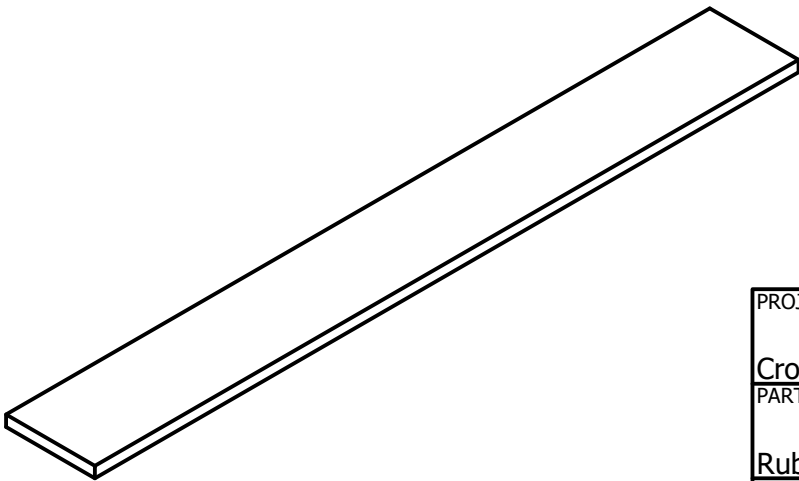
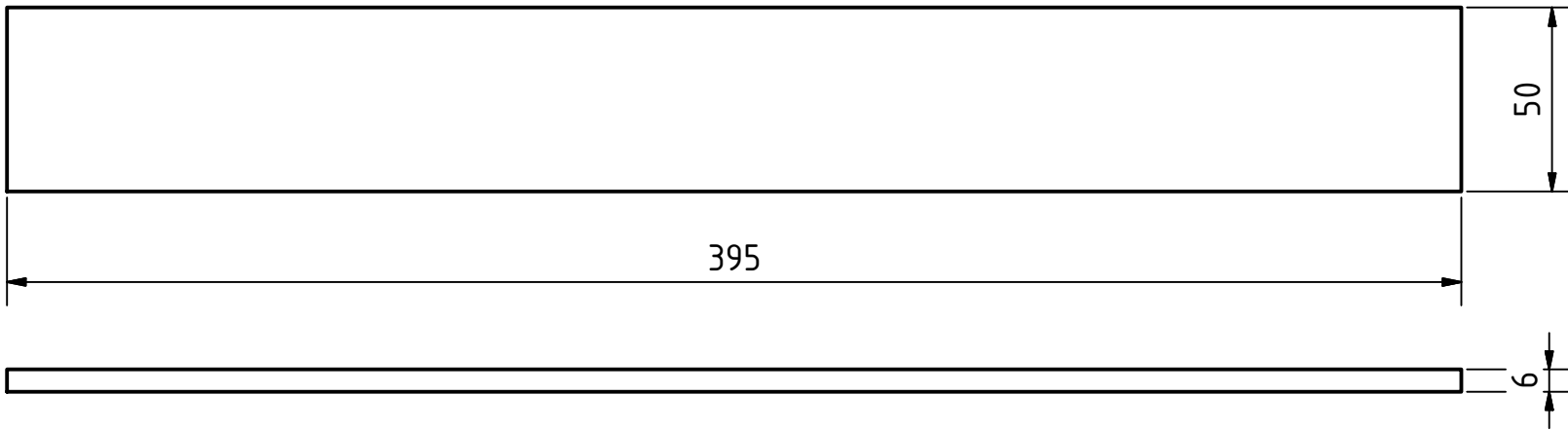
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| PROJECT | | CREATED BY | | APPROVED BY | | DATE | | VERSION | |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | | | FILE NAME | | | | PART CODE | |
| Channel100x50x475 | | | | oseg_cft_channel100x50x475.ipt | | | | 1.2 | |
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|  | |  | |  | | PART | | ASTM-A36 | |
| | | | | | | LICENCE | | SCALE | |
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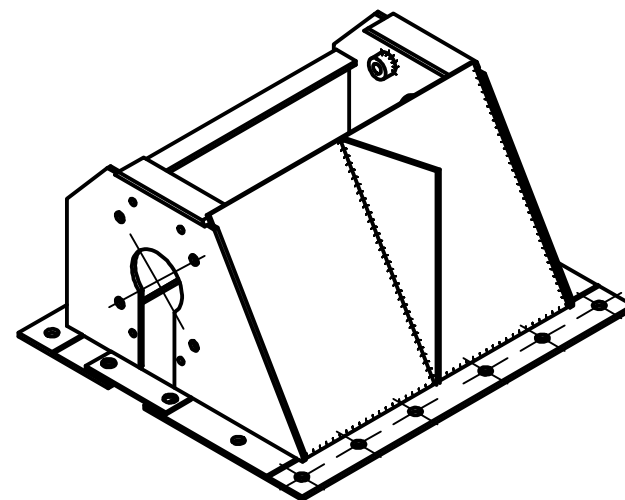
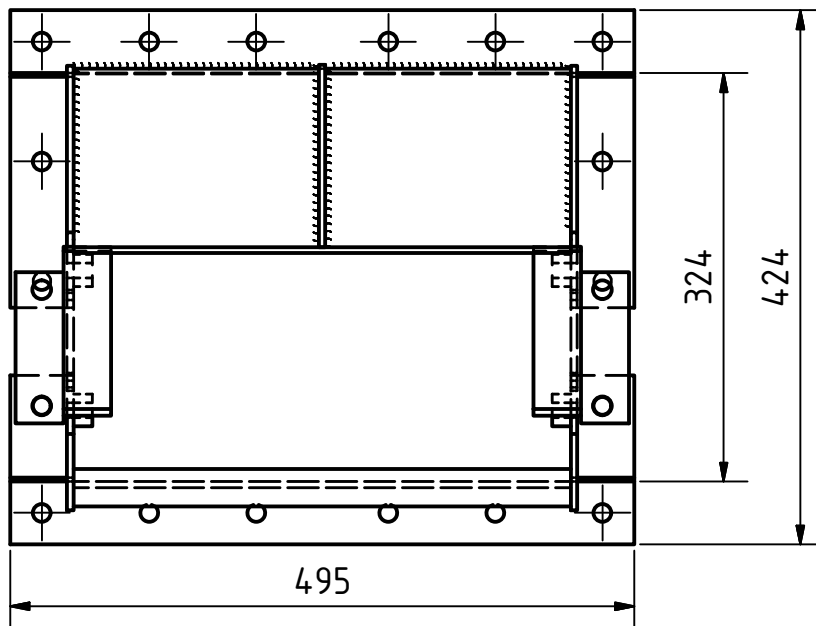
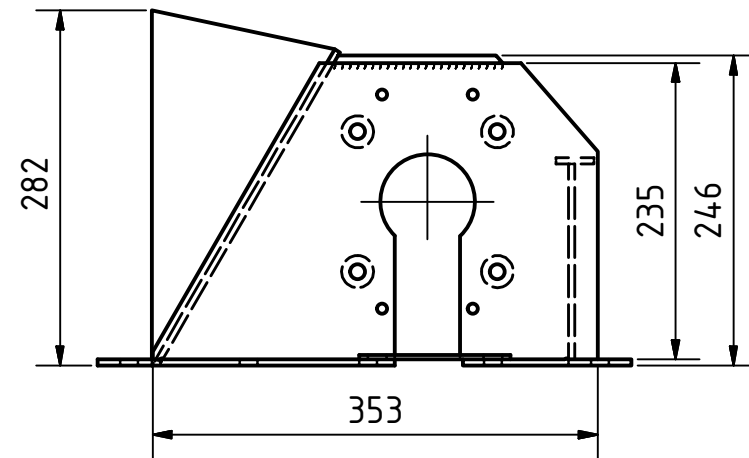
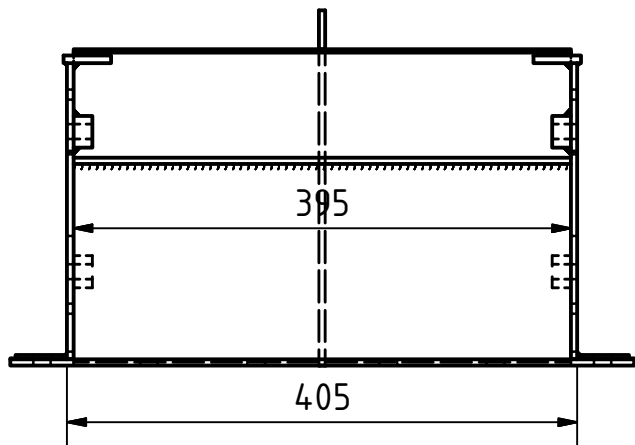
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | | | FILE NAME | | | | PART CODE | |
| Channel100x50x545 | | | | oseg_cft_channel100x50x545.ipt | | | | 1.3 | |
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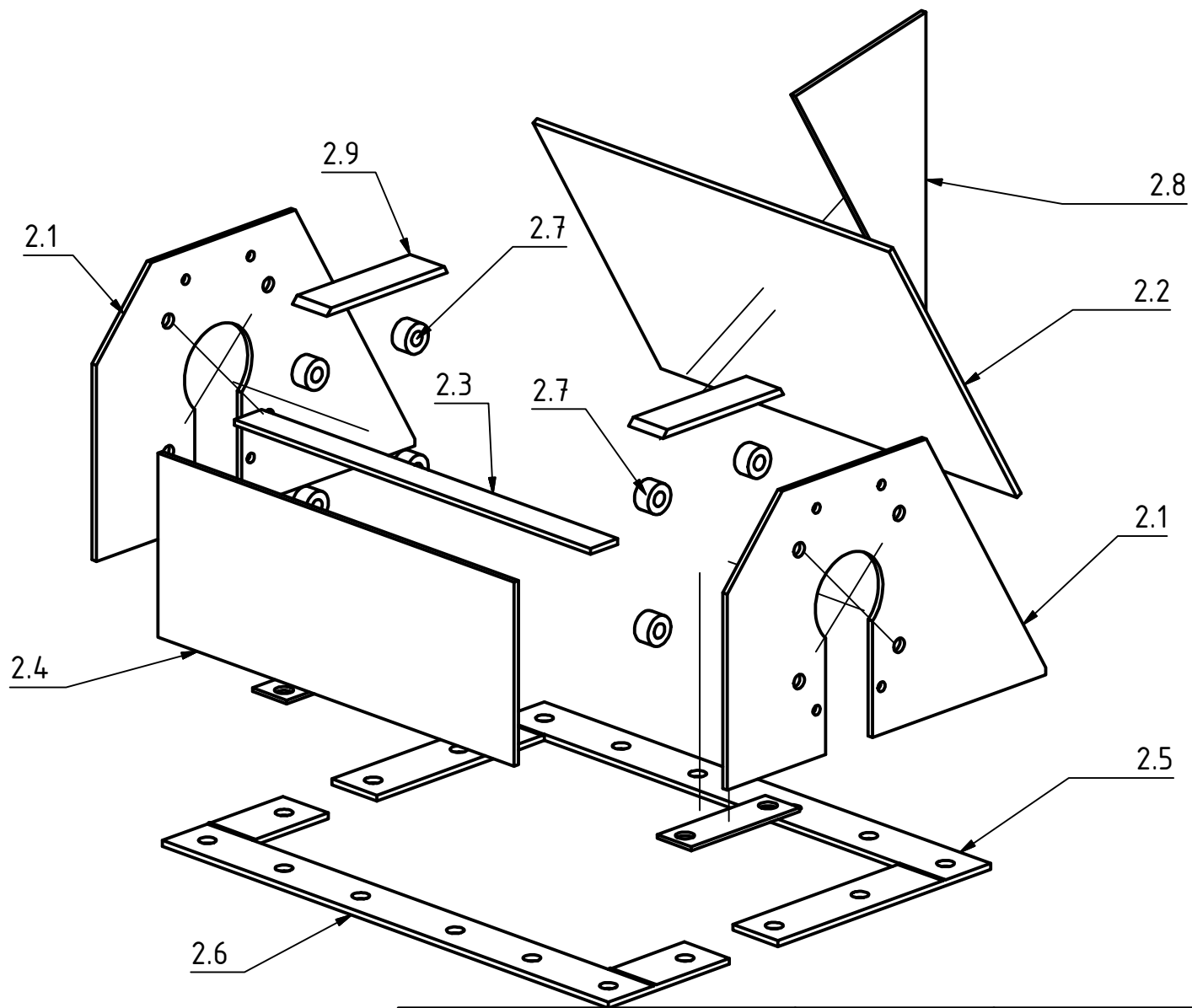
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| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Rubber6mmx425 | | oseg_cft_rubber-6mmx425.ipt | | | 1.4 |
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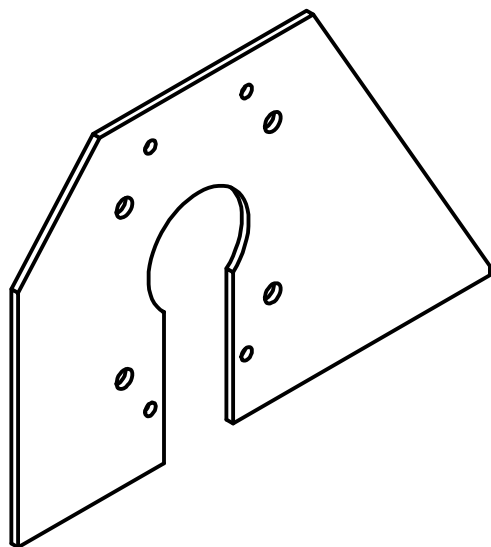
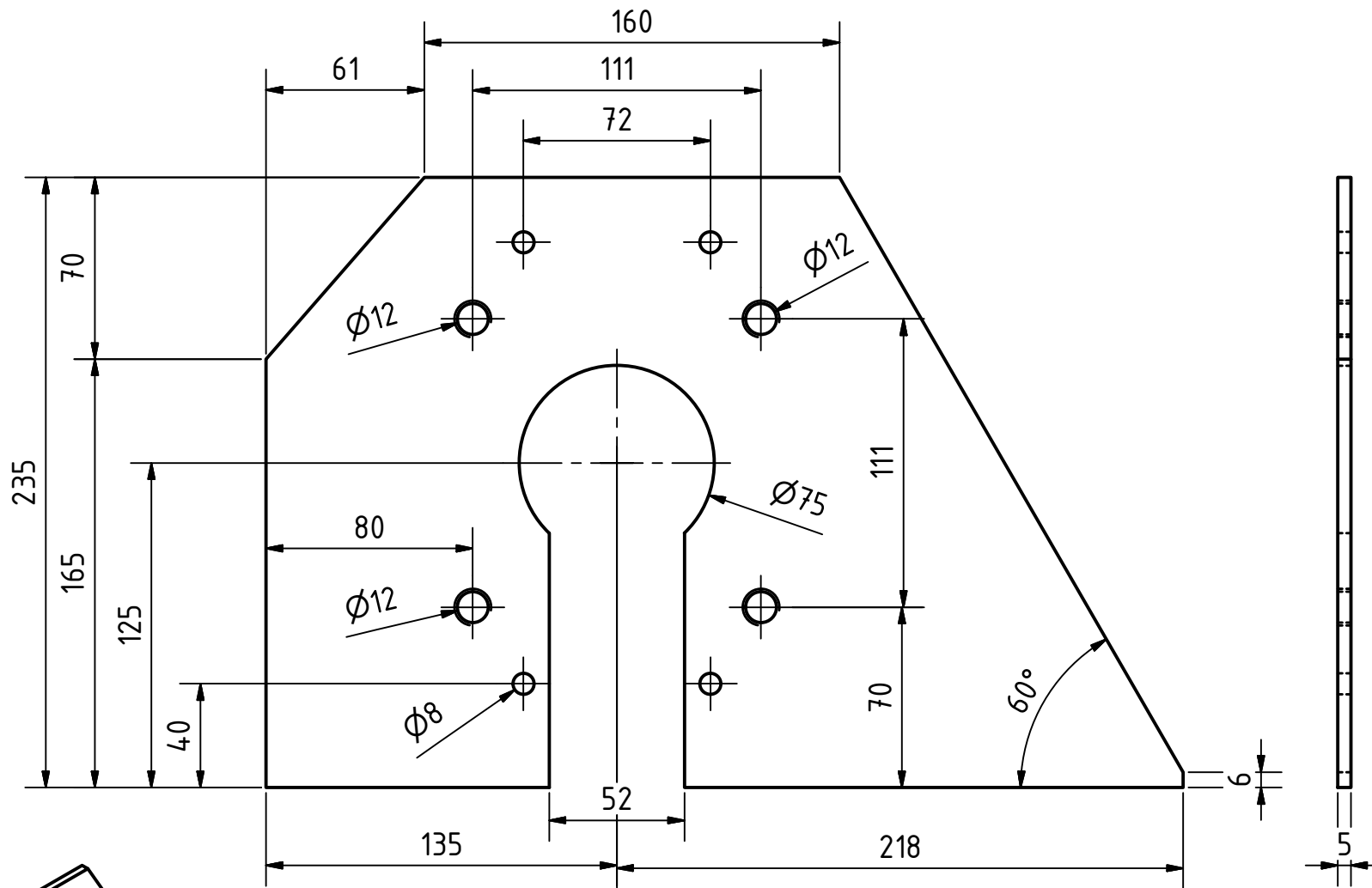
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| PART NAME | | FILE NAME | | | PART CODE |
| Rubber-6mmx395 | | oseg_cft_rubber-6mmx395.ipt | | | 1.5 |
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|  |  OPEN SOURCE ECOLOGY GERMANY OSEG |  | PART | rubber | 2 |
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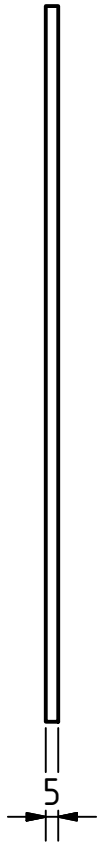
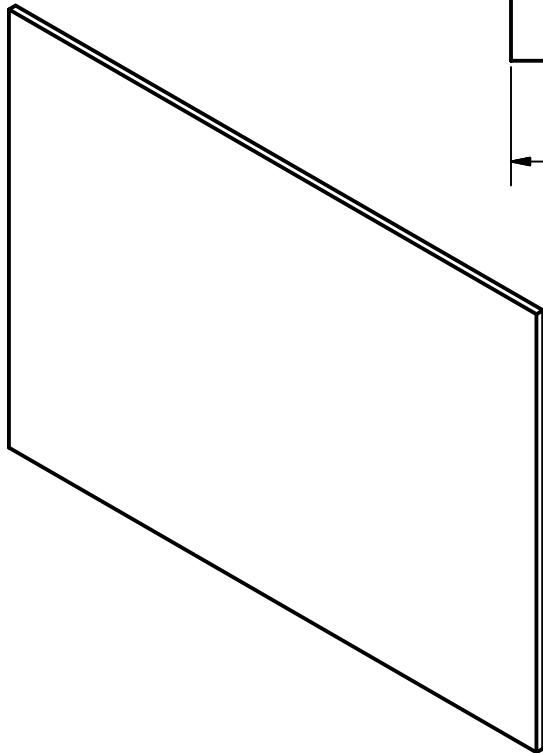
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | | |
| PART NAME | | FILE NAME | | | | | | | | PART CODE |
| Rotor-housing | | oseg_cft_Rotor-housing.iam | | | | | | | | 2.0 |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | | QUANTITY |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | ASSEMBLY | | | | 1 |
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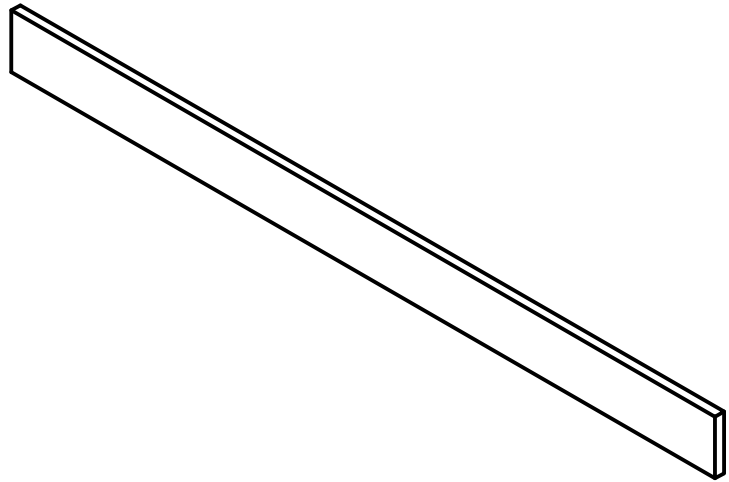
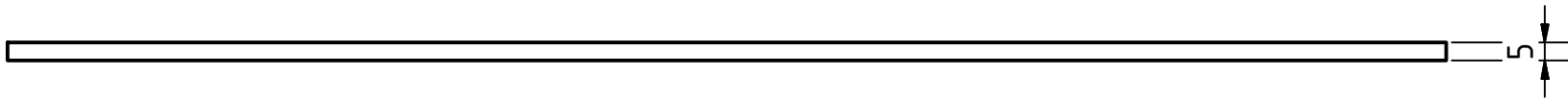
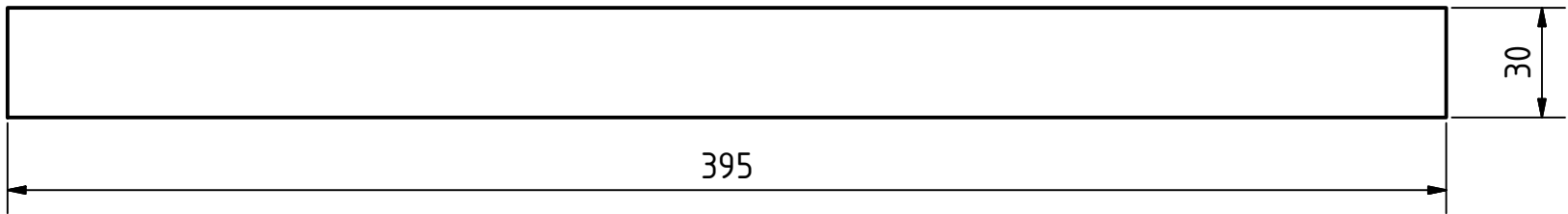
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | 1.0 | |
| PART NAME | | FILE NAME | | | | | PART CODE | |
| Rotor housing | | oseg_cft_Rotor-housing.ipn | | | | | 2.0 | |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | | DOC. TYPE | MATERIAL | | QUANTITY | |
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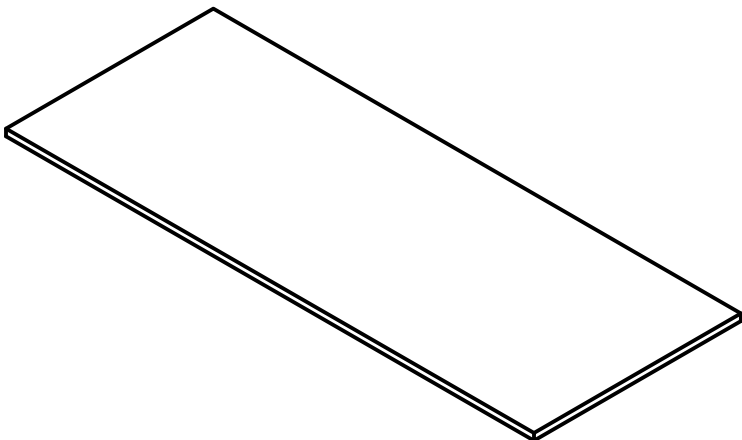
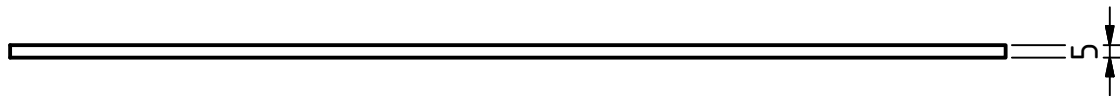
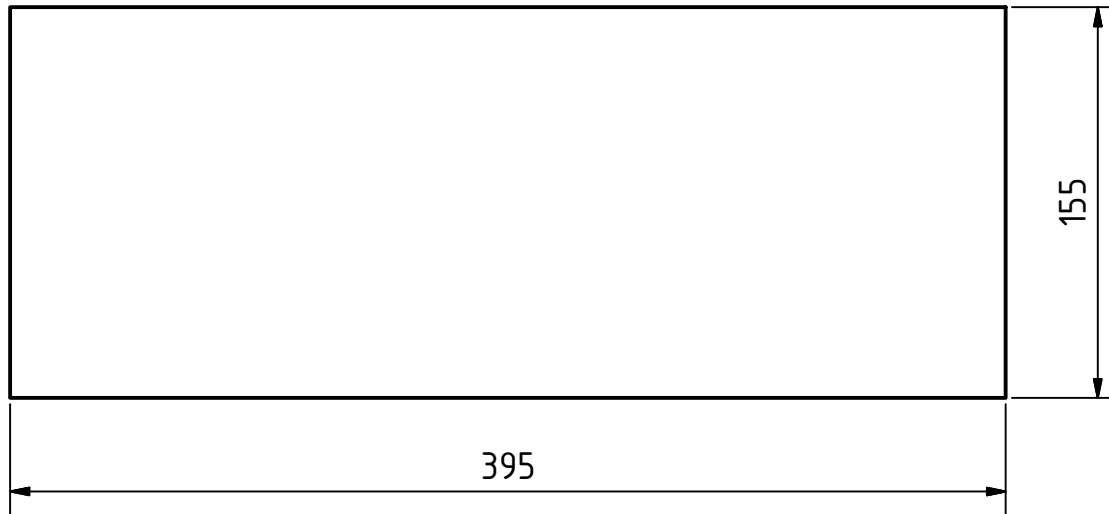
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | | |
| PART NAME | | FILE NAME | | | | | | | | PART CODE |
| Side plate | | oseg_cft_side-plate.ipt | | | | | | | | 2.1 |
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|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | steel C45 | | 2 |
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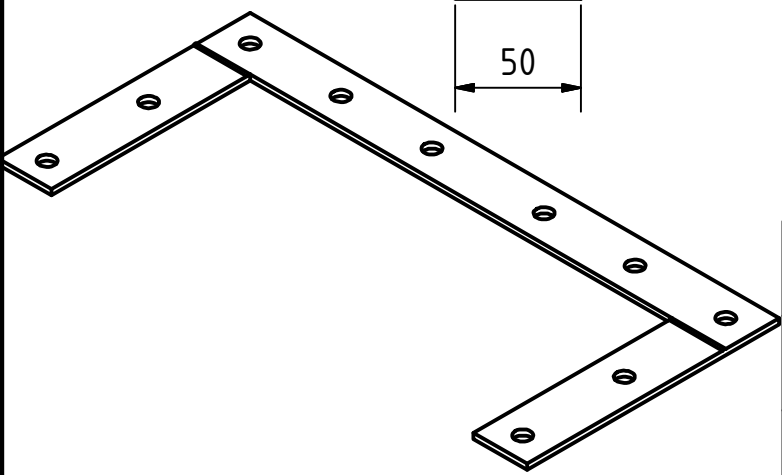
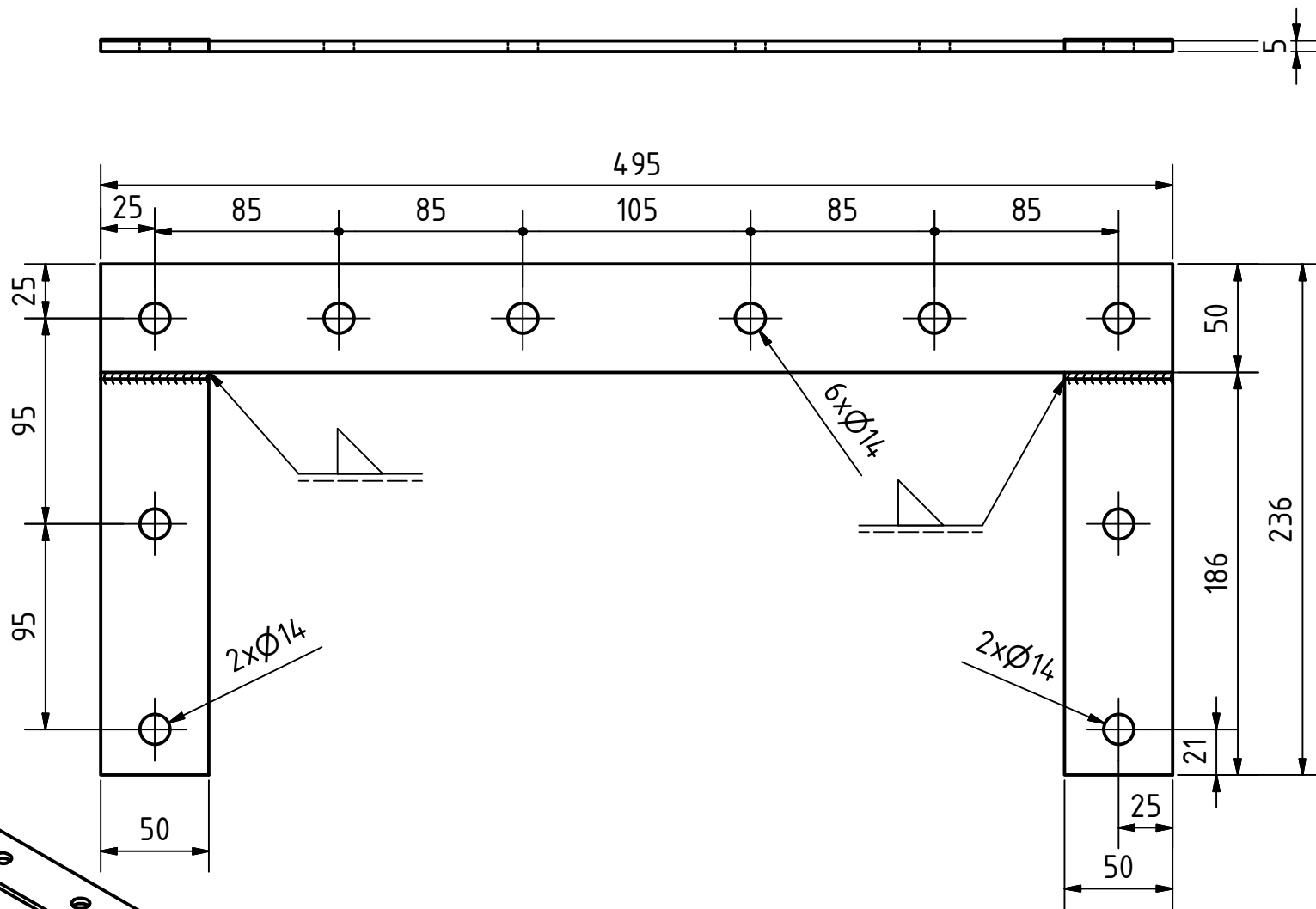
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| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Baffle plate | | oseg_cft_baffle-plate.ipt | | | 2.2 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  OPEN SOURCE ECOLOGY GERMANY OSEG |  | PART LICENCE | steel C45 | 1 |
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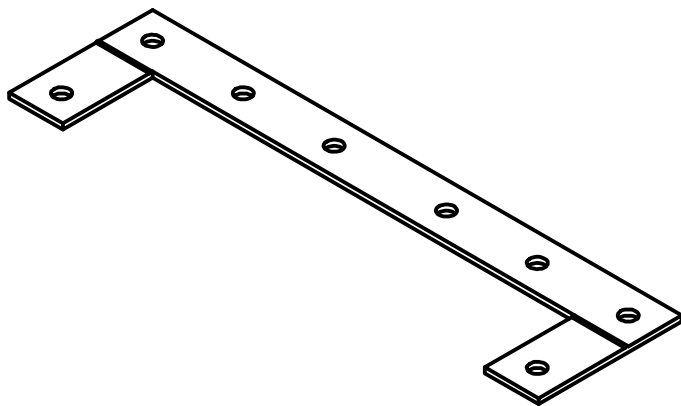
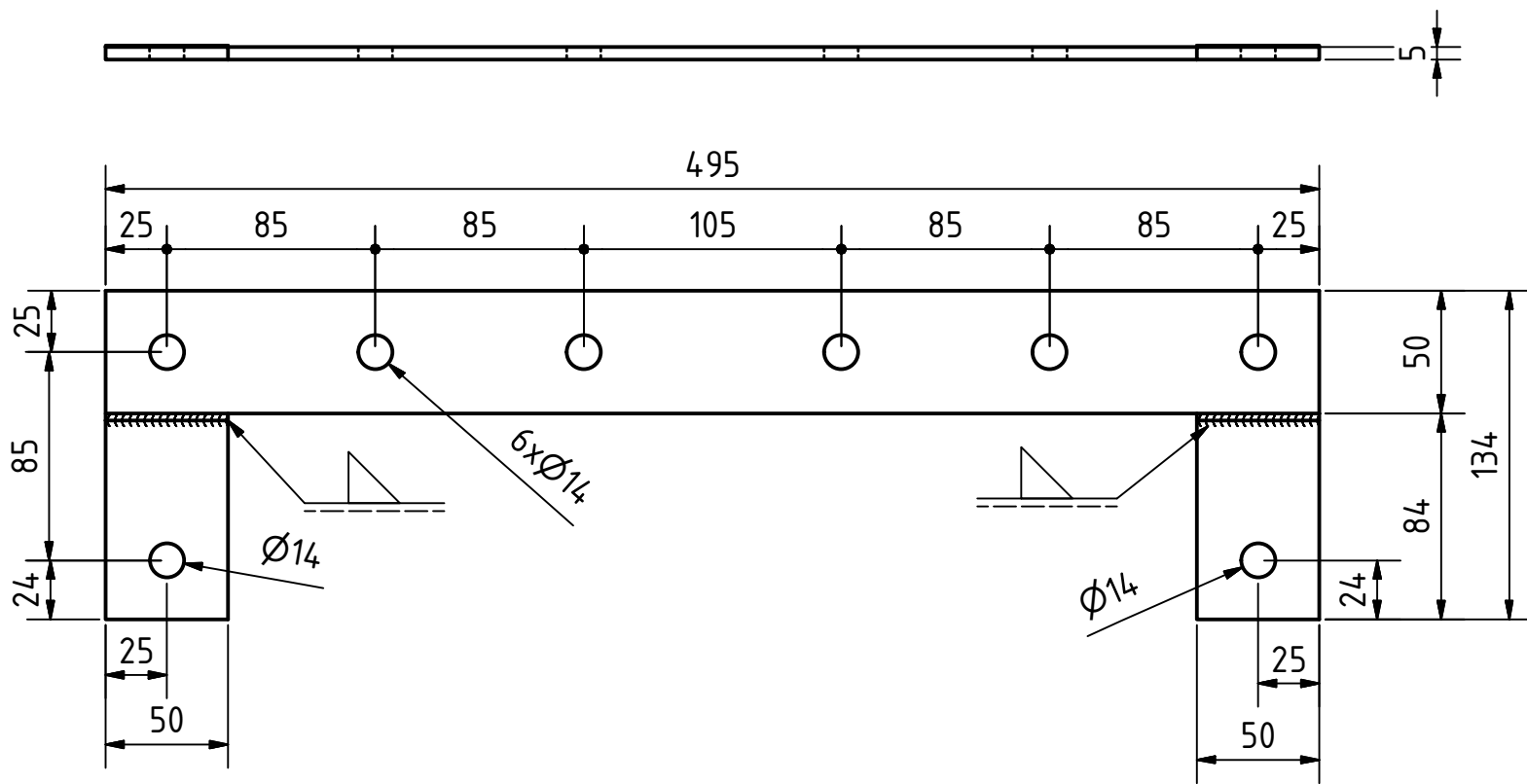
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| PART NAME | | FILE NAME | | | PART CODE |
| oseg_cft_spacer-plate | | oseg_cft_spacer-plate.ipt | | | 2.3 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  OPEN SOURCE ECOLOGY GERMANY |  | PART | steel C45 | 1 |
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| | | | CC.BY.SA 4.0 | 1:2 | 20 /90 |






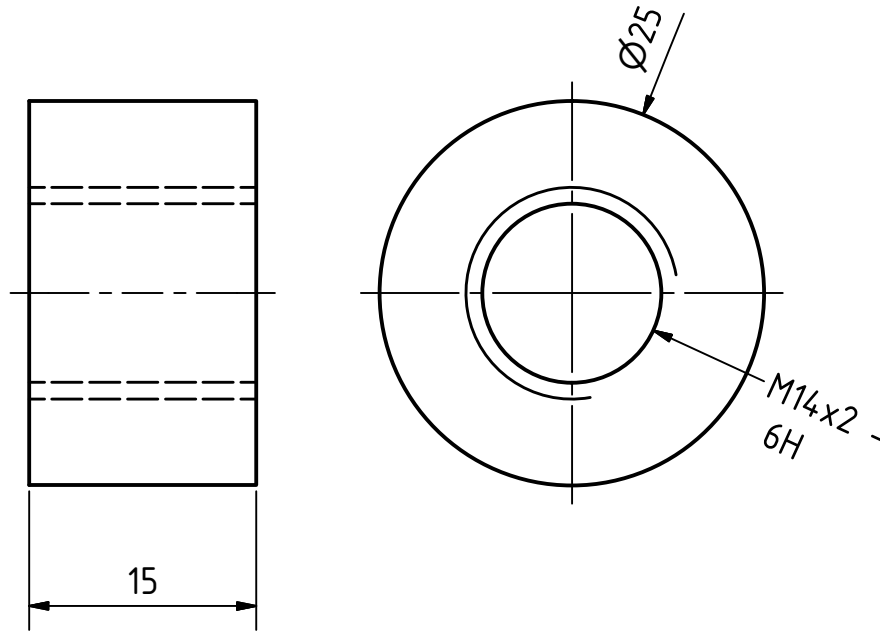
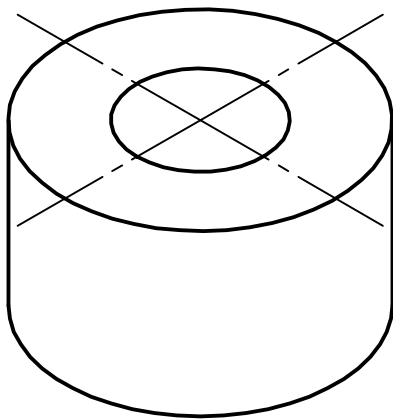
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| PART NAME | | FILE NAME | | | PART CODE |
| oseg_cft_rear-baffle-plate | | oseg_cft_rear-baffle-plate.ipt | | | 2.4 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  OPEN SOURCE ECOLOGY GERMANY OSEG |  | PART LICENCE | steel C45 | 1 |
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| | | | | 1:2 | 21 /90 |






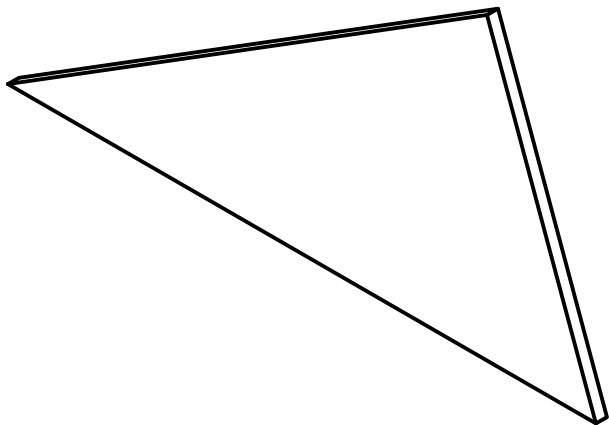
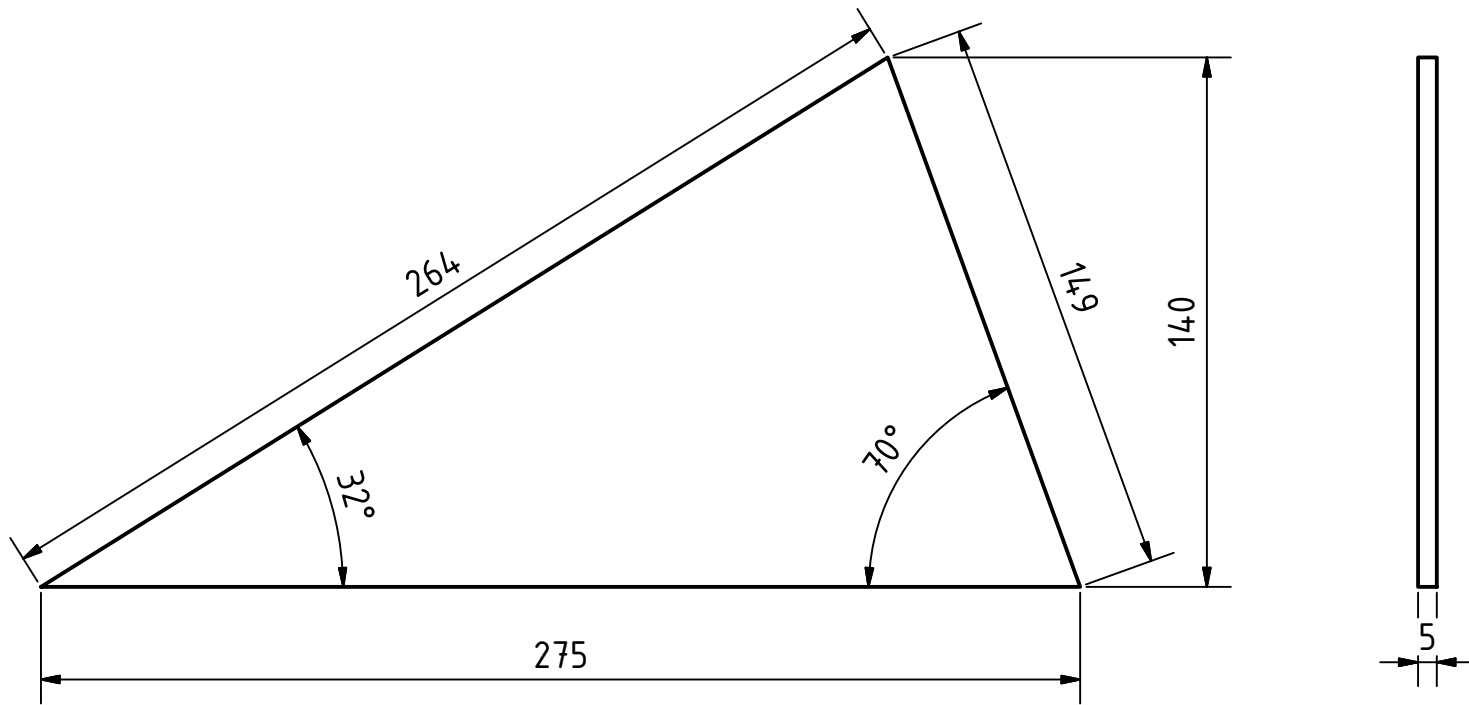
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Houseing base front | | oseg_cft_houseing-base-front.ipt | | | | | | 2.5 | |
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|  | |  | |  | | PART LICENCE | | steel C45 | |
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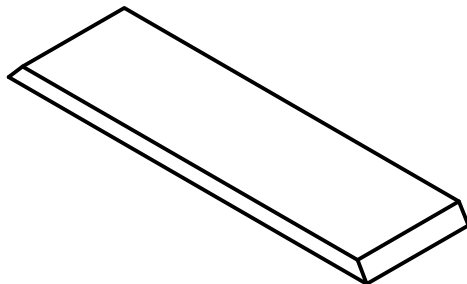
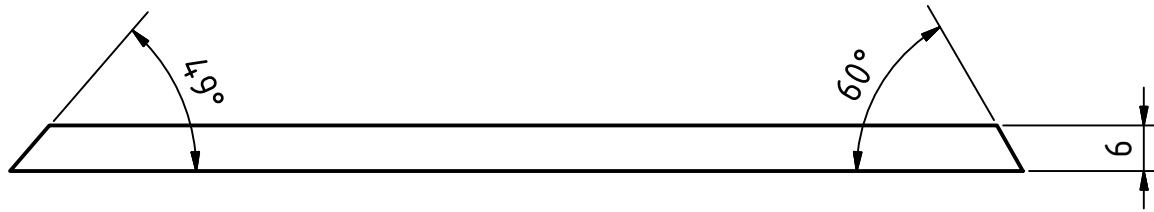
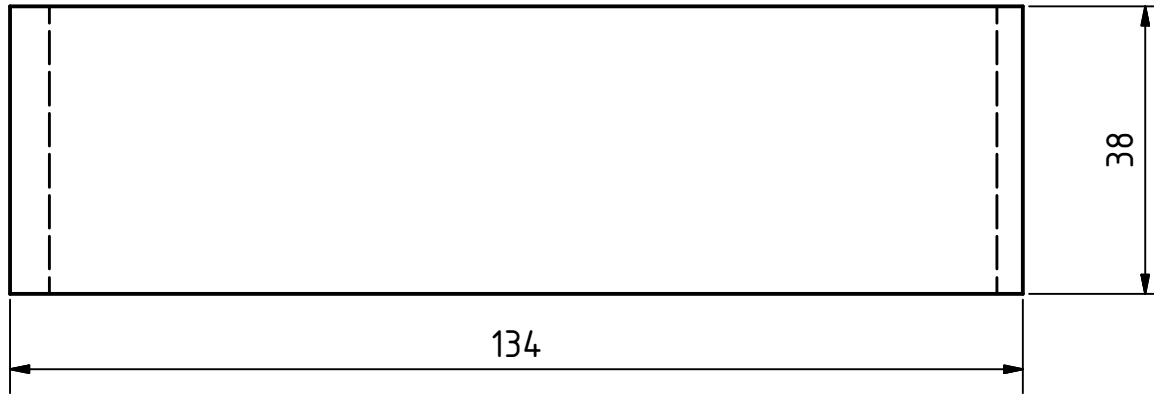
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| PROJECT | | CREATED BY | APPROVED BY | DATE | VERSION |
| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Houseing-base-rear | | oseg_cft_houseing-base-rear.ipt | | | 2.6 |
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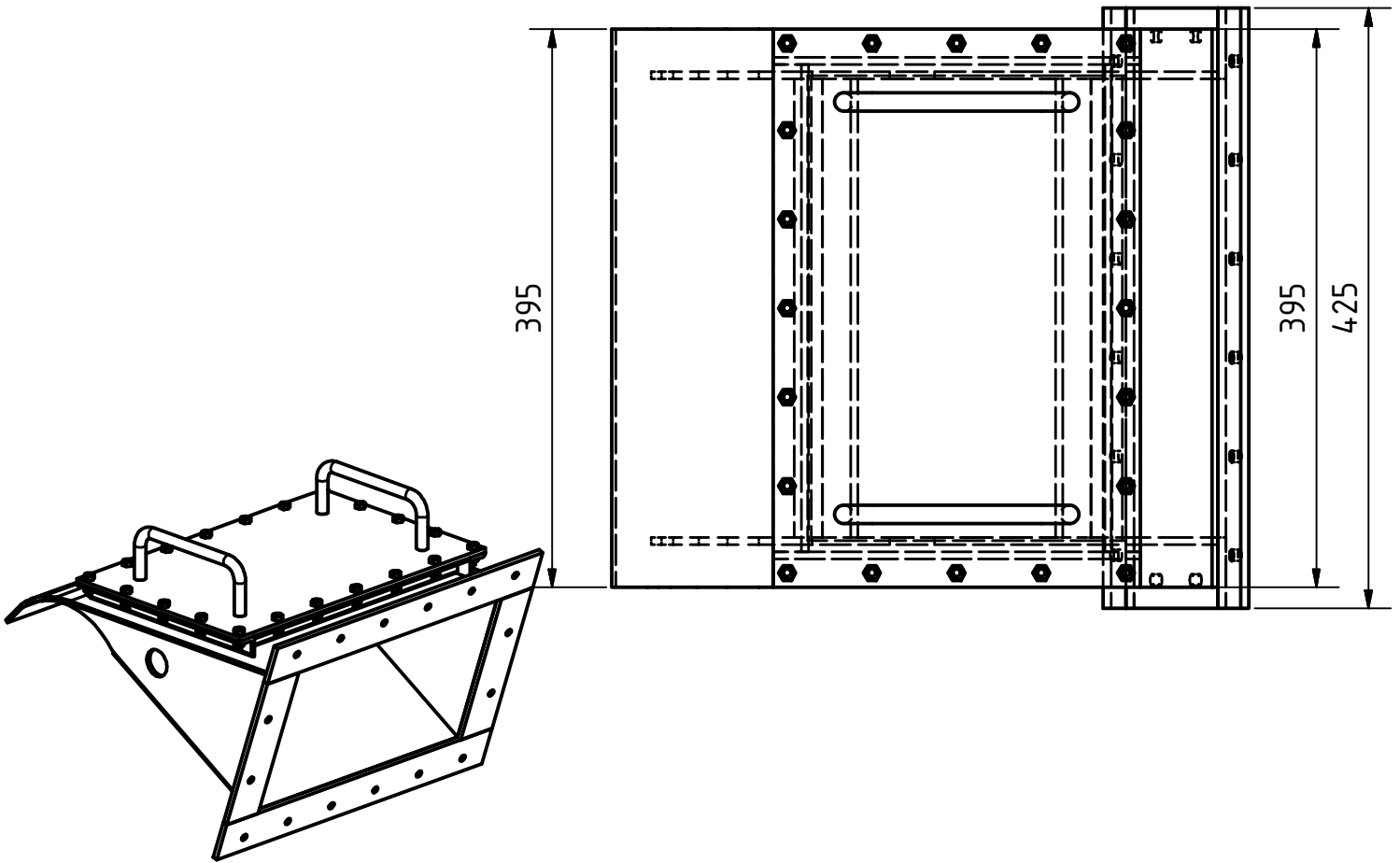
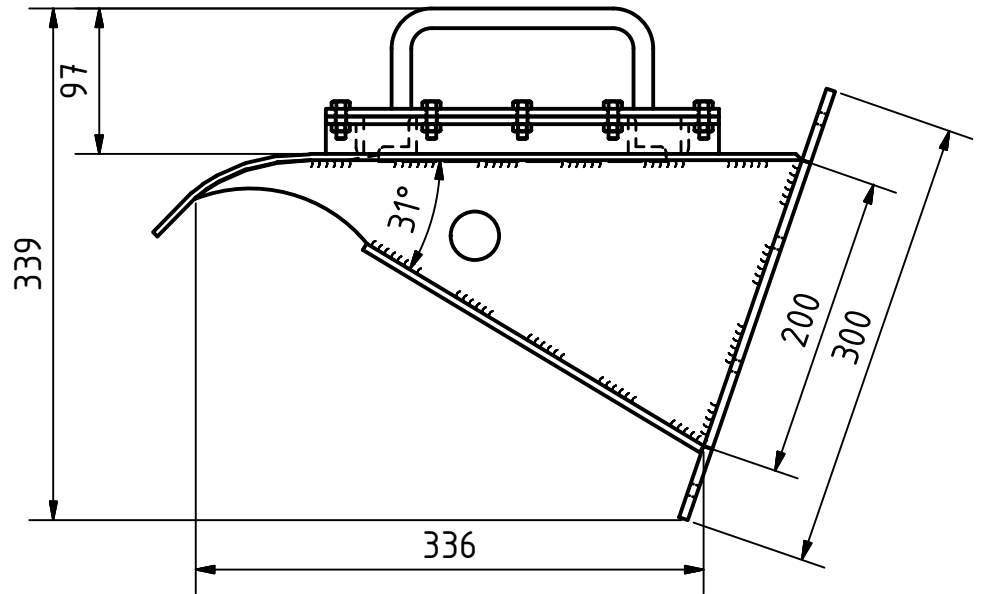
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | | | FILE NAME | | | | PART CODE | |
| Thear-stub | | | | oseg_cft_thear-stub.ipt | | | | 2.7 | |
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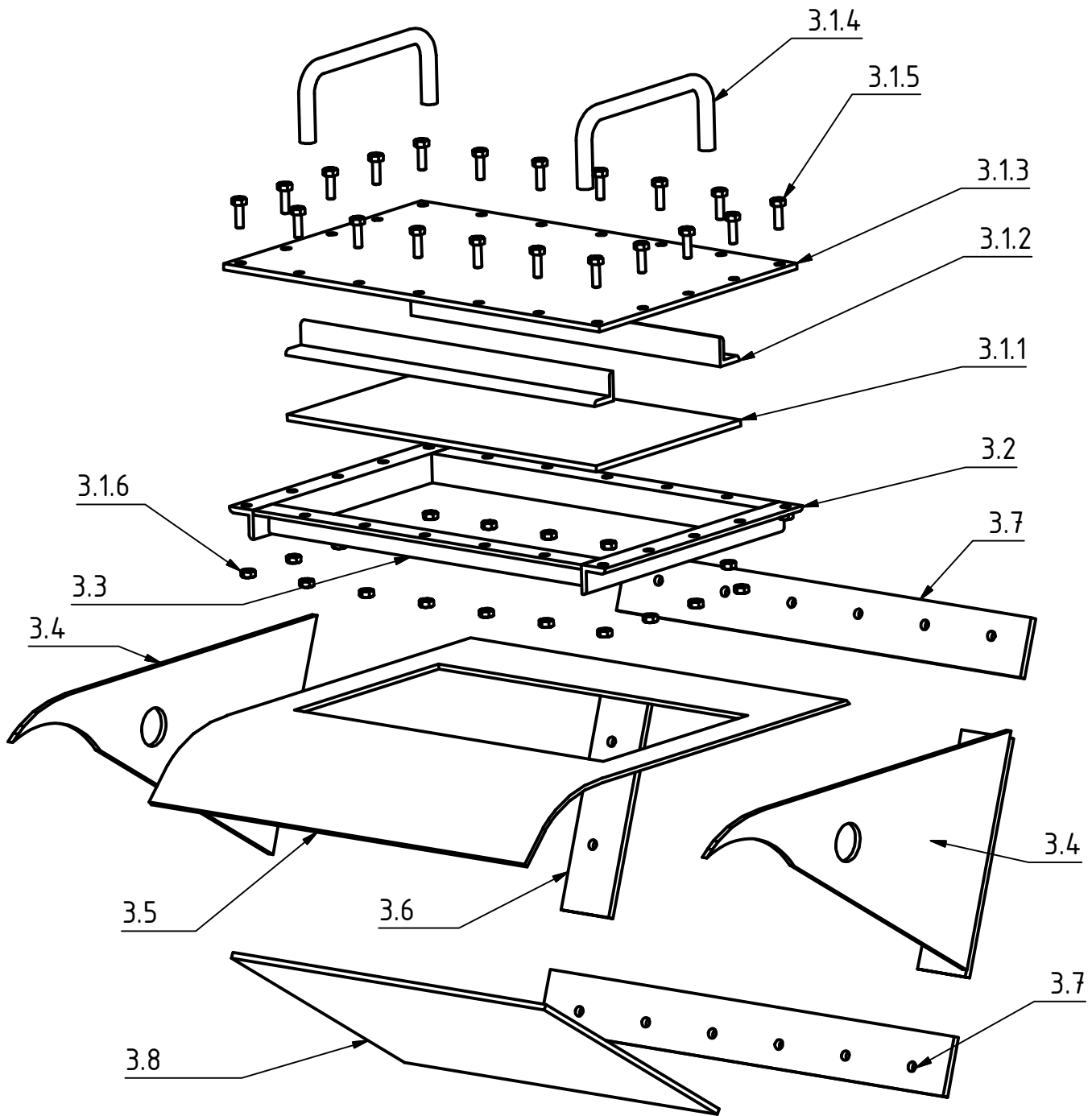
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Rib | | oseg_cft_rib.ipt | | | | | | 2.8 | |
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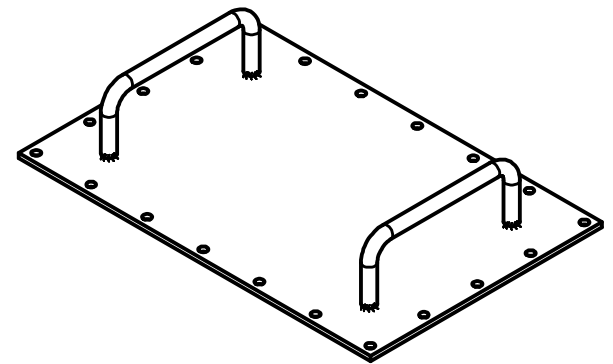
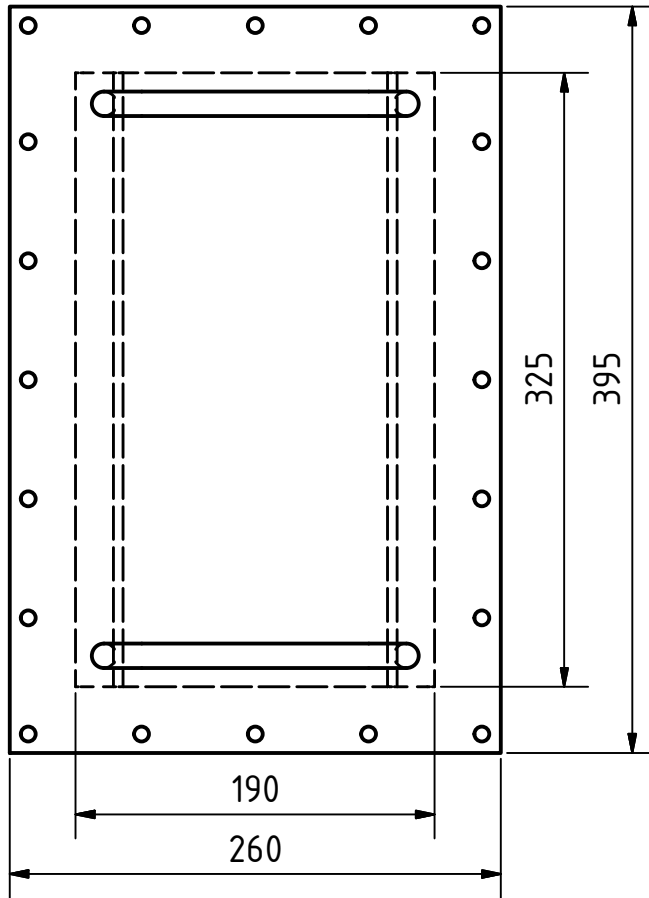
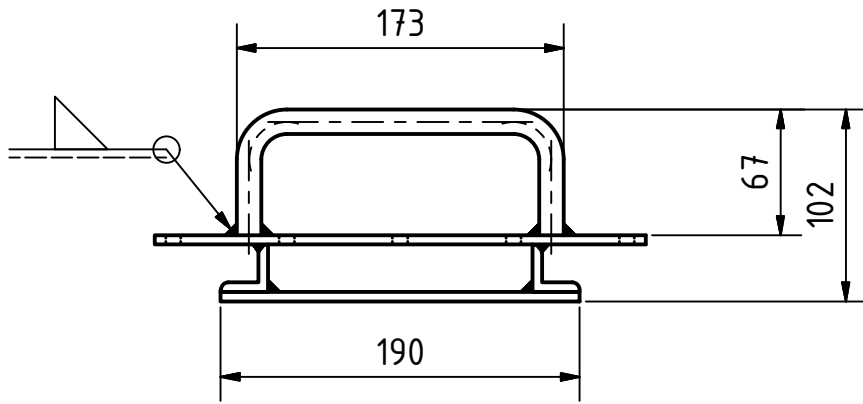
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| PART NAME | | FILE NAME | | | PART CODE |
| Bracing plate | | oseg_cft_bracing-plate.ipt | | | 2.9 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  OPEN SOURCE ECOLOGY GERMANY OSEG |  | PART LICENCE | steel C45 | 2 |
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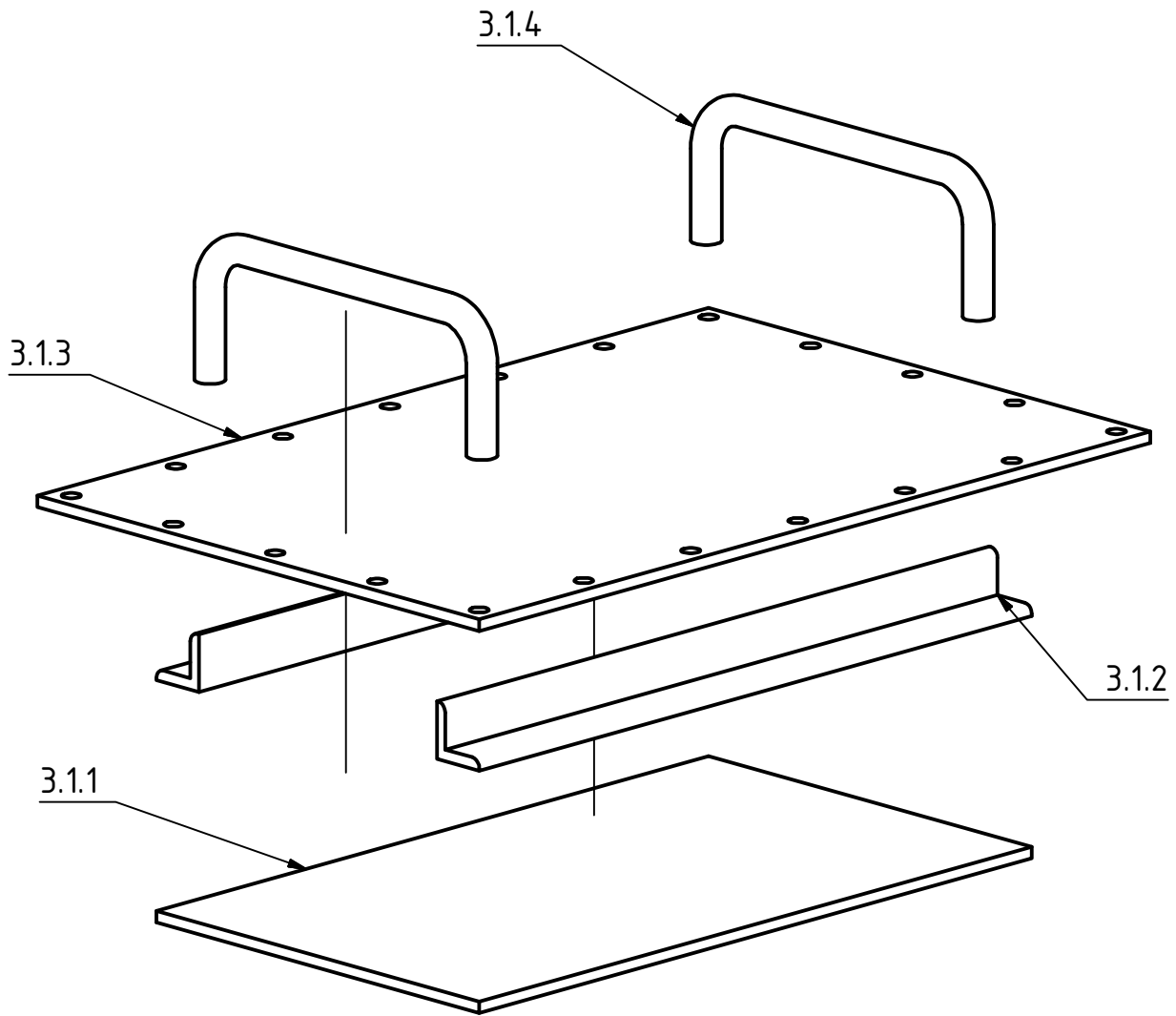
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | | |
| PART NAME | | FILE NAME | | | | | | | | PART CODE |
| Inlet top | | oseg_cft_Inlet-top.iam | | | | | | | | 3.0.0 |
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|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | ASSEMBLY LICENCE | | | | 1 |
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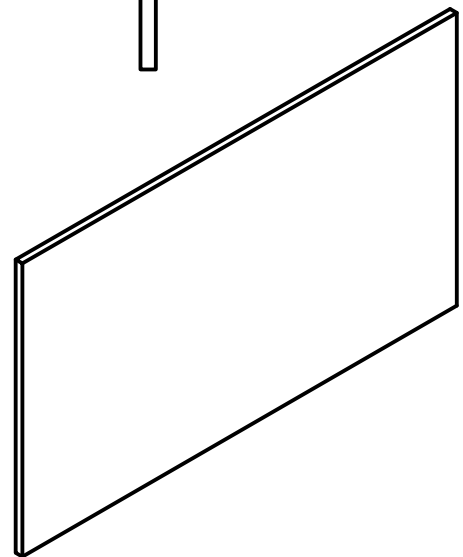
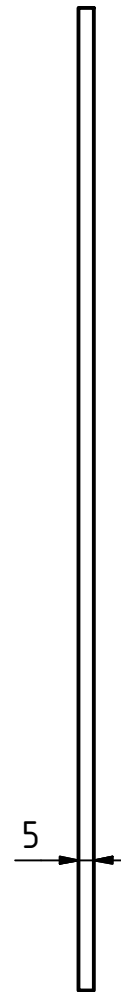
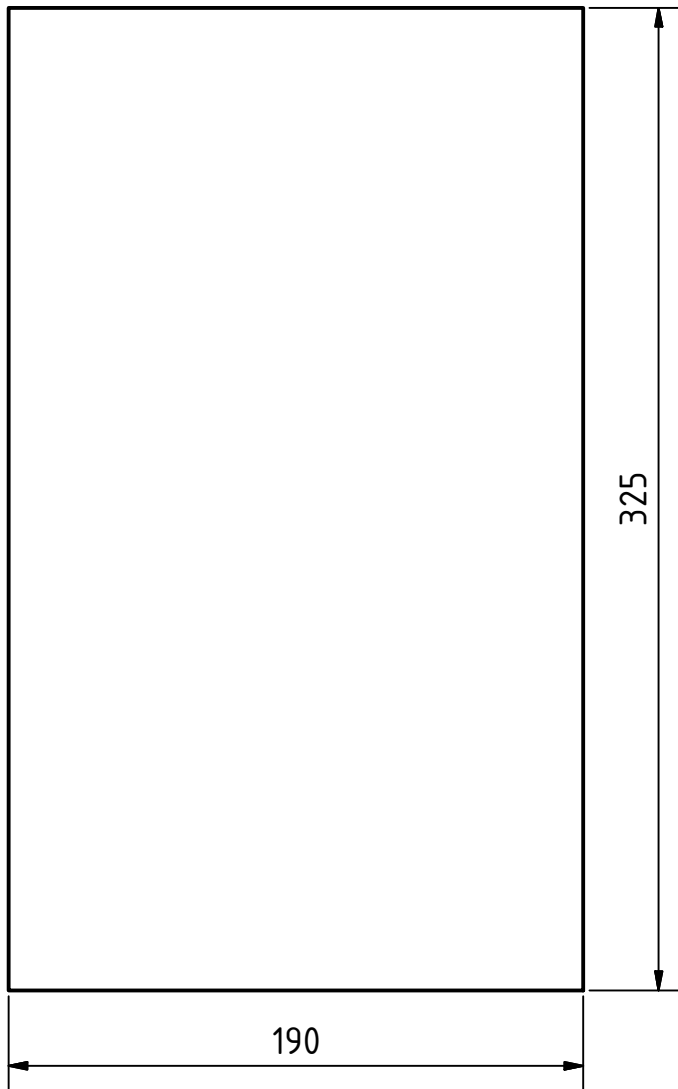
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
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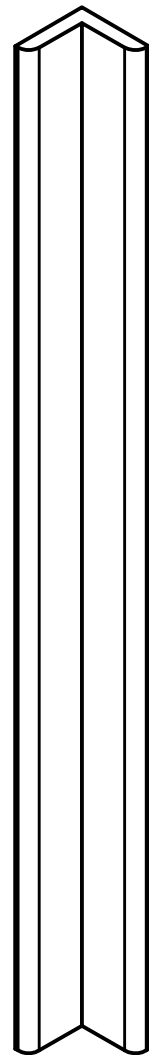
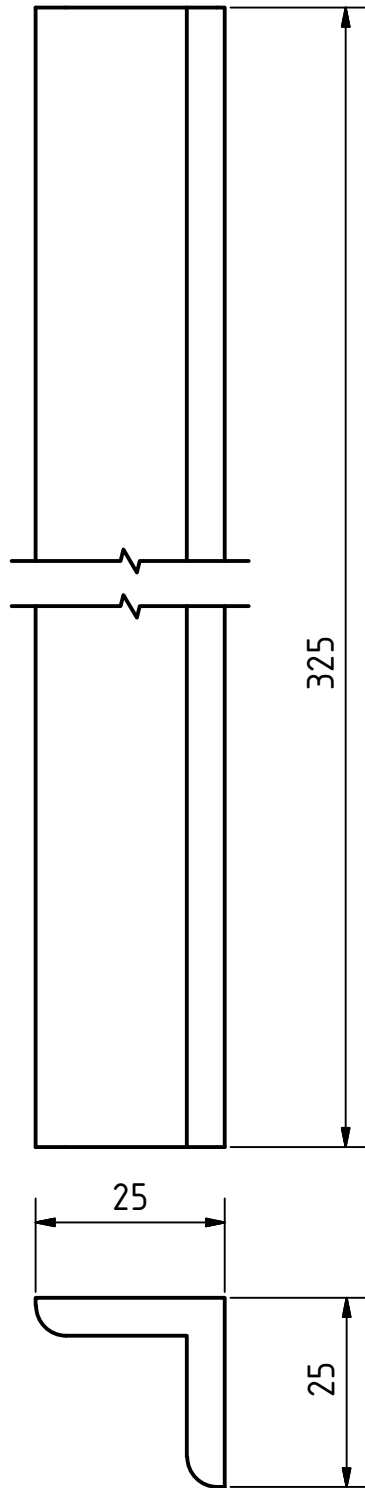
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
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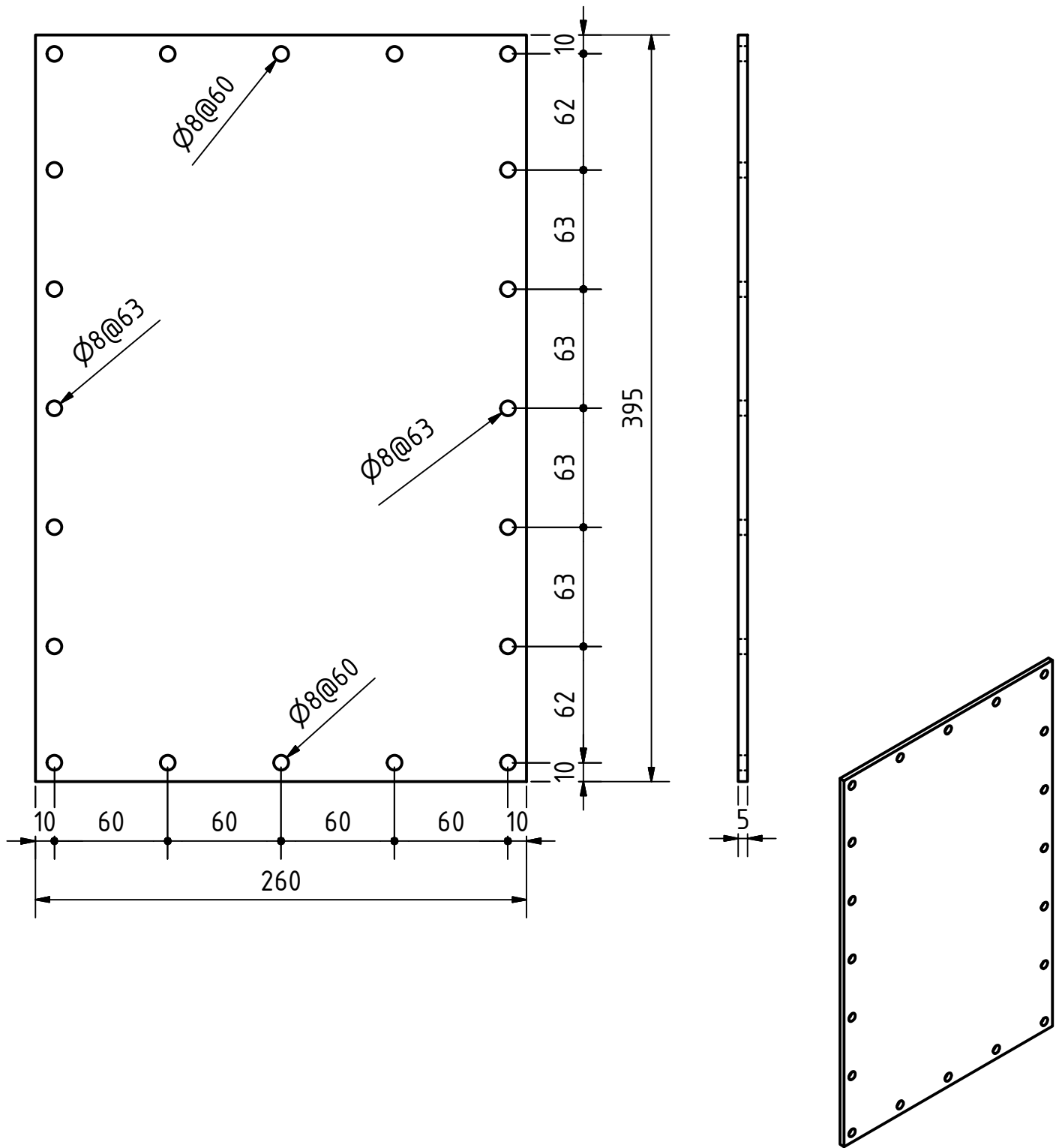
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| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
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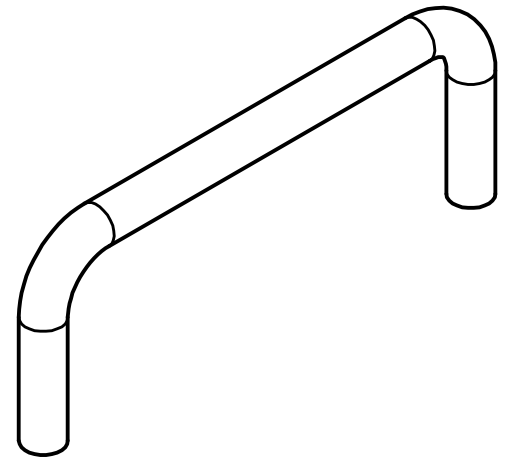
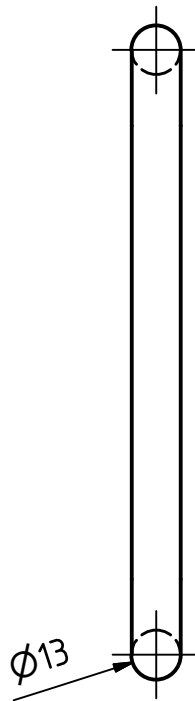
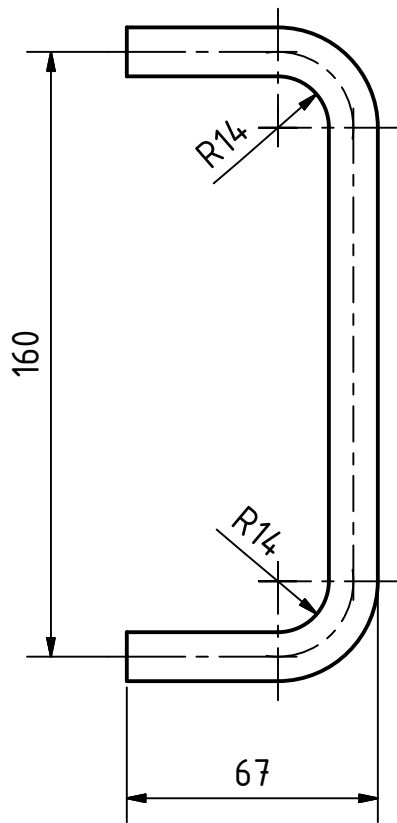
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| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
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| Hatch door sheet02 | | oseg_cft_Hatch-door-sheet02.ipt | | | 3.1.1 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
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| | OSEG | | LICENCE | SCALE | SHEET |
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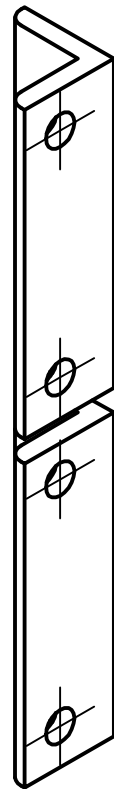
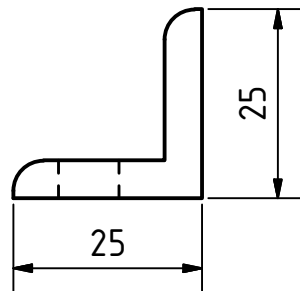
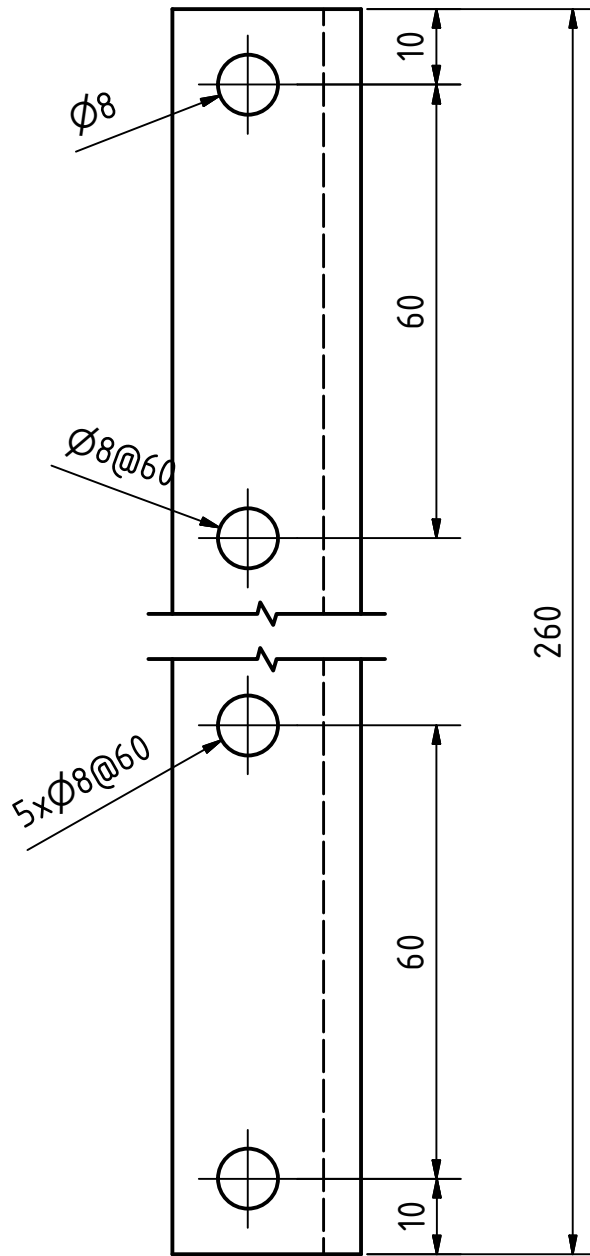
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
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| Hatch door frame L25x325 | | | | oseg_cft_Hatch-door-frame03.ipt | | | | 3.1.2 | |
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|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART | | ASTM-A36 | |
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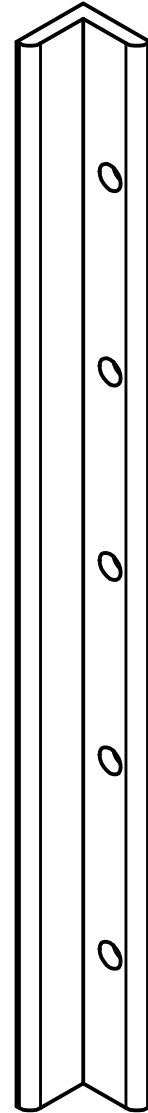
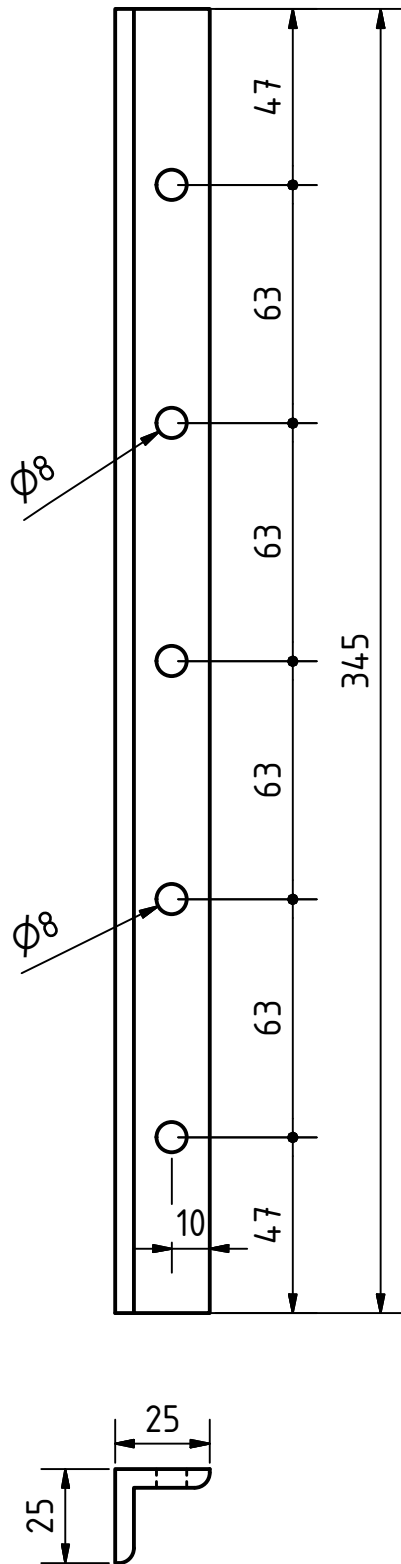
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| PART NAME | | | | FILE NAME | | | | PART CODE | |
| oseg_cft_Hatch-door-sheet | | | | oseg_cft_Hatch-door-sheet.ipt | | | | 3.1.3 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | Steel C45 | |
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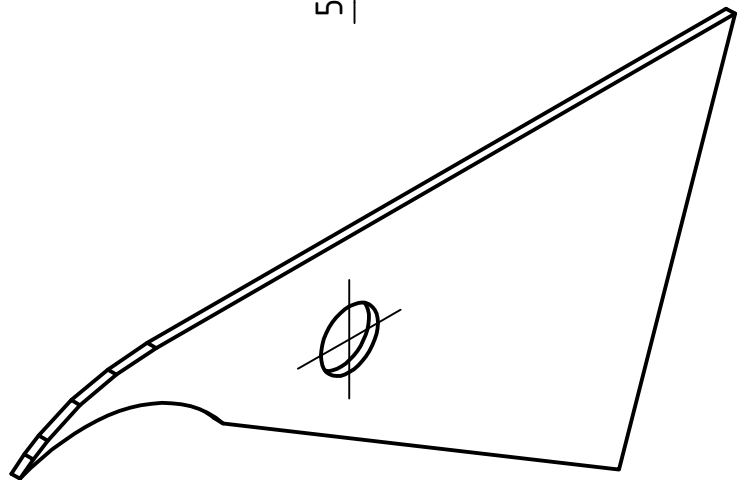
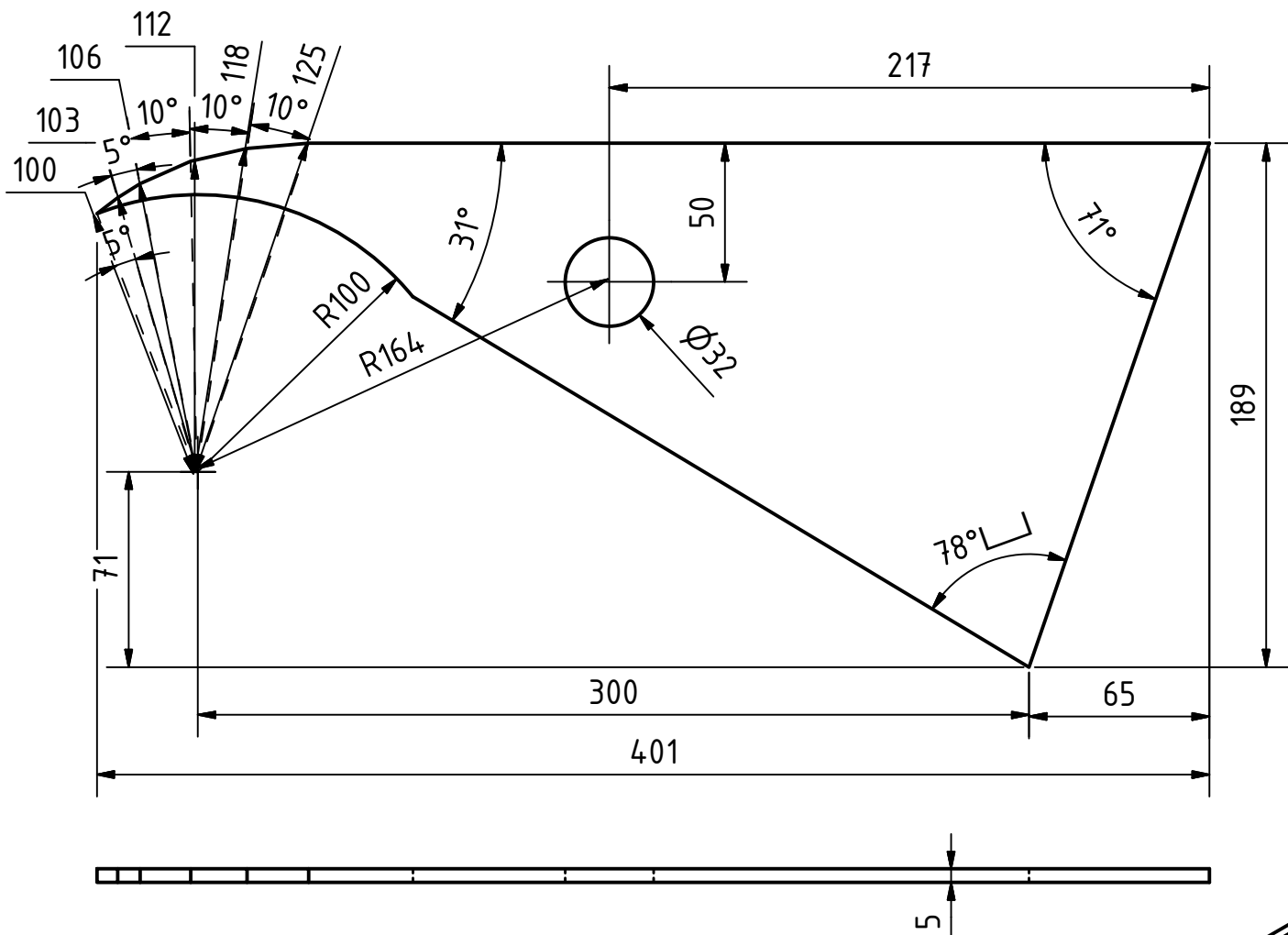
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
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| Handle | | oseg_cft_Handle.ipt | | | | | | 3.1.4 | |
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|  | |  | |  | | PART | | ASTM-A36 | |
| | | | | | | LICENCE | | SCALE | |
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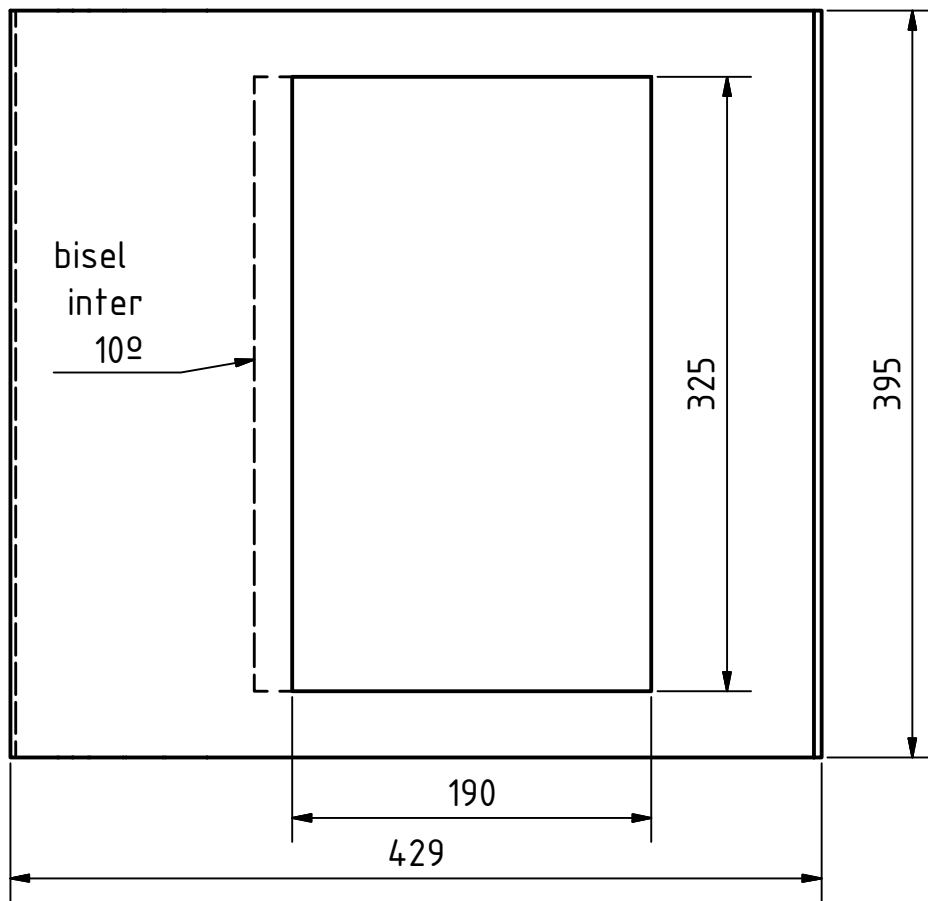
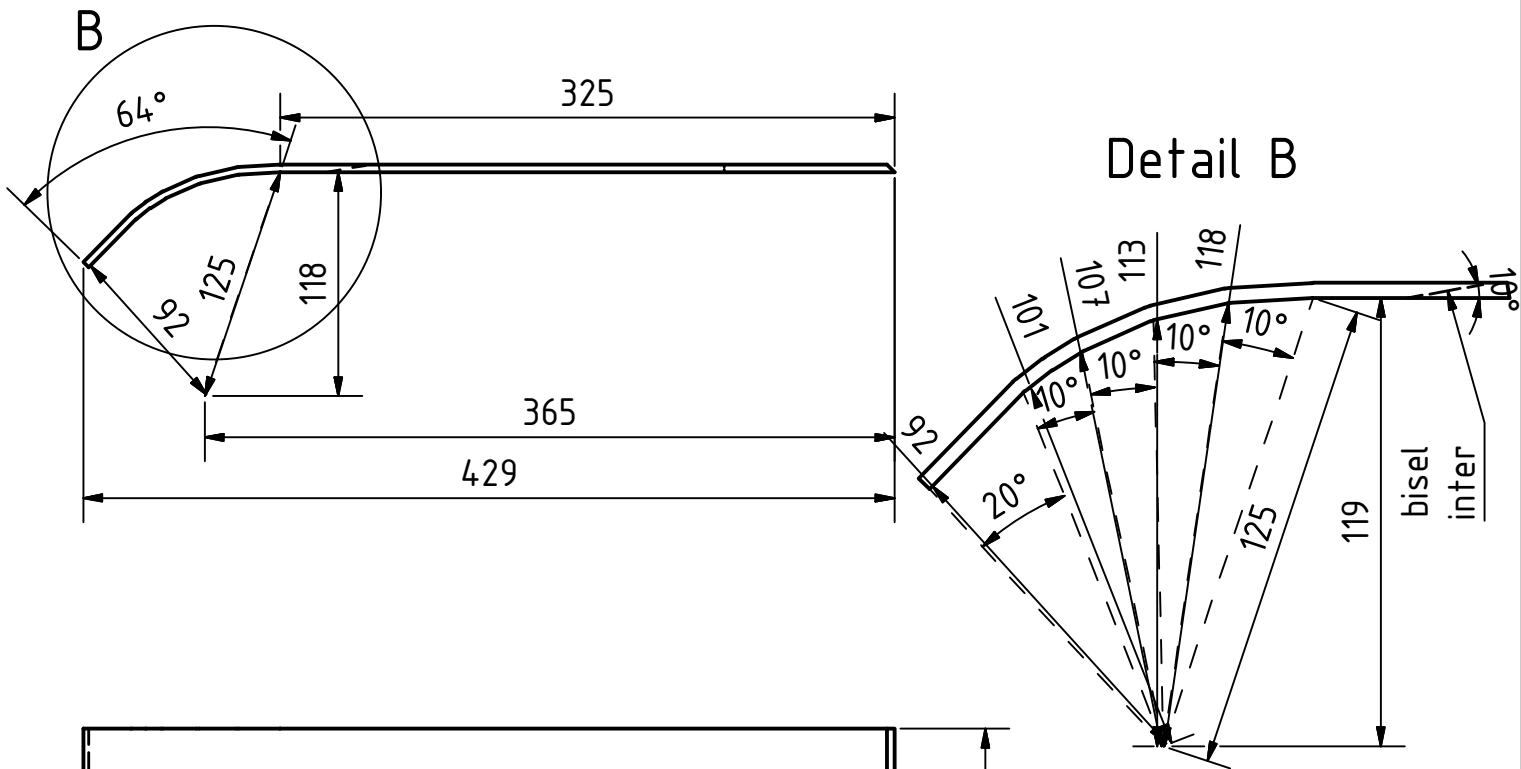
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| Hatch door frame L25x260 | | | | oseg_cft_Hatch-door-frame01.ipt | | | | 3.2.0 | |
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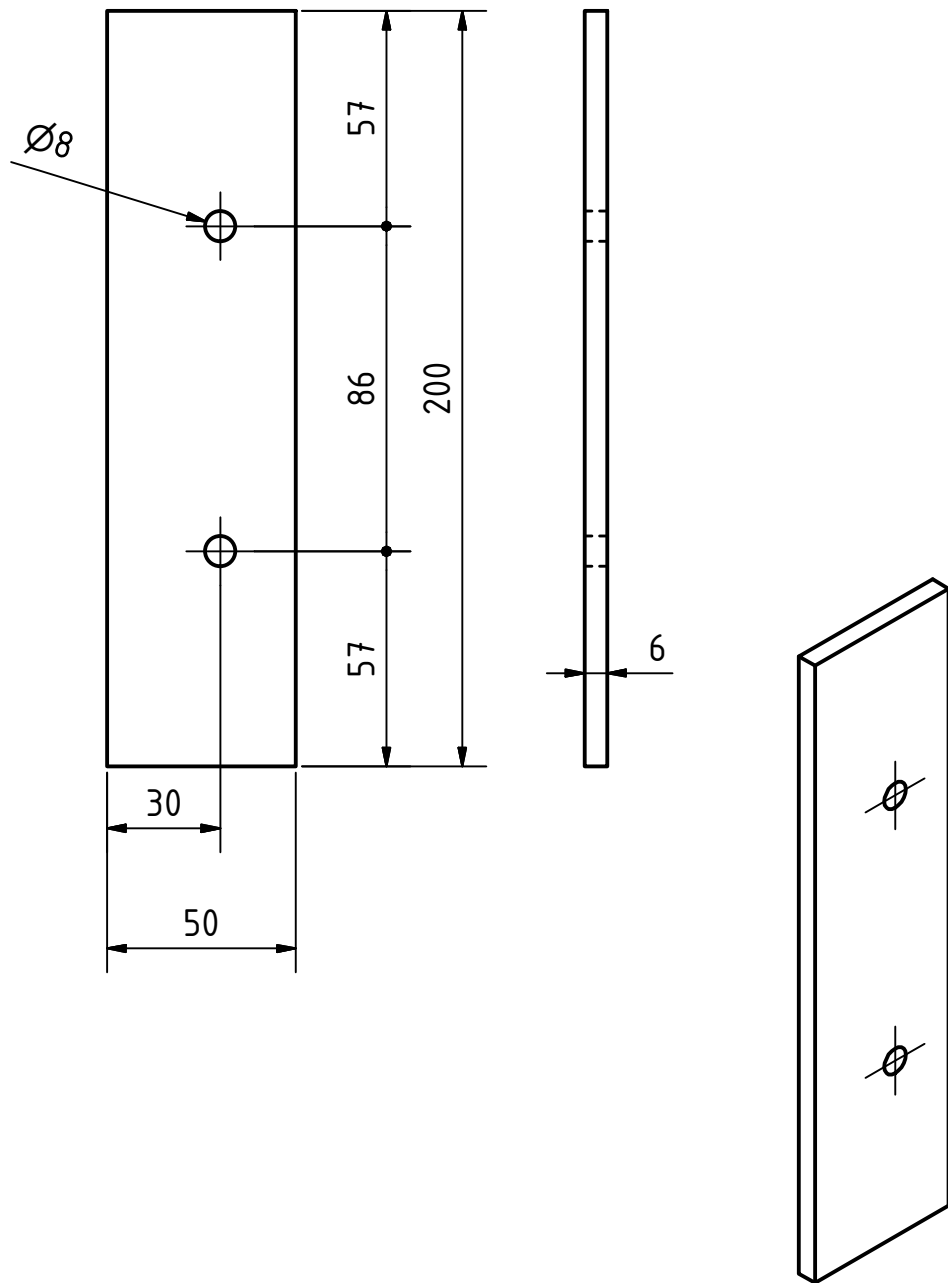
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| Hatch door frame L25x345 | | | | oseg_cft_Hatch-door-frame02.ipt | | | | 3.3.0 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
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| | | | | | | LICENCE | | SCALE | |
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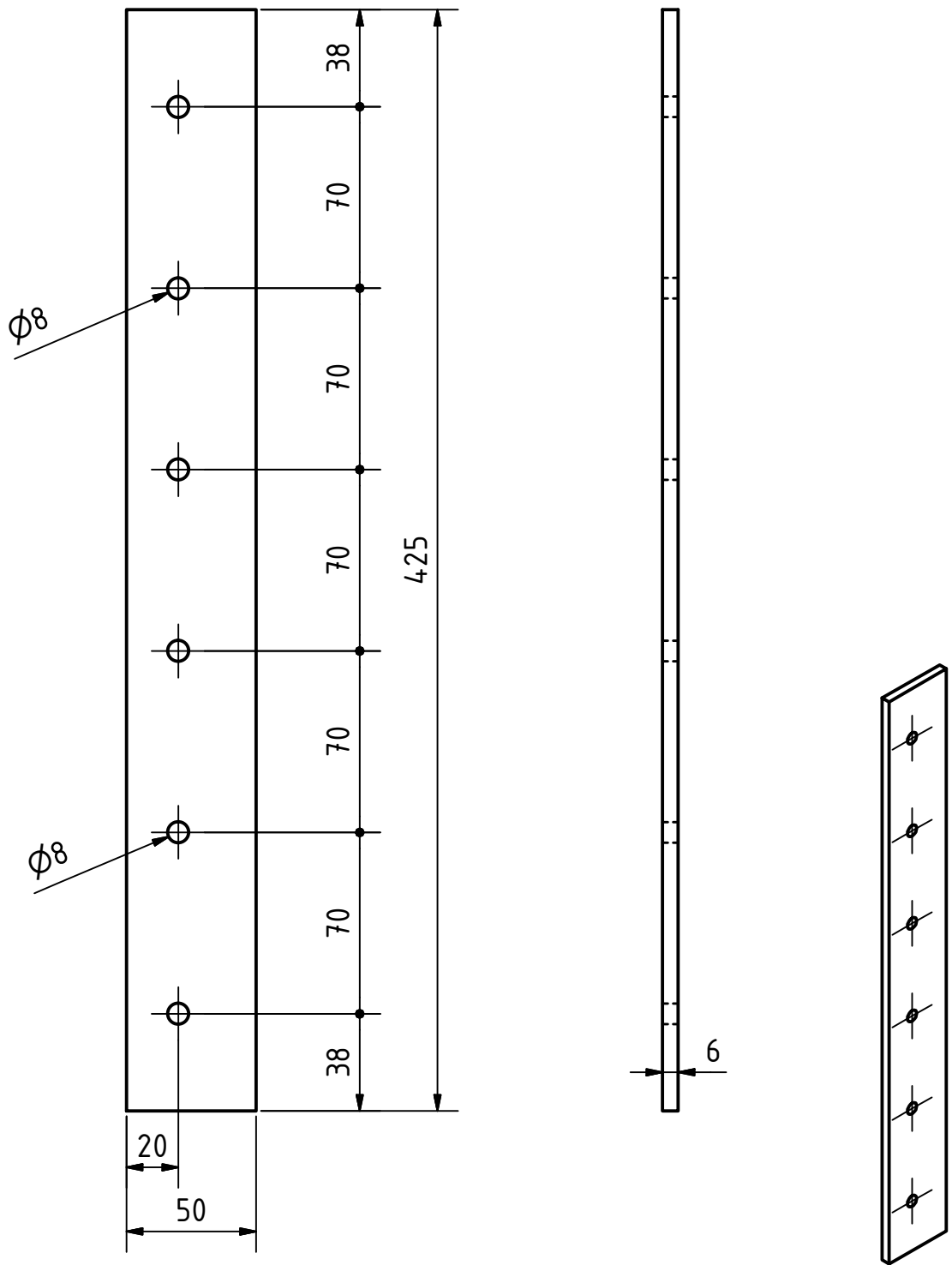
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| PART NAME | | FILE NAME | | | PART CODE |
| Inlet side plate | | oseg_cft_inlet-side-plate.ipt | | | 3.4.0 |
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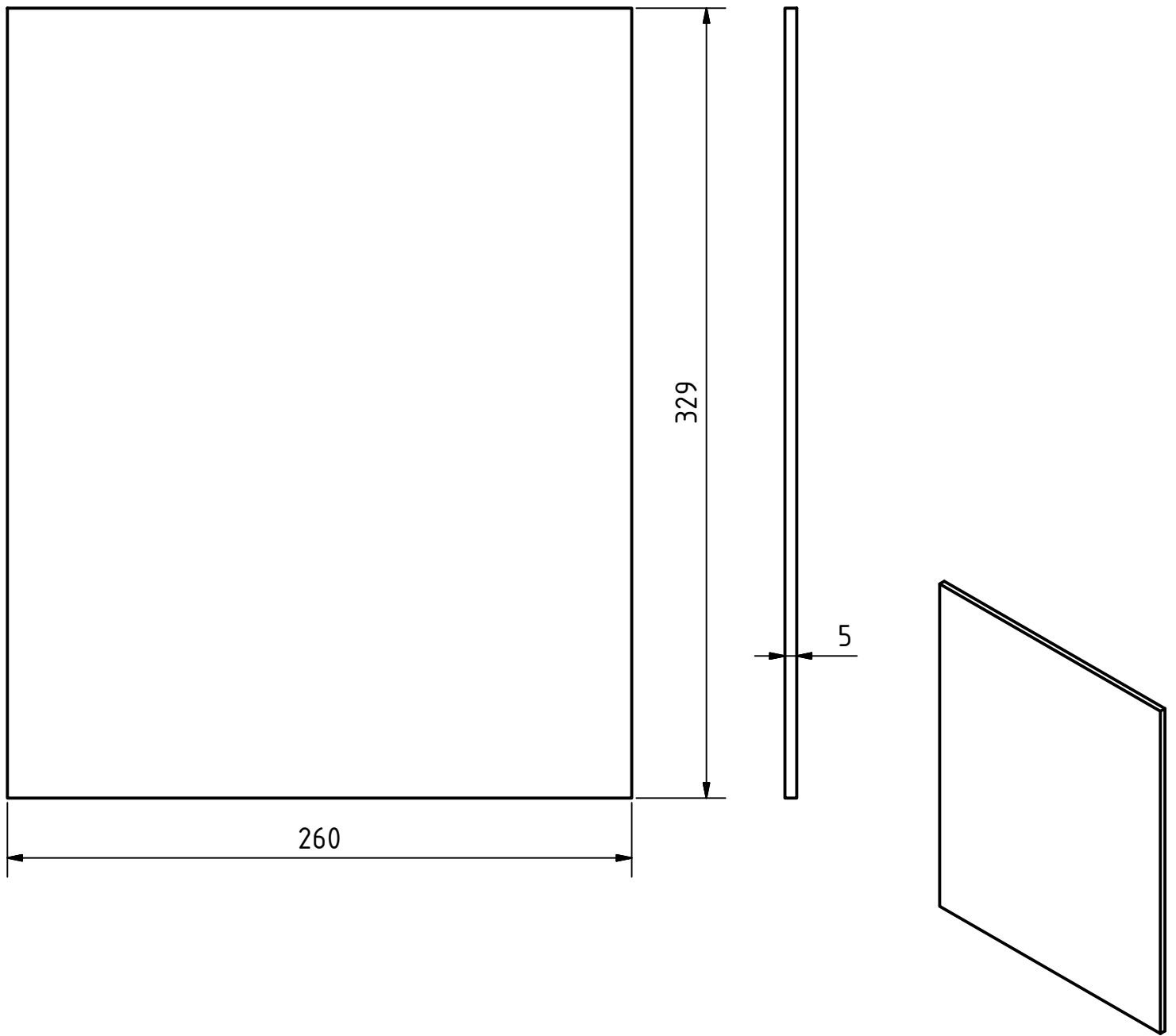
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | | |
| PART NAME | | FILE NAME | | | | | | | | PART CODE |
| Inlet top guide | | oseg_cft_Inlet-top-guide.ipt | | | | | | | | 3.5.0 |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | | QUANTITY |
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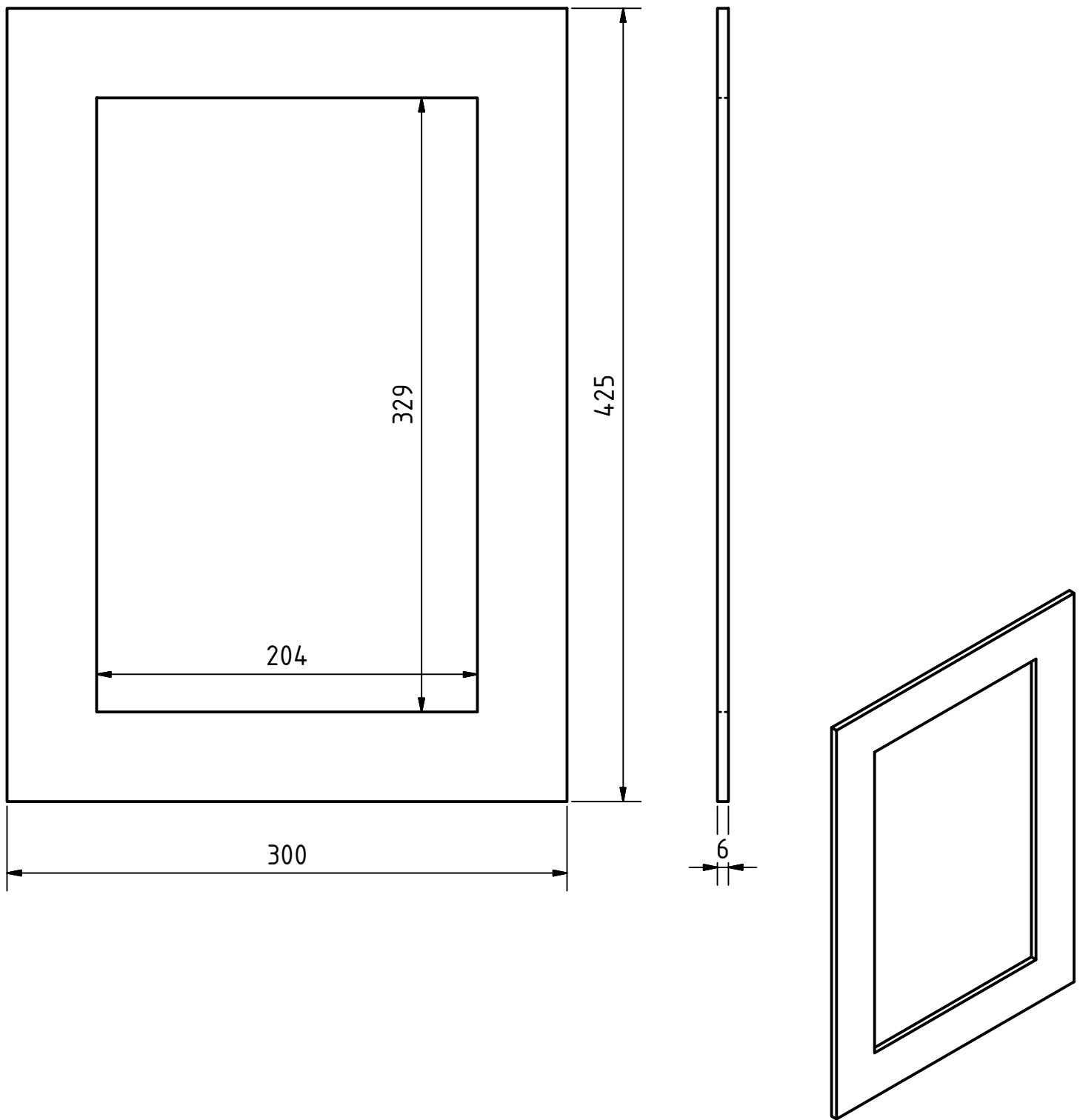
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Inlet flange | | oseg_cft_Inlet-flange.ipt | | | | | | 3.6.0 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  | |  | | PART | | Steel C45 | |
| | | | | | | LICENCE | | SCALE | |
| | | | | | | CC.BY.SA 4.0 | | 1:2 | |
| | | | | | | | | QUANTITY | |
| | | | | | | | | 2 | |
| | | | | | | | | SHEET | |
| | | | | | | | | 39 /90 | |






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| PROJECT | | CREATED BY | | APPROVED BY | | DATE | | VERSION | |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Inlet flange2 | | oseg_cft_Inlet-flange2.ipt | | | | | | 3.7.0 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART | | Steel C45 | |
| | | | | | | LICENCE | | SCALE | |
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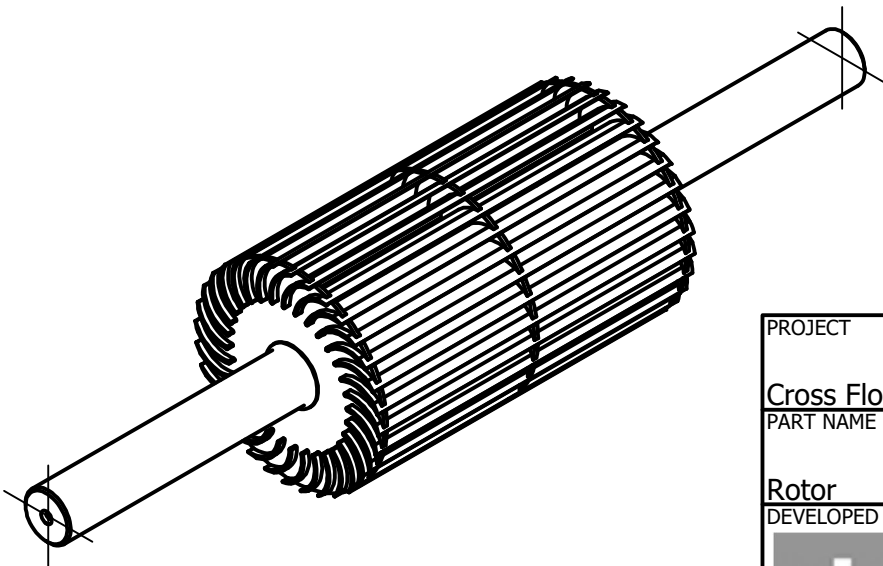
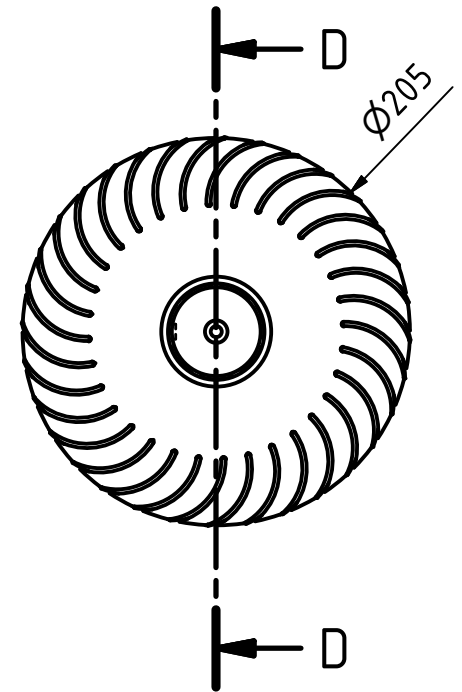
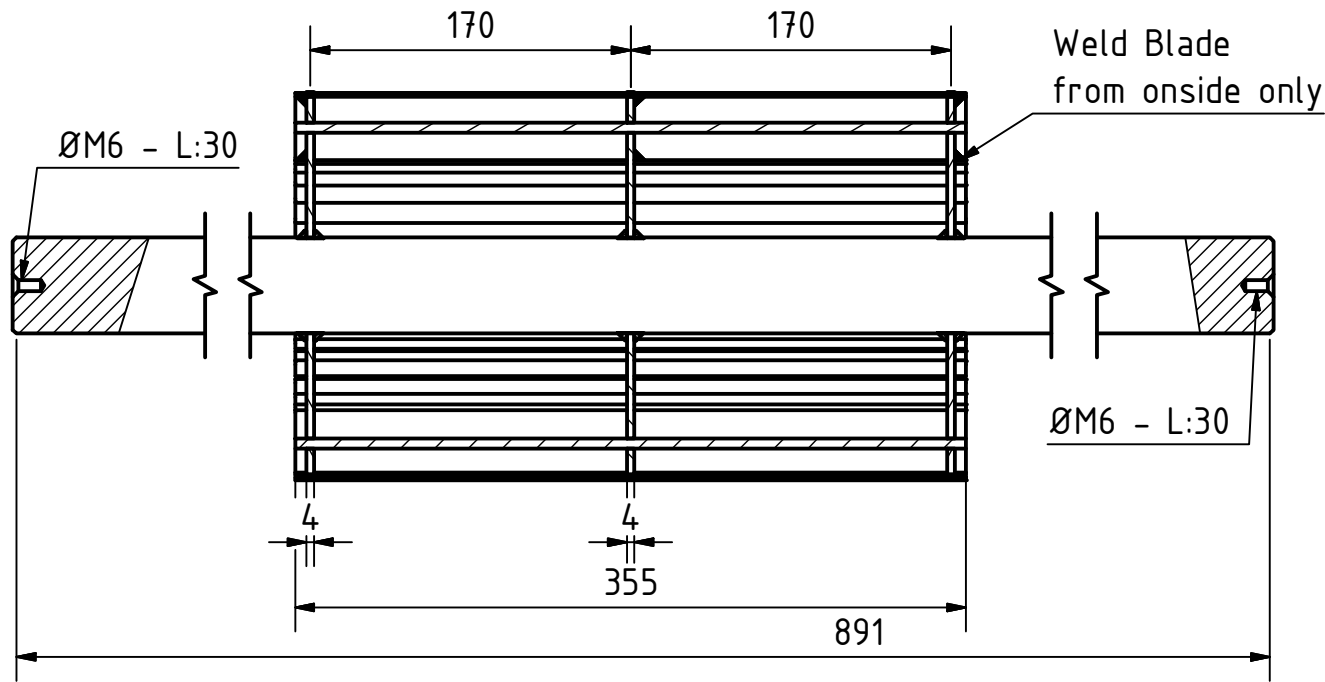





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| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Inlet bottom plate | | oseg_cft_Inlet-bottom-plate.ipt | | | 3.8.0 |
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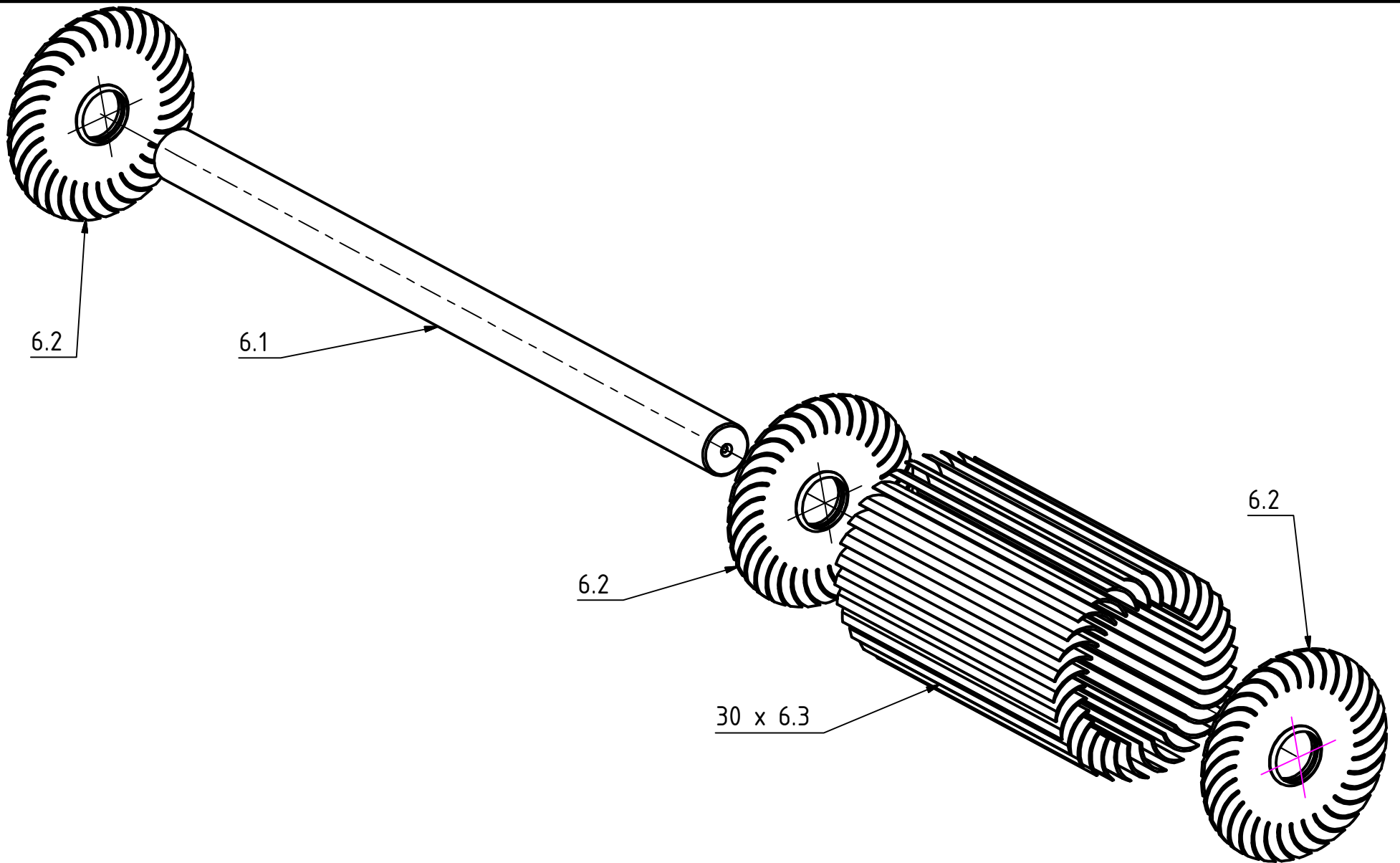





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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
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| Inle-gasket | | oseg_cft_Inle-gasket.ipt | | | | | | 3.9.0 | |
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|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | Rubber | |
| | | | | | | CC.BY.SA 4.0 | | SCALE | |
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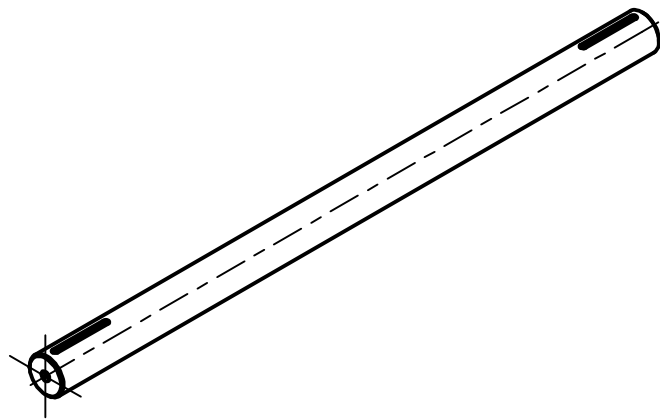
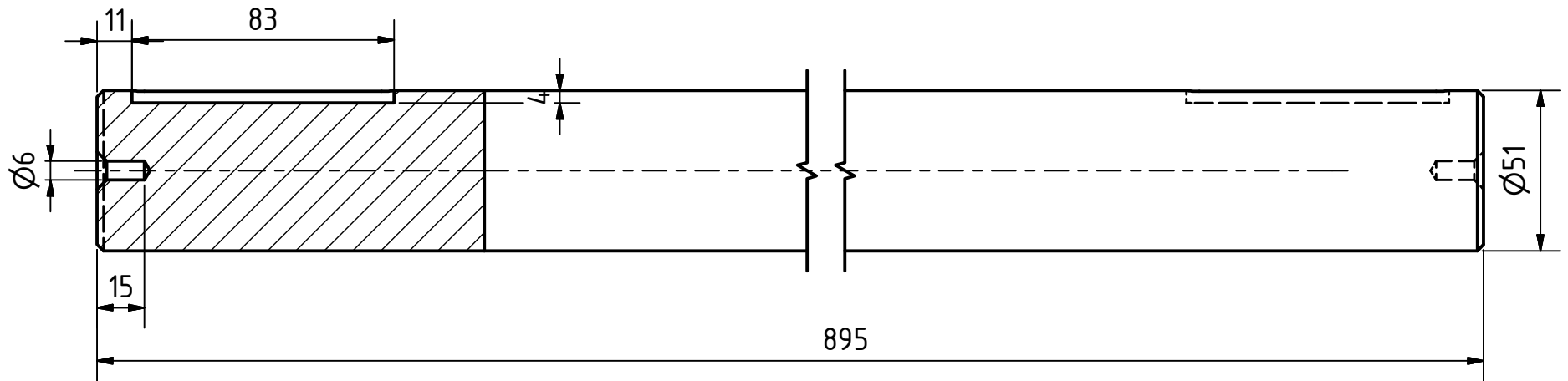
Section D-D





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| PROJECT | CREATED BY | APPROVED BY | DATE | VERSION |
| Cross Flow Turbine | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | FILE NAME | | | PART CODE |
| Rotor | oseg_cft_Rotor.iam | | | 4 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL |
|  |  OPEN SOURCE ECOLOGY GERMANY OSEG |  | ASSEMBLY | |
| | | | LICENCE | SCALE |
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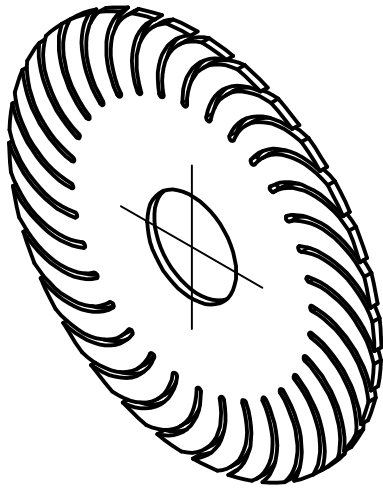
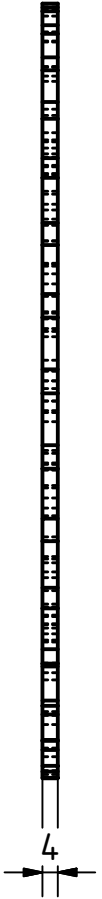
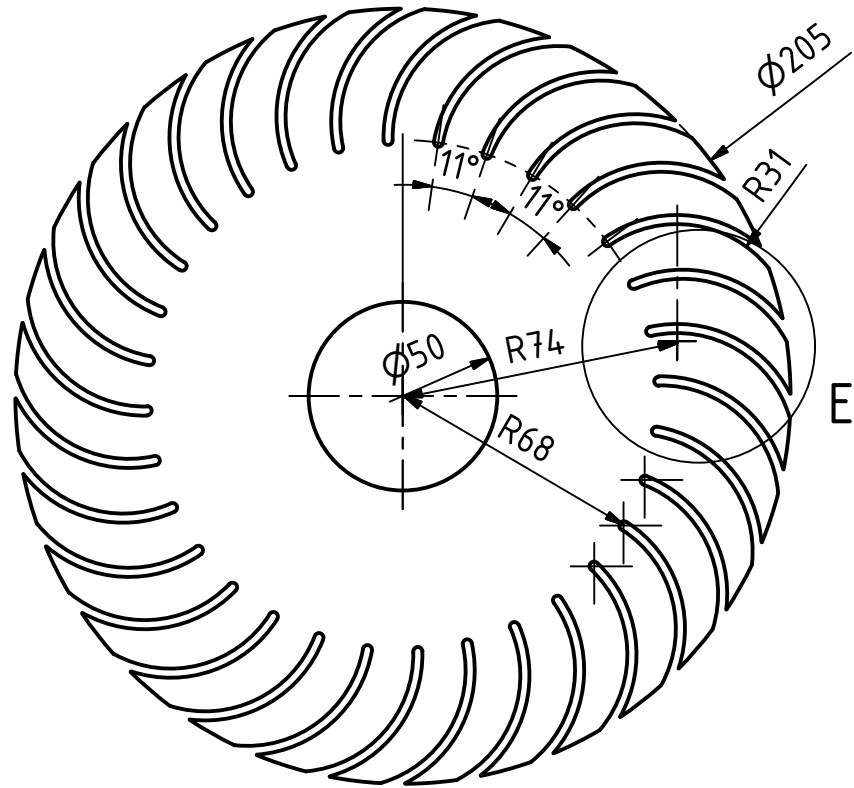
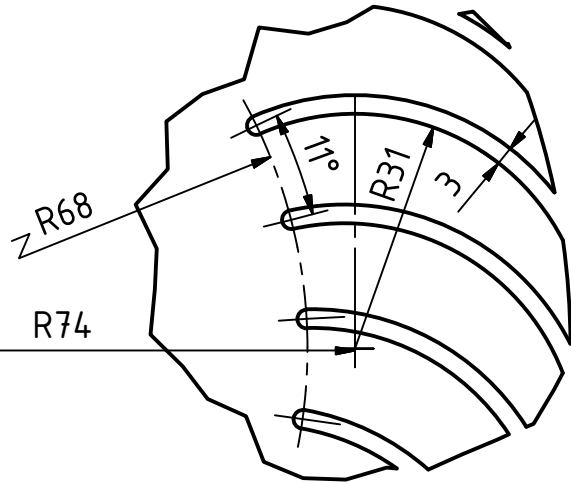





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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
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| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
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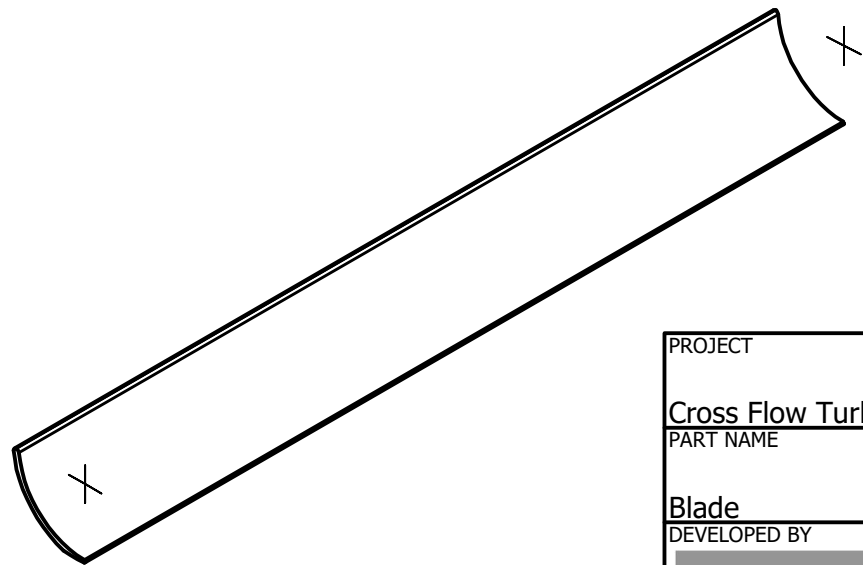
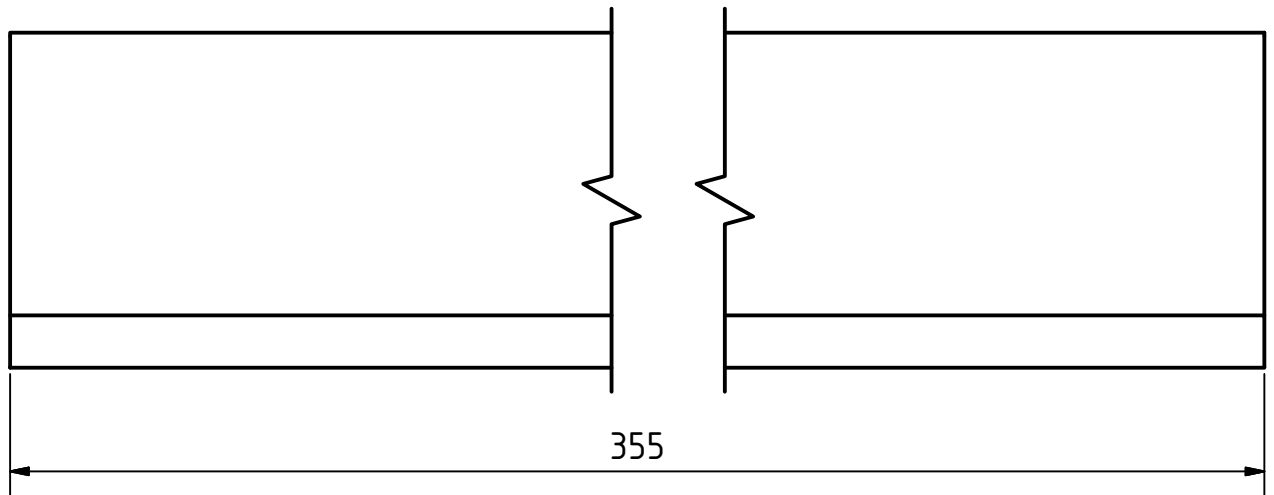
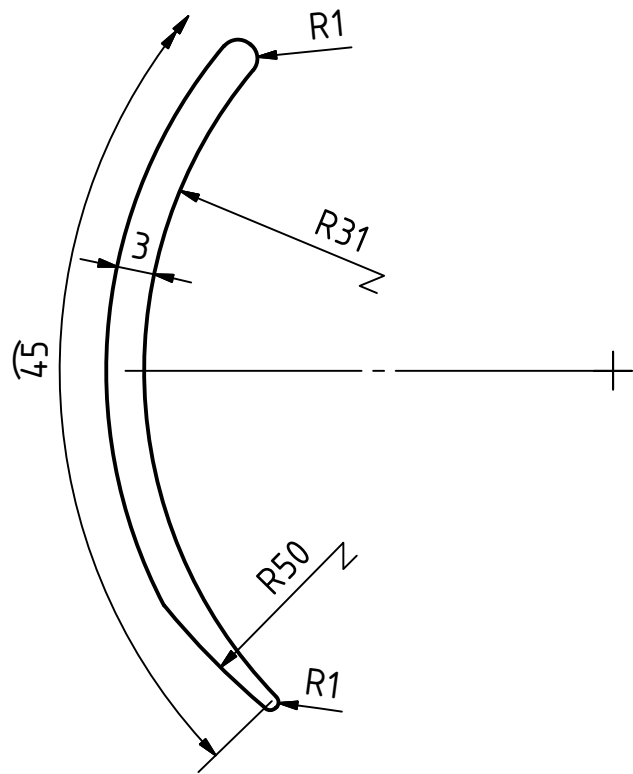


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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
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| Rotor shaft | | oseg_cft_Rotor-shaft.ipt | | | | | | 4.1 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
| skat | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  E.ON STIFTUNG | | PART | | Steel C45 hardened | |
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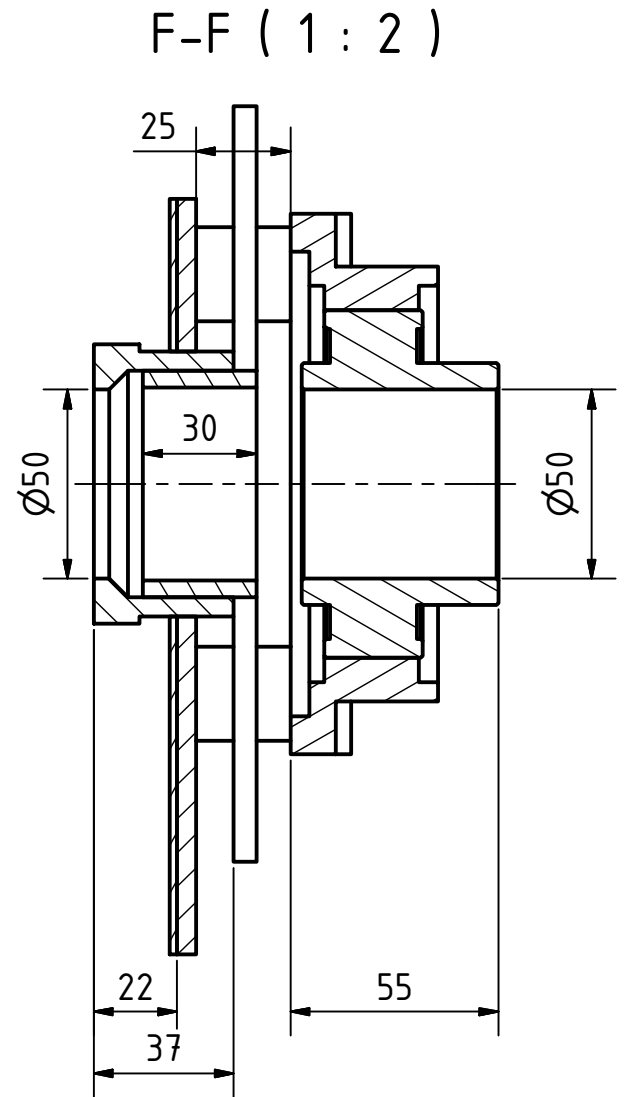
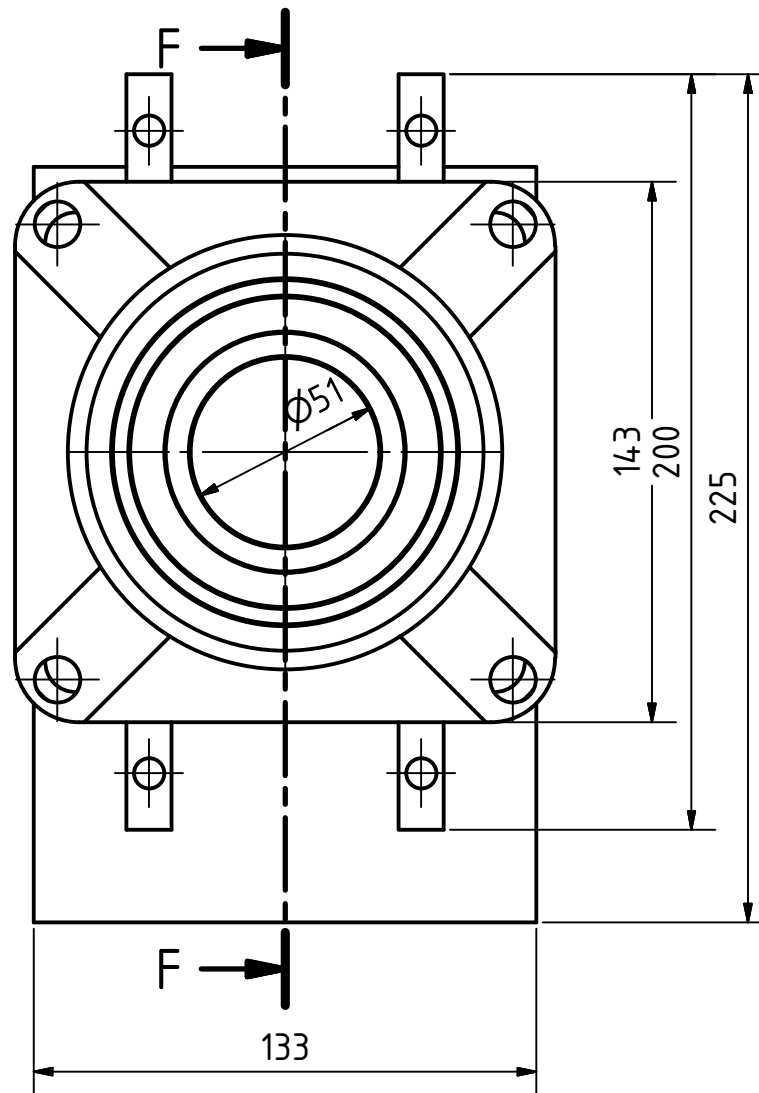
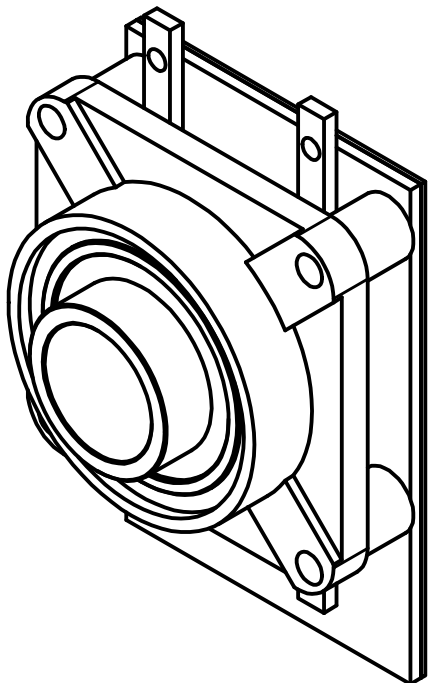
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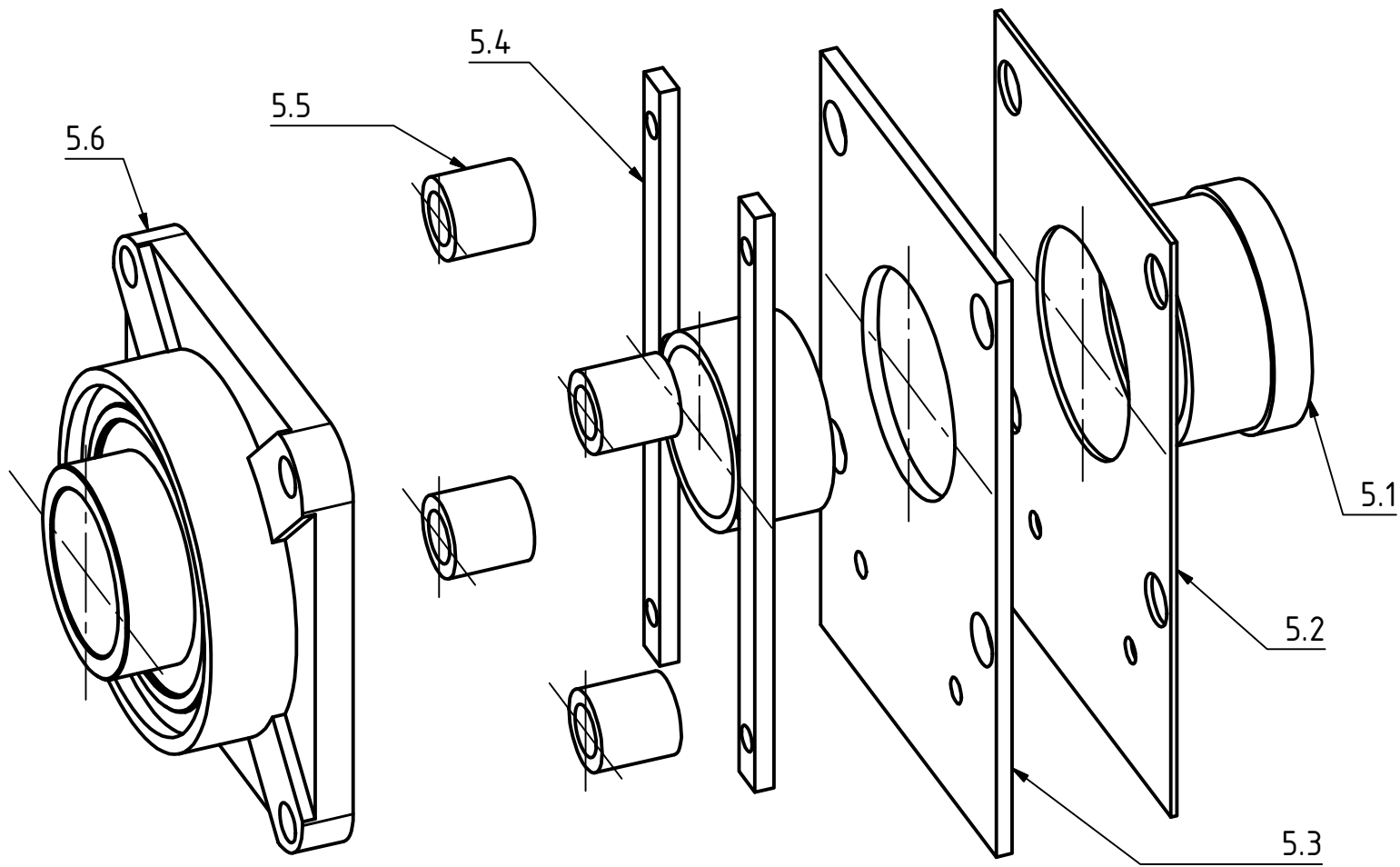
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | | |
| PART NAME | | FILE NAME | | | | | | | | PART CODE |
| Rotor disc | | oseg_cft_Rotor-disc.ipt | | | | | | | | 4.2 |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | | QUANTITY |
|  | |  OSEG | |  | | PART LICENCE | | Steel C45 | | 3 |
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| PROJECT | | CREATED BY | | APPROVED BY | | DATE | | VERSION | |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Blade | | oseg_cft_Blade.ipt | | | | | | 4.3 | |
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| | | | | | | | | QUANTITY | |
| | | | | | | | | 32 | |
| | | | | | | | | SHEET | |
| | | | | | | | | 47 /90 | |

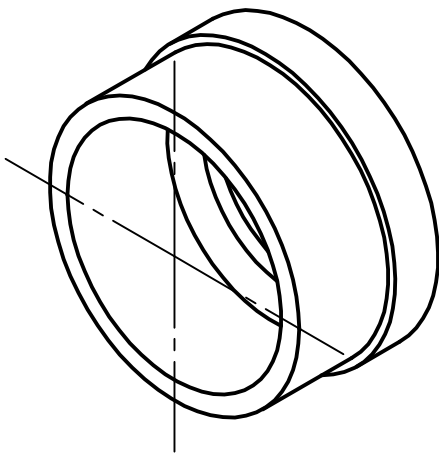
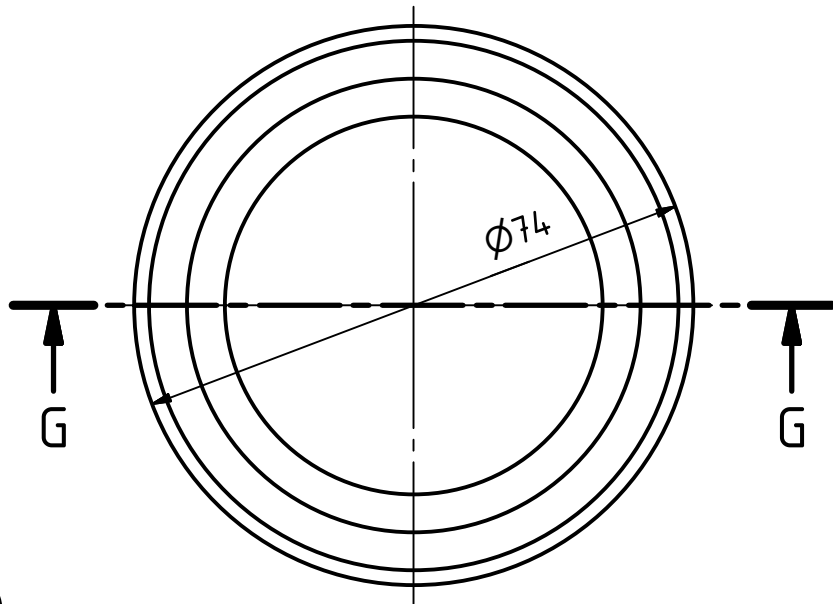
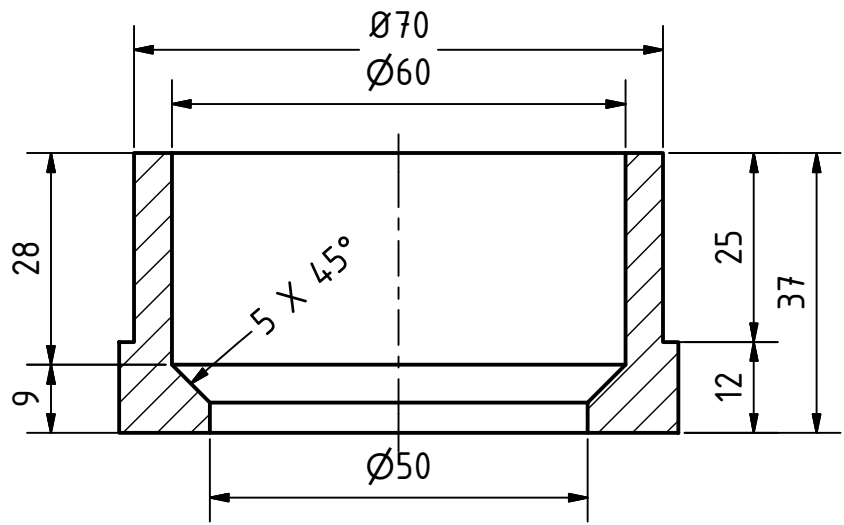






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| PROJECT | | CREATED BY | | APPROVED BY | | DATE | | VERSION | | |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | | |
| PART NAME | | FILE NAME | | | | | | | | PART CODE |
| Stuffing box | | oseg_cft_Stuffing box.iam | | | | | | | | 5 |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | | QUANTITY |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  E.ON STIFTUNG | | ASSEMBLY | | | | 2 |
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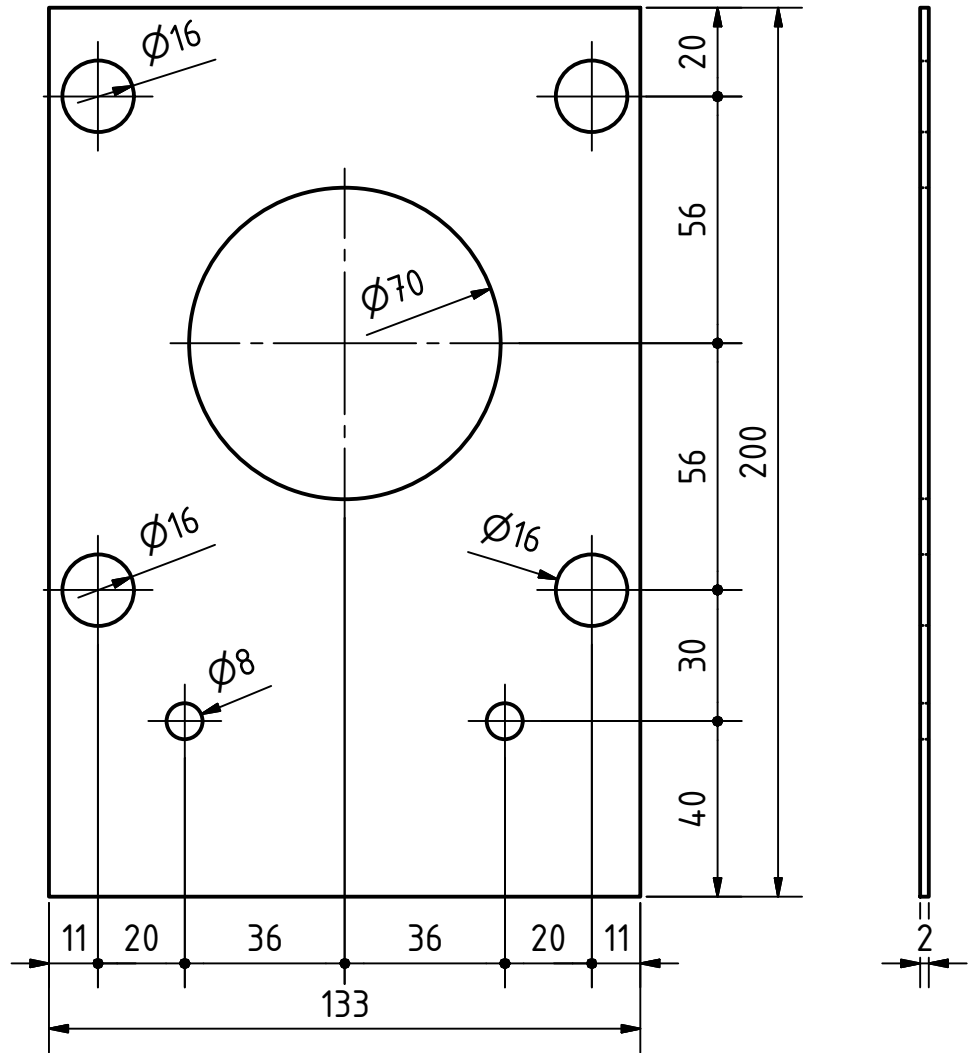
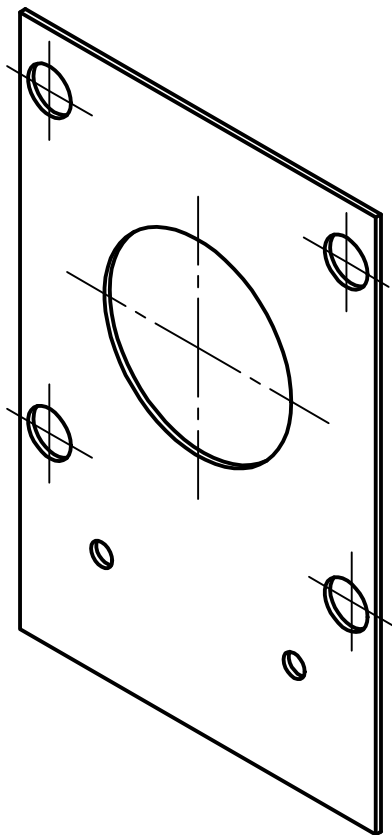





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| PROJECT | | CREATED BY | | APPROVED BY | | DATE | | VERSION | |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | | | FILE NAME | | | | PART CODE | |
| Stuffing box | | | | oseg_cft_Stuffing box.ipn | | | | 5 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  | |  | | ASSEMBLY | | | |
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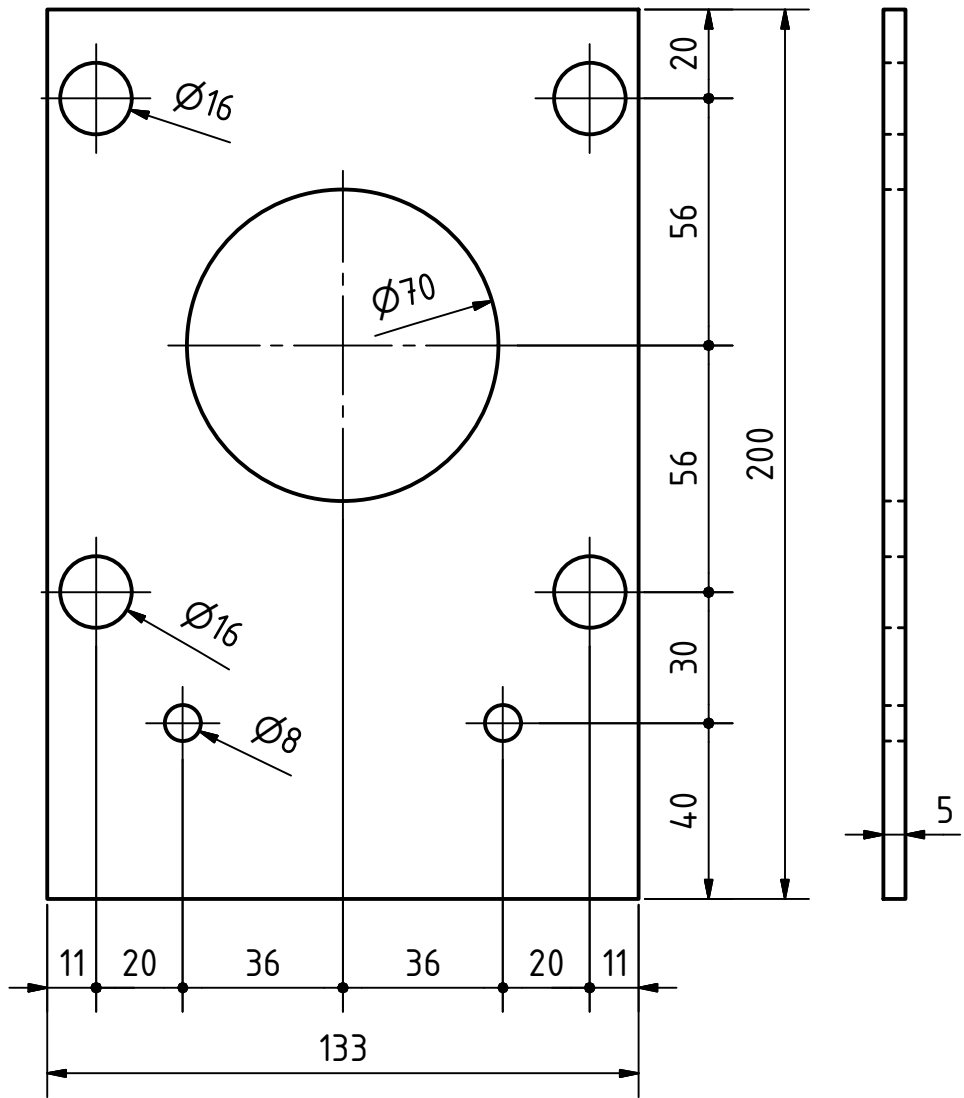
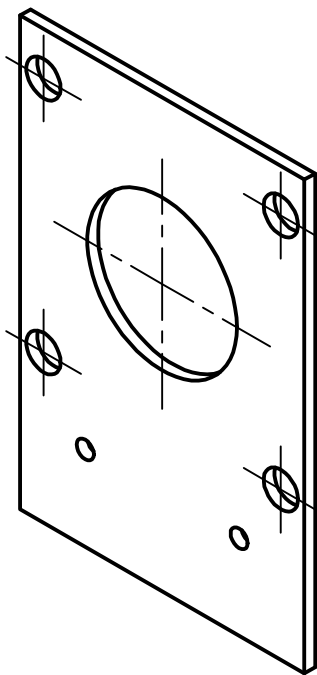
Section G-G






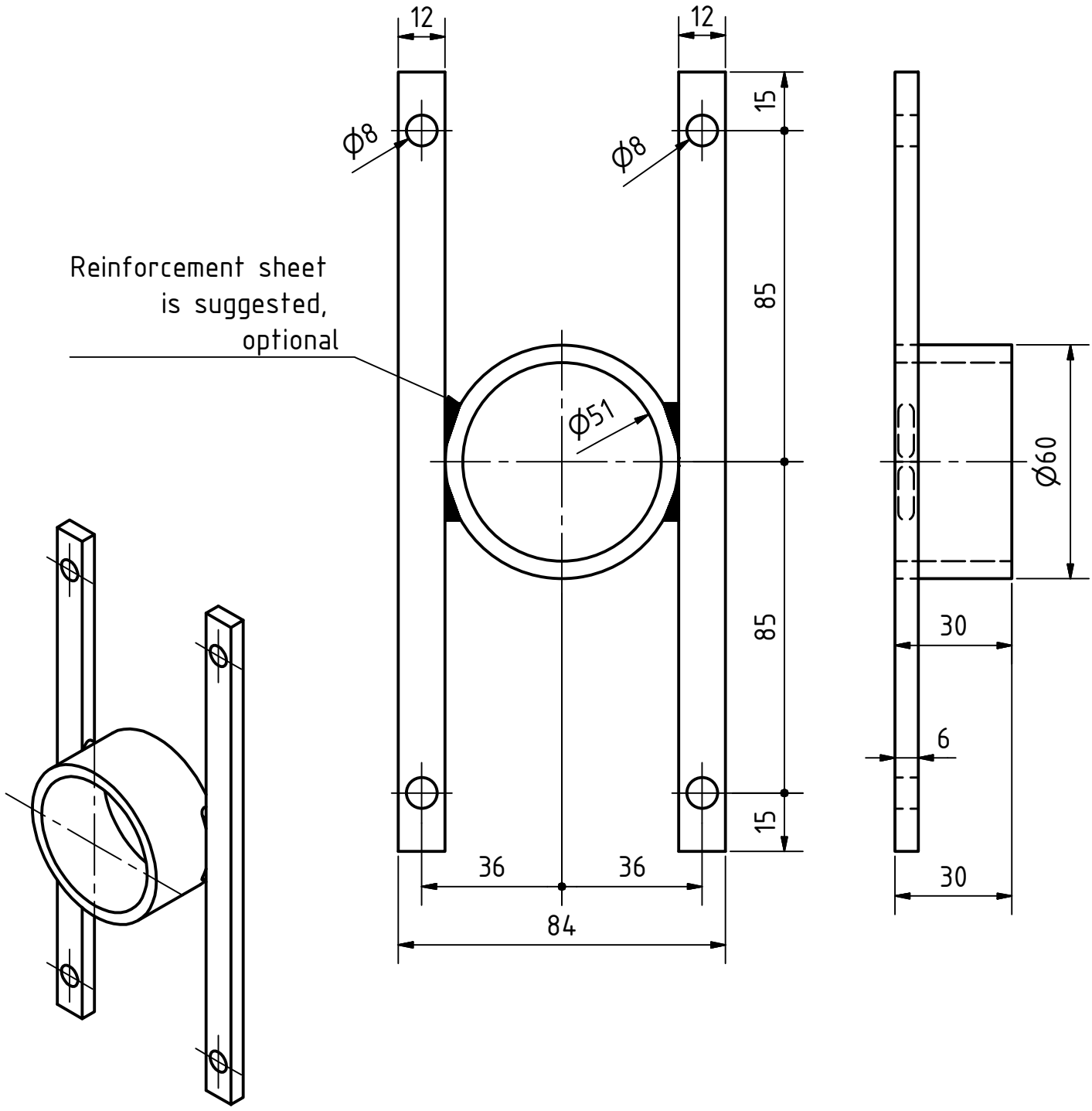
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| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Stuffing box02 | | oseg_cft_Stuffing box02.ipt | | | 5.1 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  OPEN SOURCE ECOLOGY GERMANY |   | PART LICENCE | Steel C45 | 2 |
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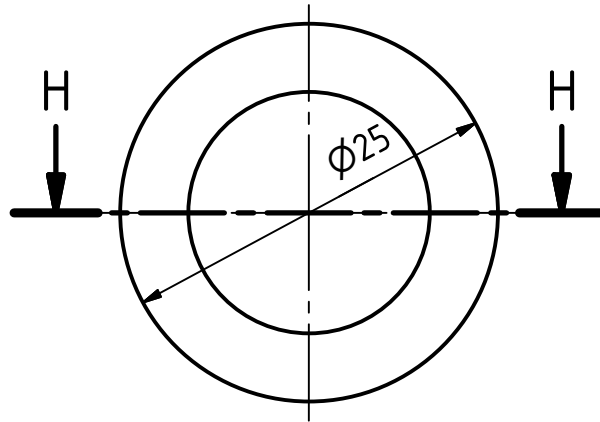
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Stuffin plate gasket | | oseg_cft_Stuffin-plate-gasket.ipt | | | | | | 5.2 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | Rubber | |
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| | | | | CC.BY.SA 4.0 | | | | | |



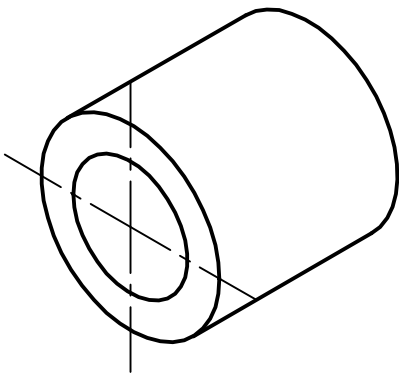
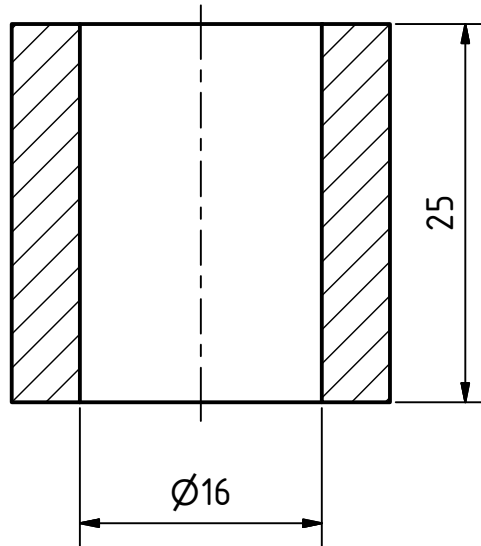
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | | | FILE NAME | | | | PART CODE | |
| Stuffing box01 | | | | oseg_cft_Stuffing box01.ipt | | | | 5.3 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  | |  | | PART LICENCE | | Steel C45 | |
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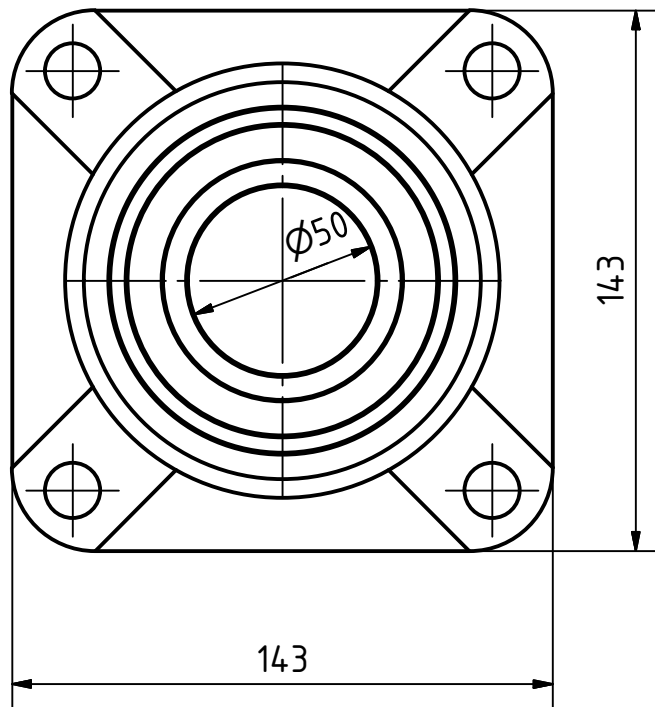
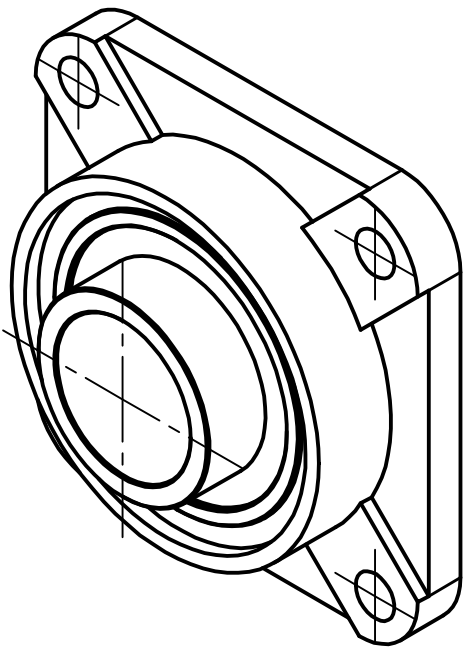
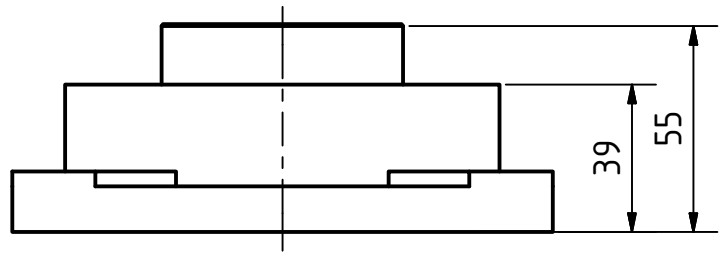
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Press ring | | oseg_cft_press-ring.ipt | | | | | | 5.4 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | Steel C45 | |
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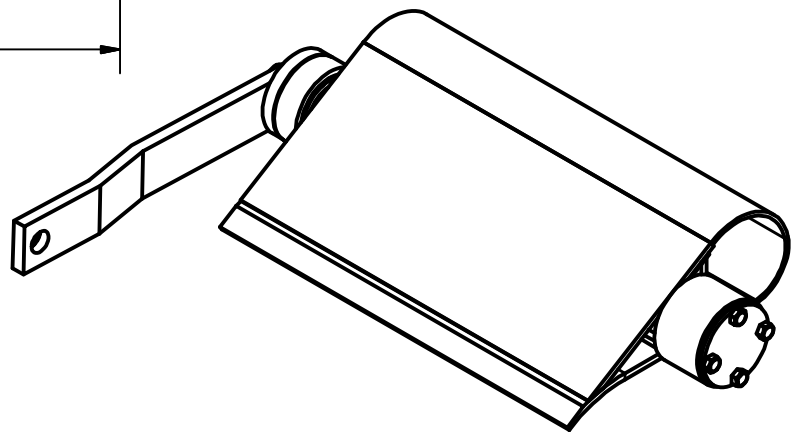
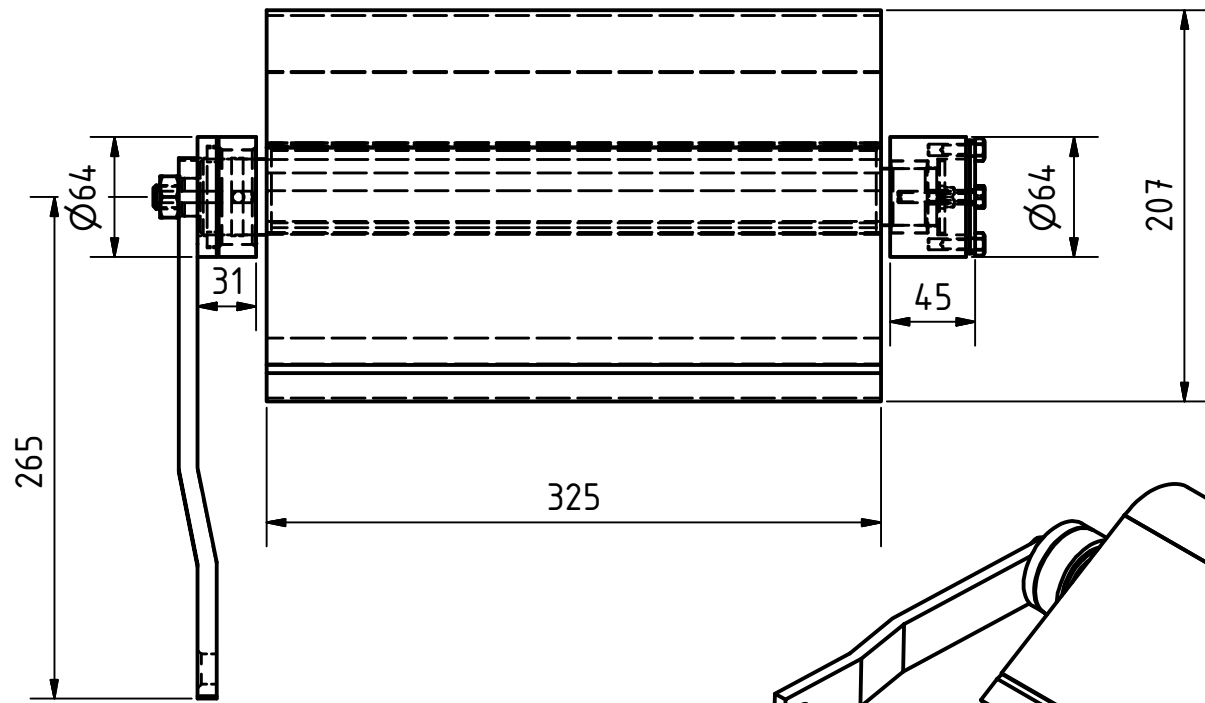
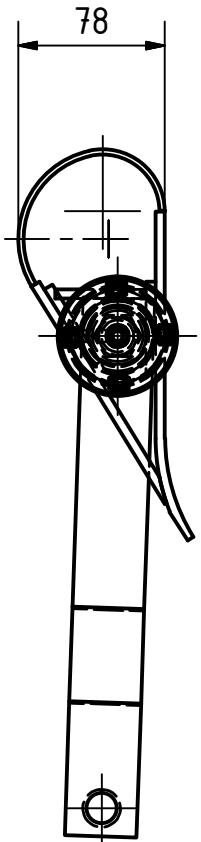
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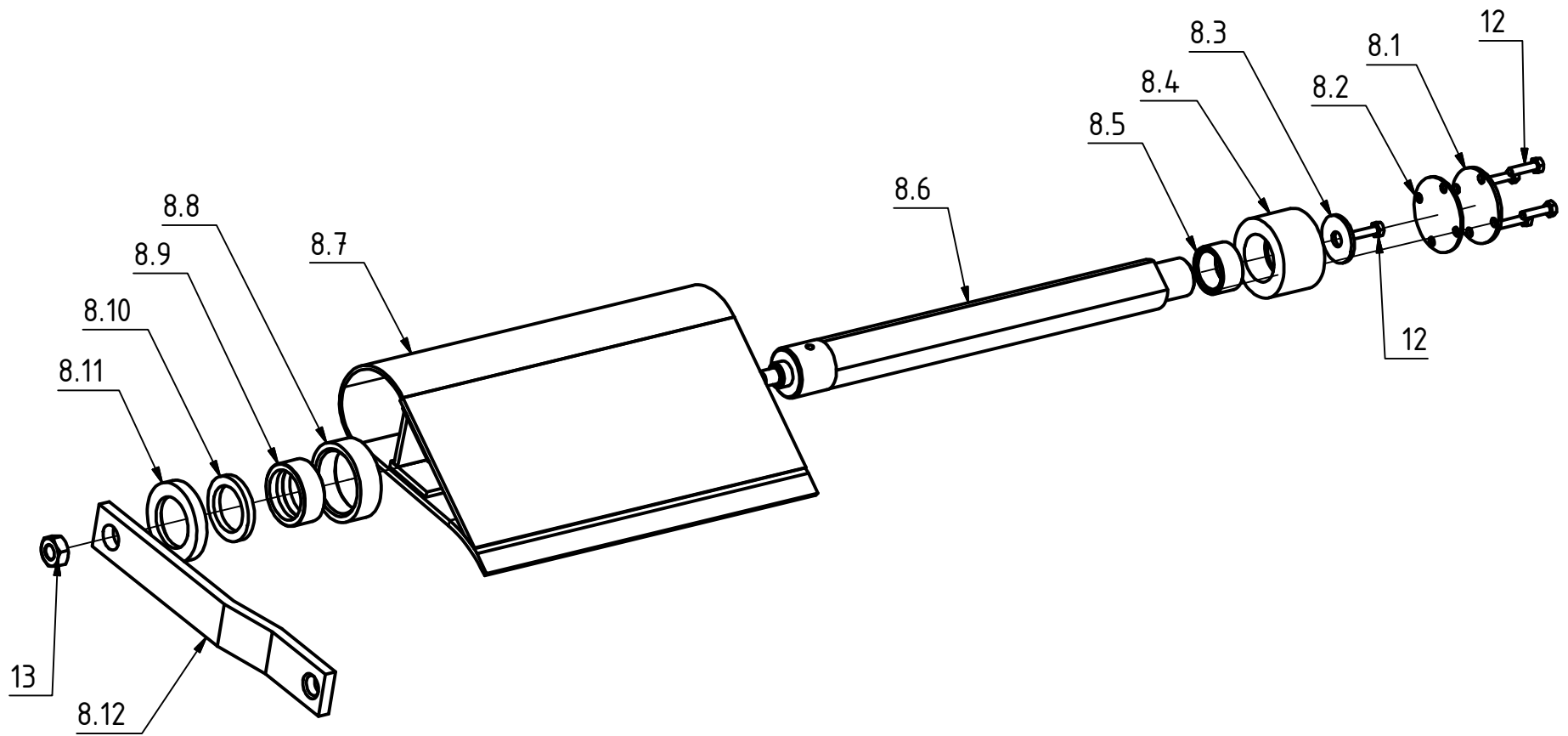
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Spacer | | oseg_cft_Spacer.ipt | | | | | | 5.5 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  | |  | | PART LICENCE | | Steel C45 | |
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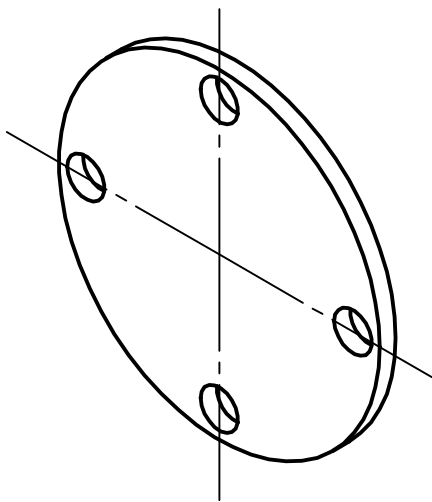
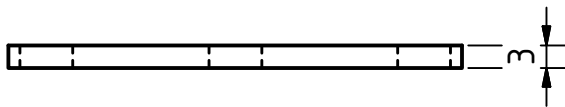
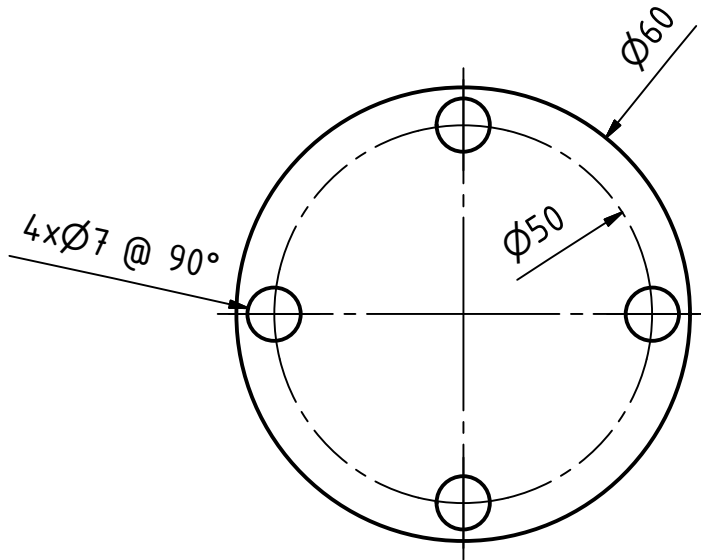
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Rotor bearing | | oseg_cft_rotor-bearing.iam | | | | | | 5.6 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | SCALE | |
| | | | | CC.BY.SA 4.0 | | 1:2 | | 2 SHEET 55 /90 | |






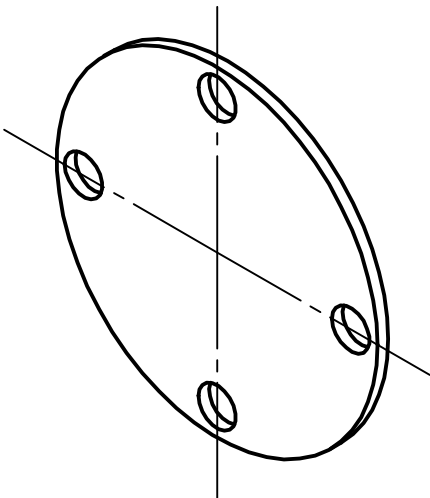
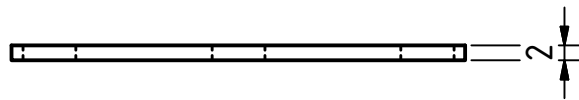
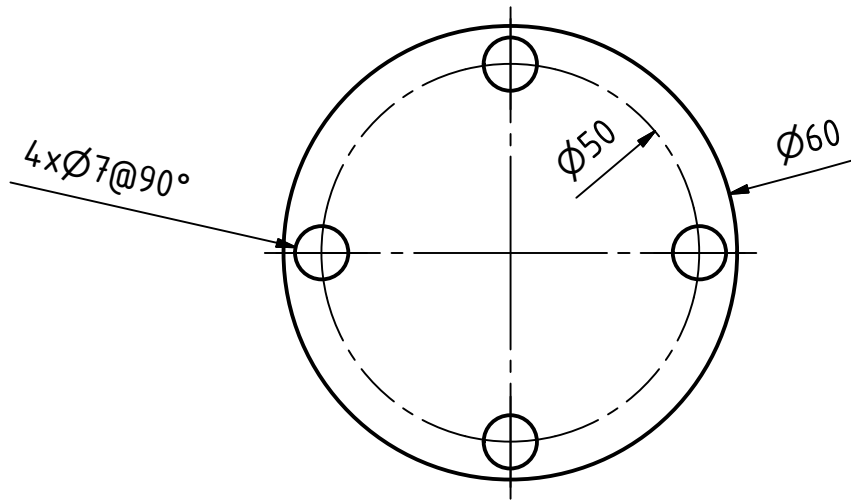
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Butterfly Valve | | oseg_cft_Butterfly-Valve.iam | | | | | | 6.0.0 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  | |  | | ASSEMBLY | | | |
| | | | | | | LICENCE | | SCALE | |
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| | | | | | | | | 56 /90 | |






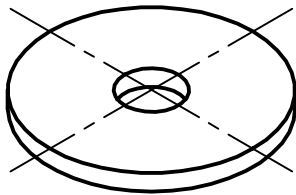
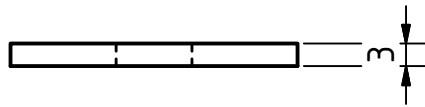
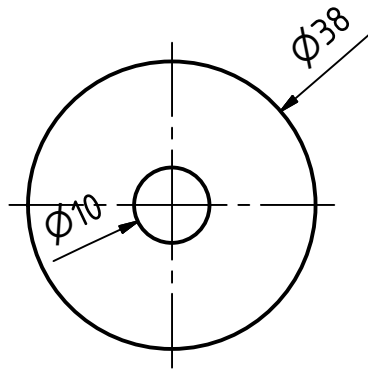
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| PROJECT | | CREATED BY | | APPROVED BY | | DATE | | VERSION | |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Butterfly Valve | | oseg_cft_Butterfly-Valve.ipn | | | | | | 6.0.0 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
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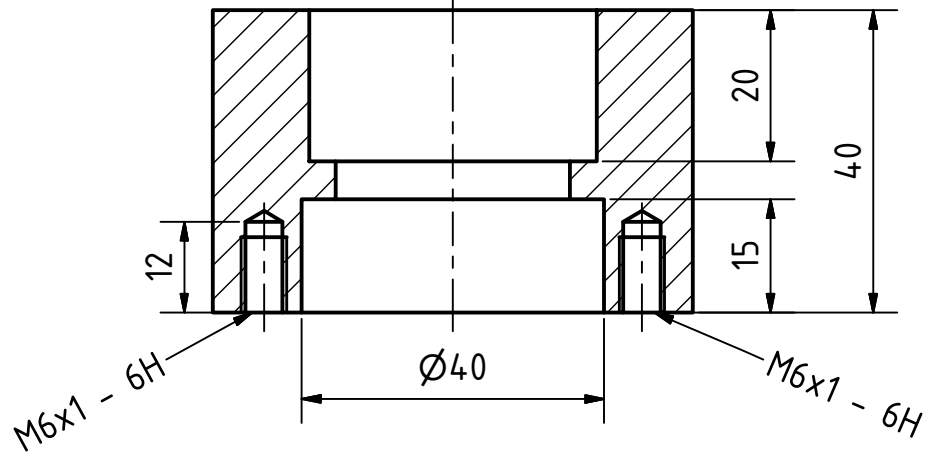
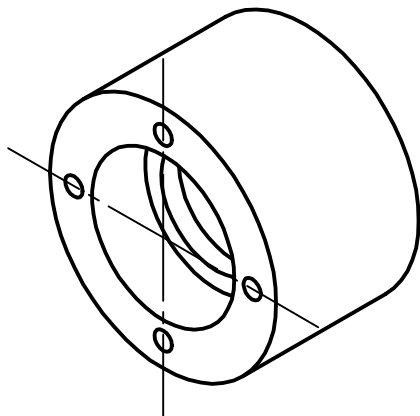
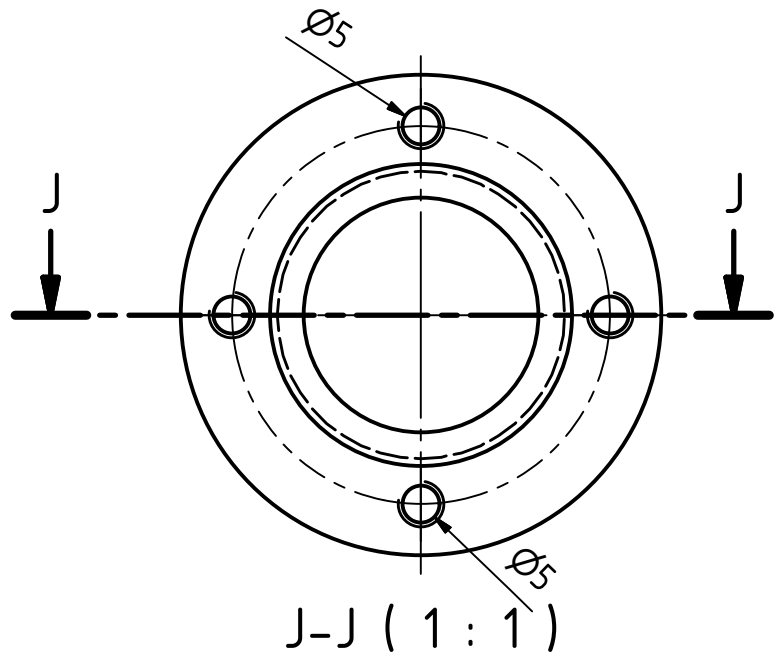
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Cover | | oseg_cft_cover.ipt | | | | | | 6.1.0 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART | | Steel C45 | |
| | | | | | | LICENCE | | SCALE | |
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| | | | | | | | | 58 /90 | |






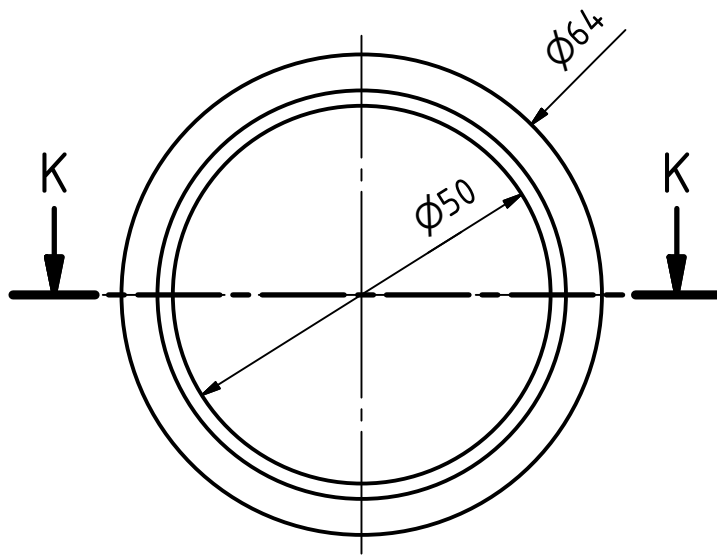
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Gasket | | oseg_cft_gasket.ipt | | | | | | 6.2.0 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART | | Rubber | |
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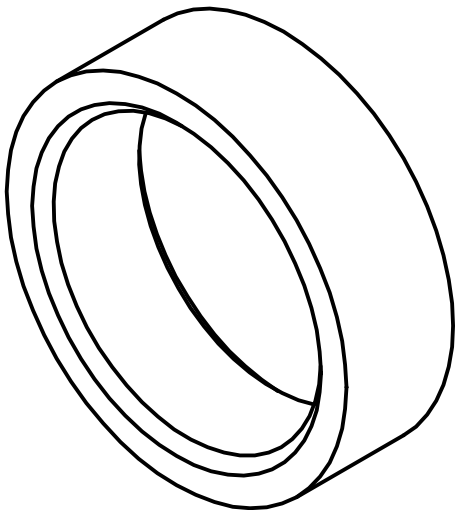
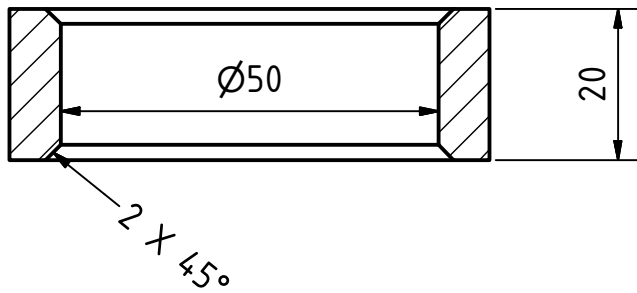
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Washer | | oseg_cft_washer.ipt | | | | | | 6.3.0 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
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| | | | | | | LICENCE | | SCALE | |
| | | | | | | CC.BY.SA 4.0 | | 1:1 | |
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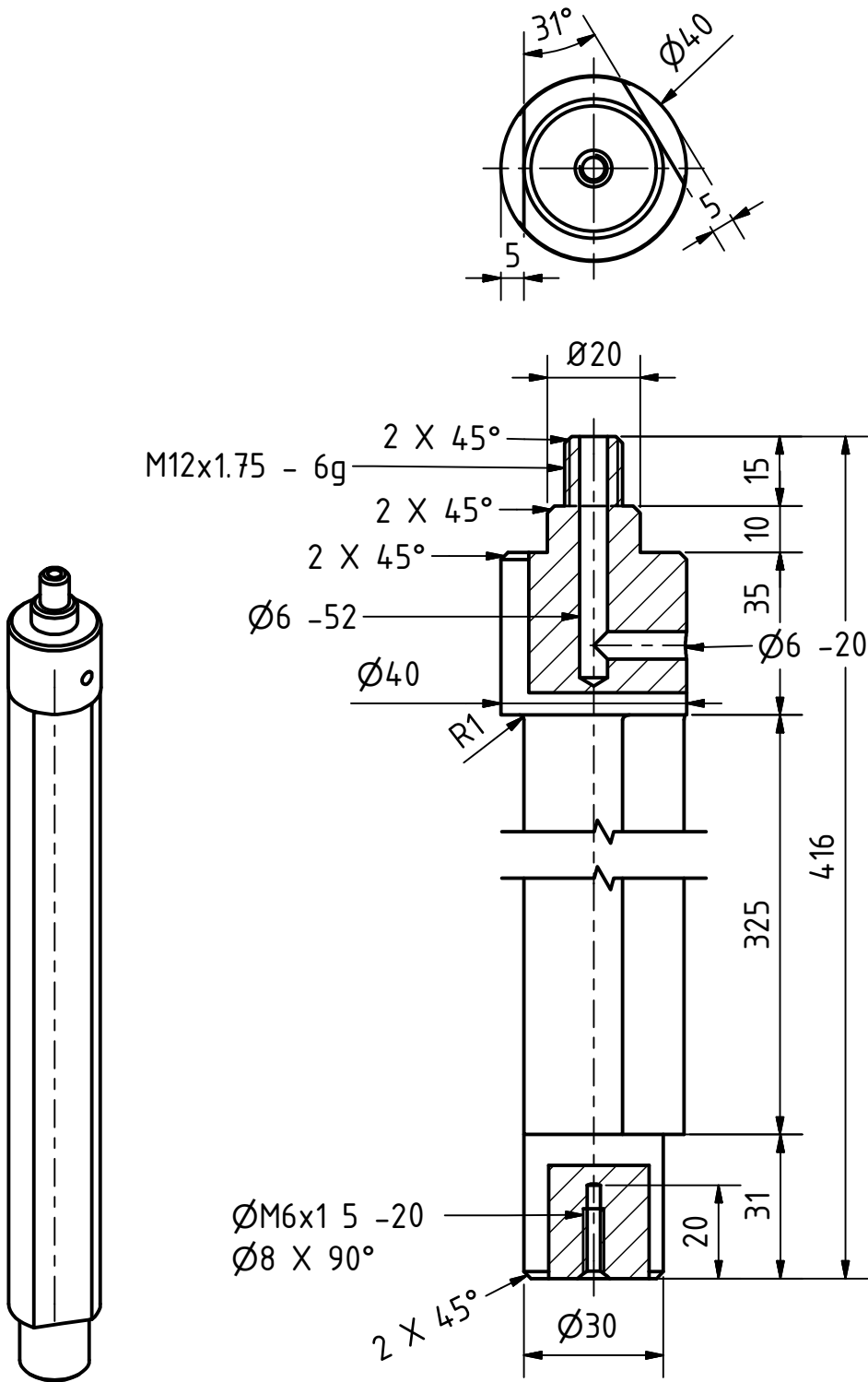
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Bush casing 2 | | oseg_cft_bush-casing-2.ipt | | | | | | 6.4.0 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | Steel C45 | |
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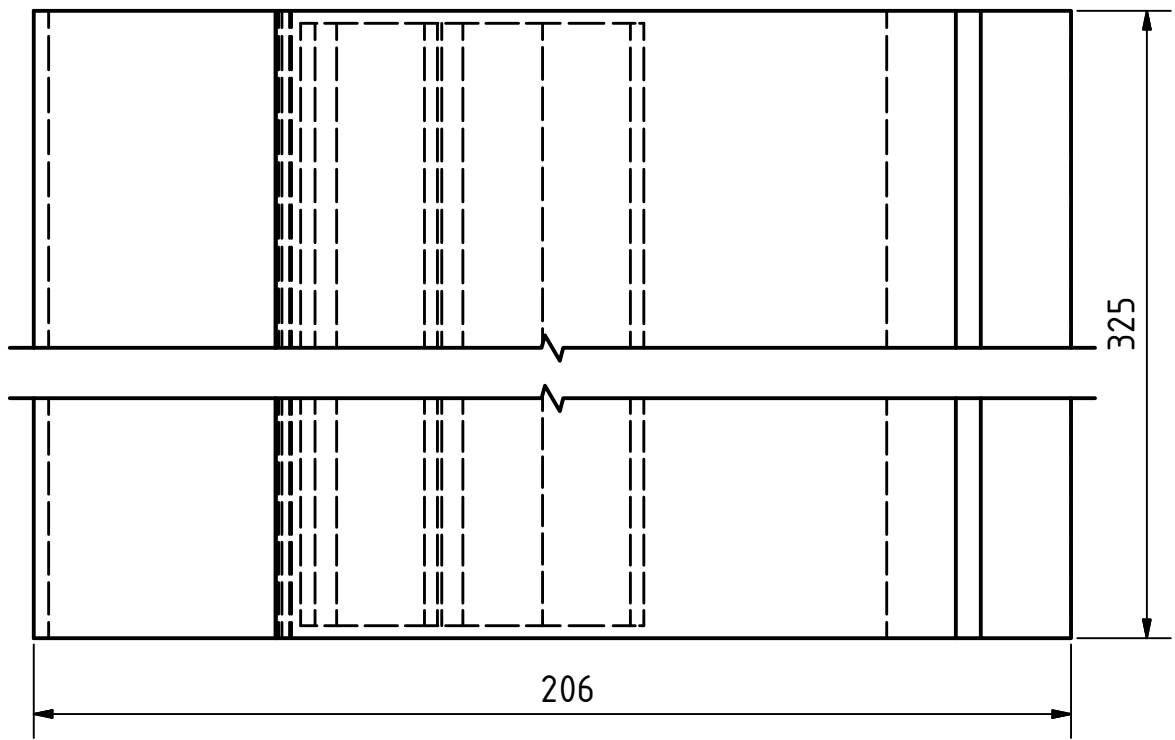
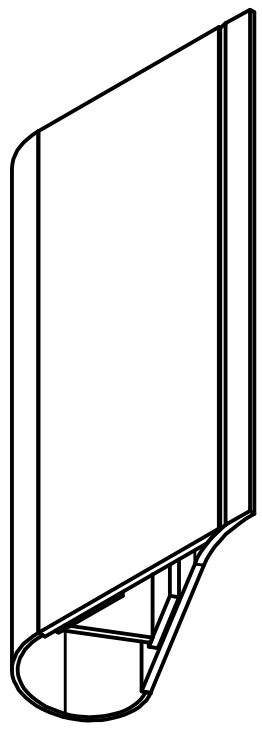
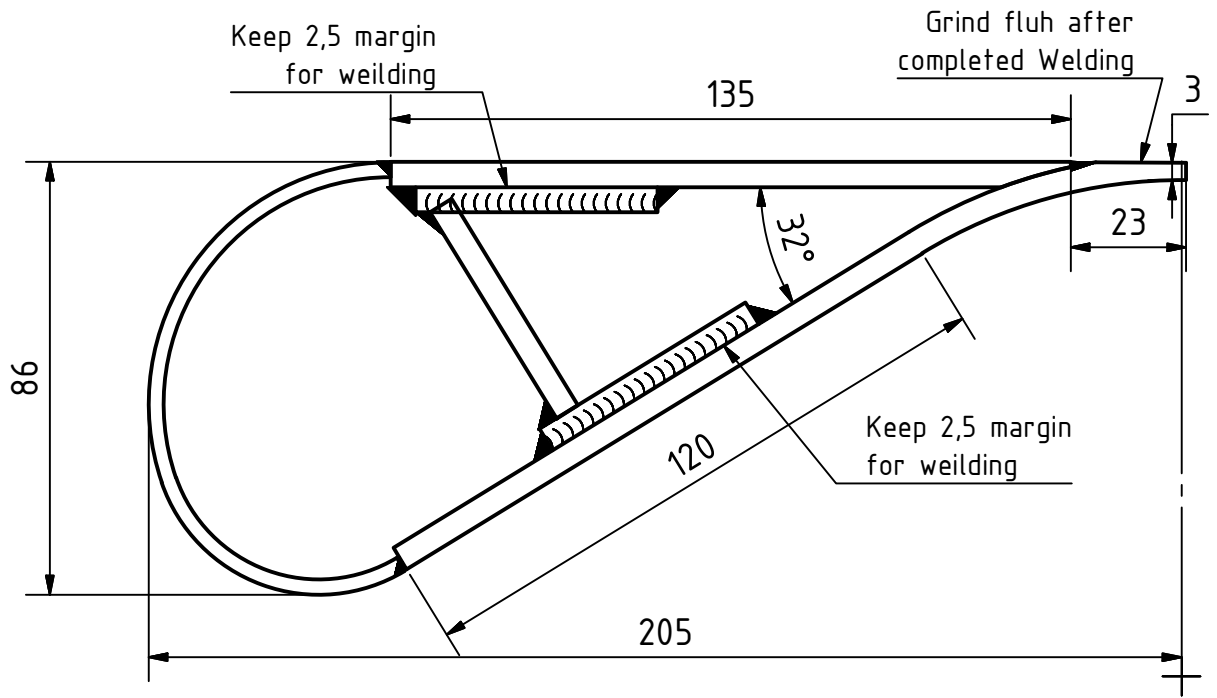
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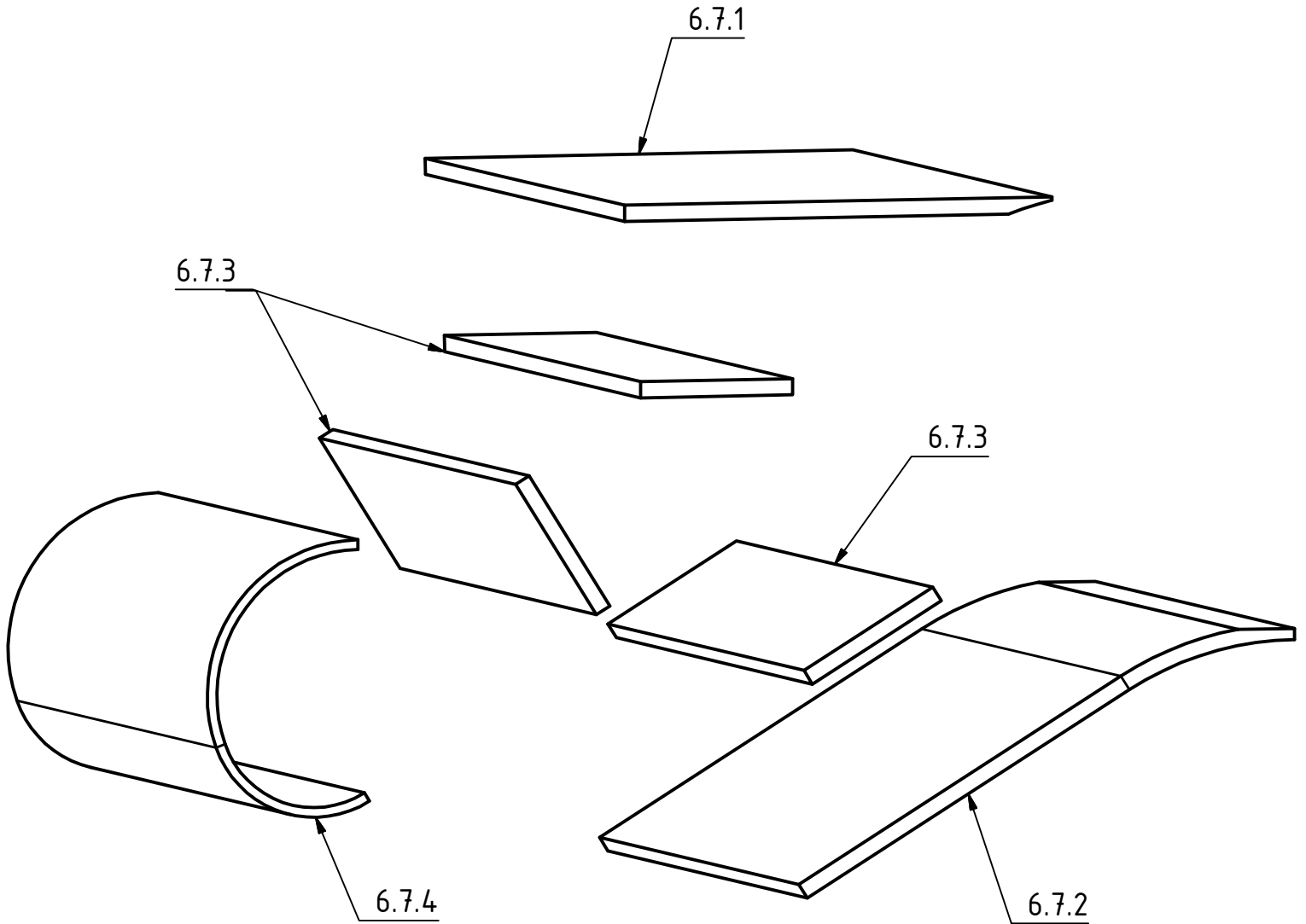
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| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Bush casing | | oseg_cft_bush-casing.ipt | | | 6.5.0 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  OPEN SOURCE ECOLOGY GERMANY OSEG |  | PART LICENCE | Steel C45 | 1 |
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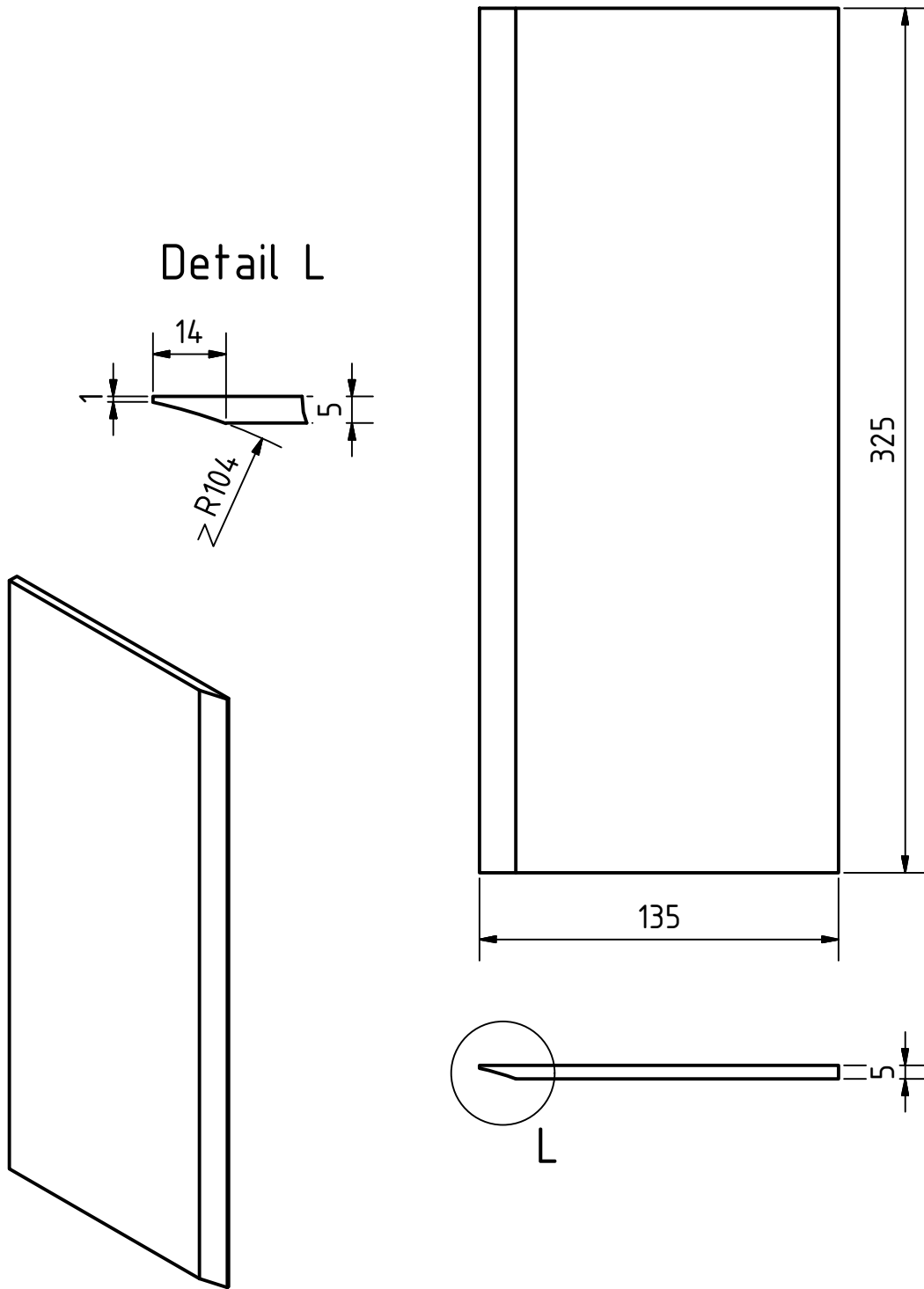
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Valve shaft | | oseg_cft_butterfly-valve-shaft.ipt | | | | | | 6.6.0 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
| skat | | OPEN SOURCE ECOLOGY GERMANY OSEG | | E.ON STIFTUNG | | PART | | Steel C45 hardened | |
| | | | | | | LICENCE | | SCALE | |
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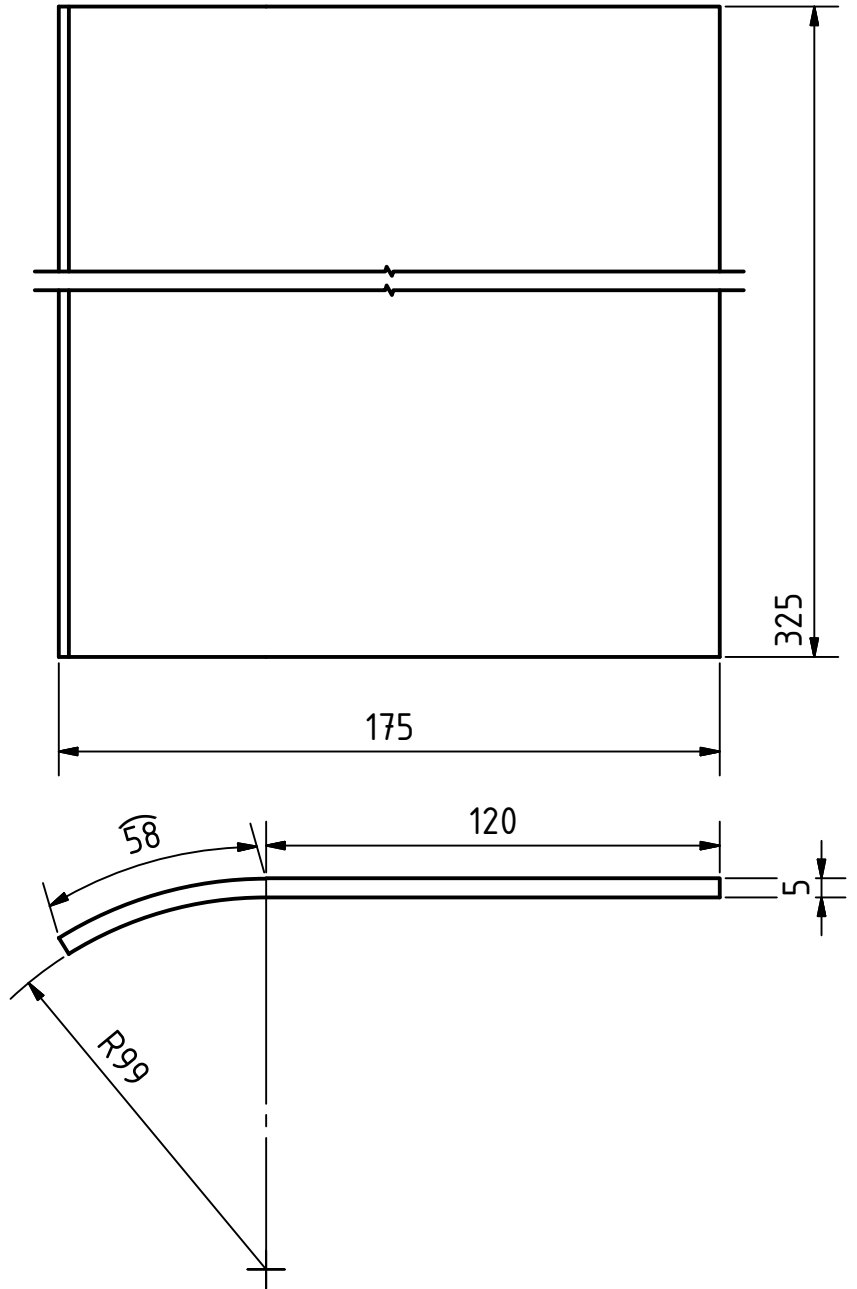
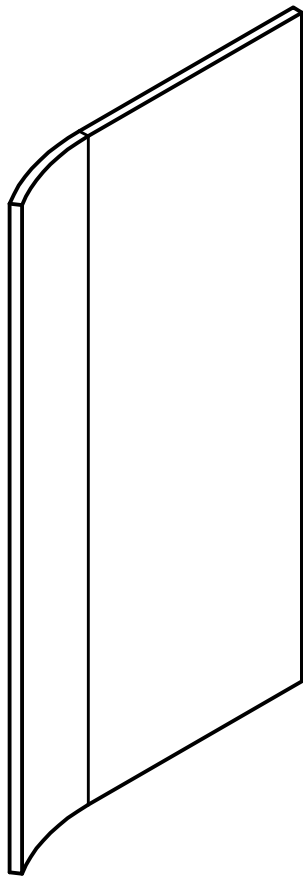
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| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Butterfly Valve shaft | | oseg_cft_Butterfly-Valve-shaft.iam | | | 6.7.0 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
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| | | | CC.BY.SA 4.0 | SCALE | SHEET |
| | | | 1:2 | | 64 /90 |






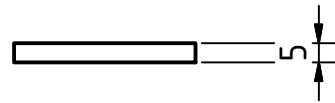
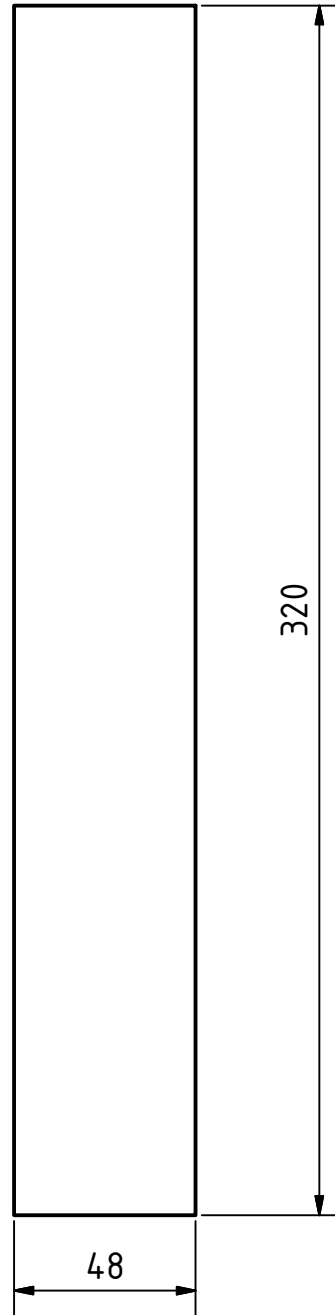
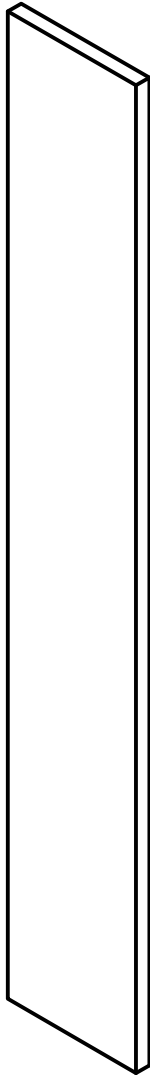
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| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Butterfly Valve shaft | | oseg_cft_Butterfly-Valve-shaft.ipn | | | 6.7.0 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
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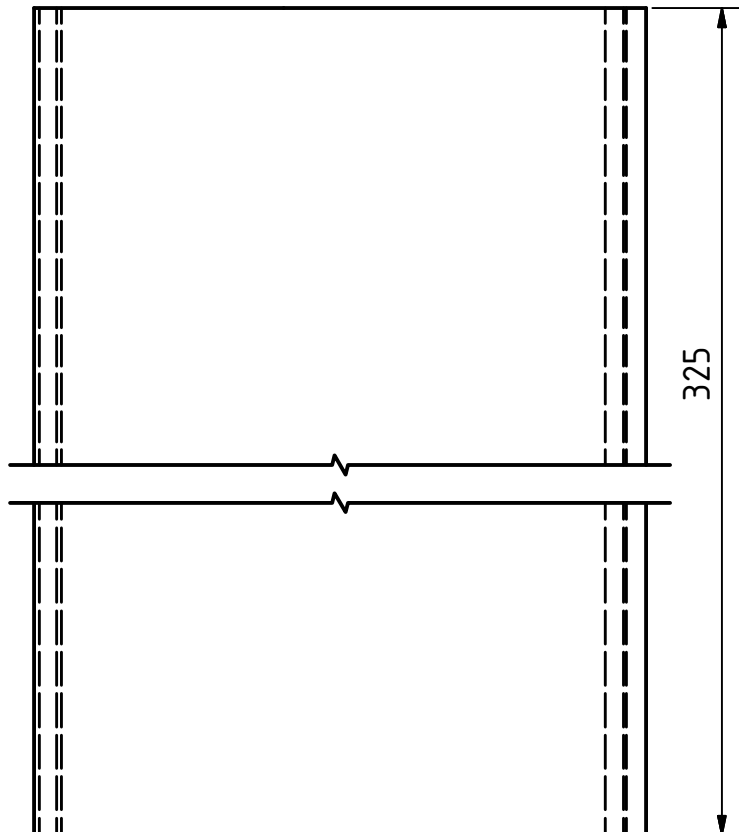
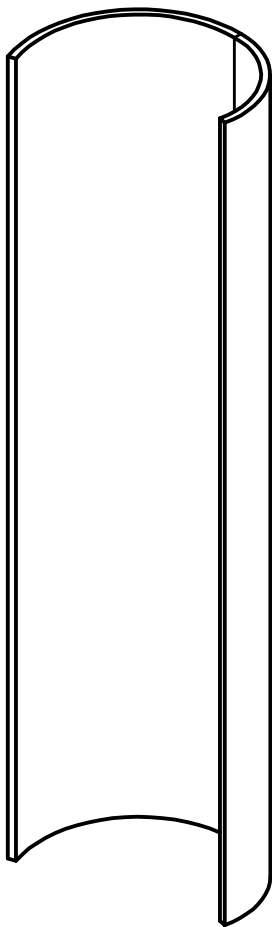
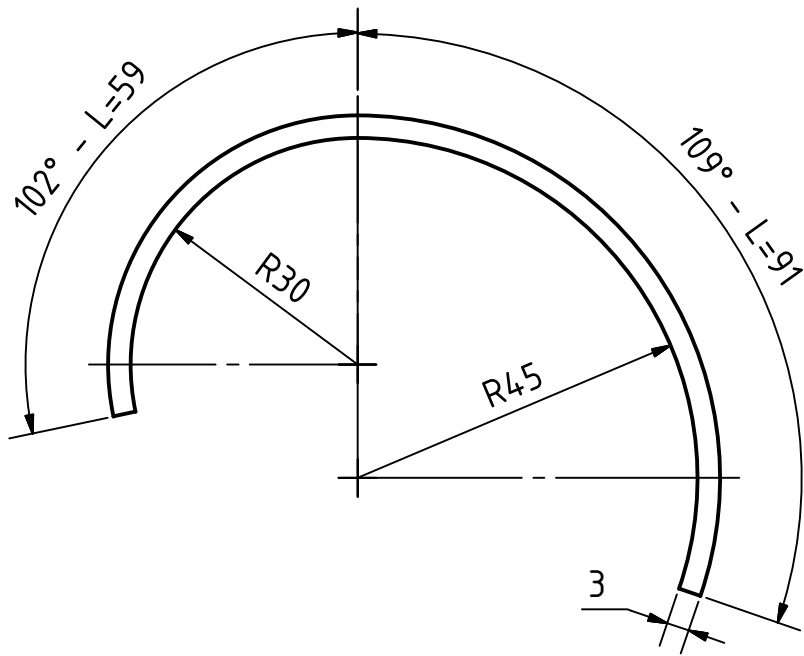
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| shaft valve 1 | | oseg_cft_shaft-valve-1.ipt | | | | | | 6.7.1 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  | |  | | PART | | Steel C45 | |
| | | OSEG | | CC.BY.SA 4.0 | | LICENCE | | SCALE | |
| | | | | | | | | 1:2 | |
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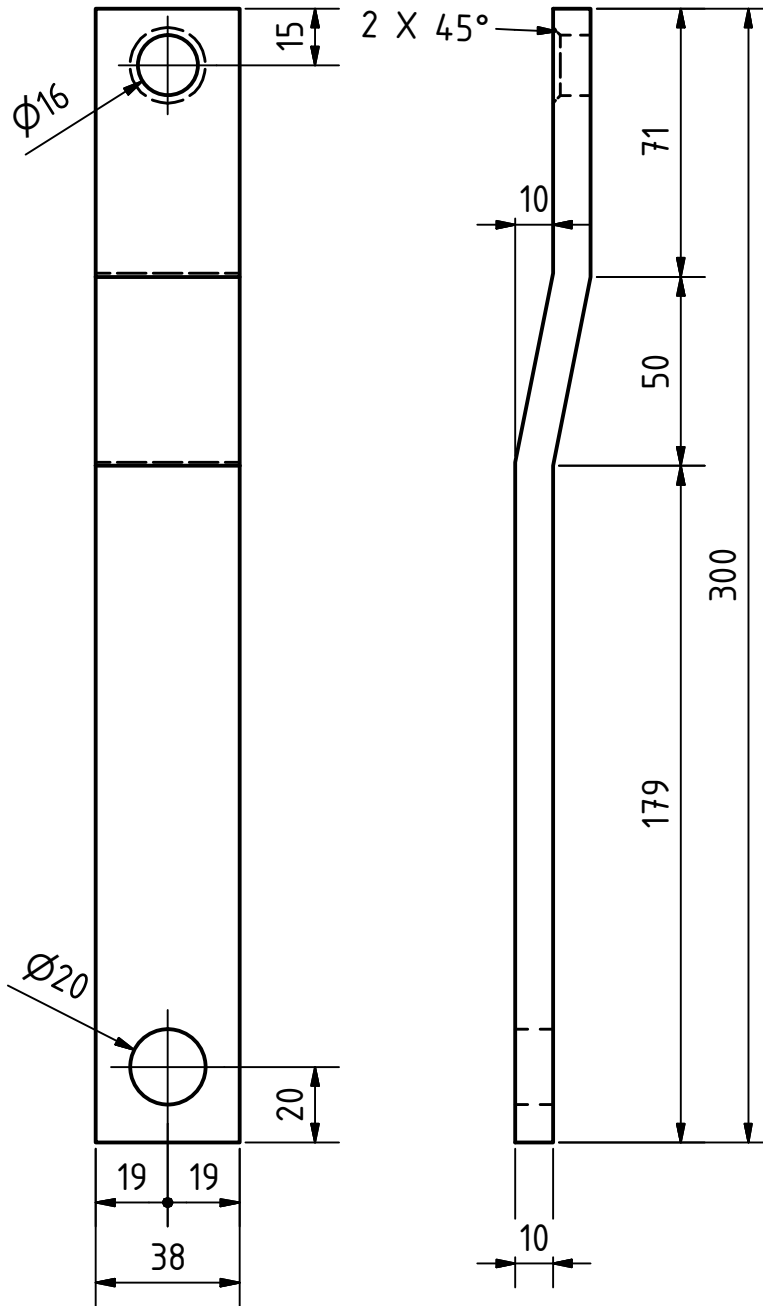
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| PART NAME | | FILE NAME | | | PART CODE |
| shaft valve 2 | | oseg_cft_shaft-valve-2.ipt | | | 6.7.2 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  OPEN SOURCE ECOLOGY GERMANY |  | PART | Steel C45 | 1 |
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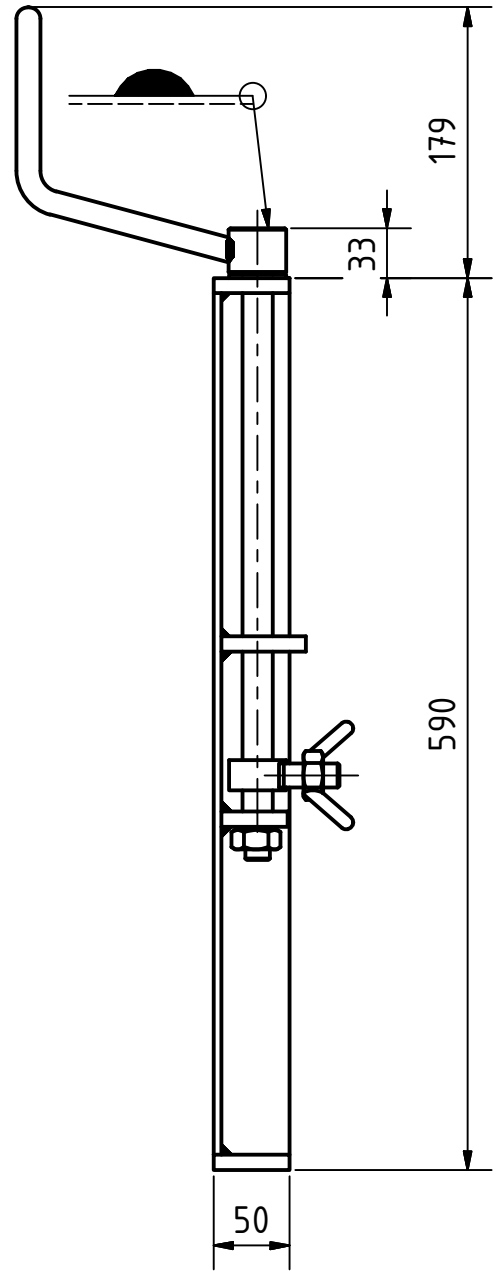
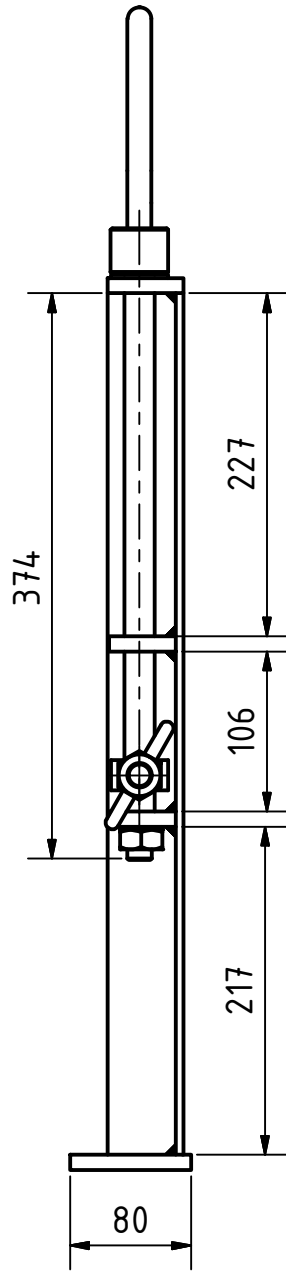
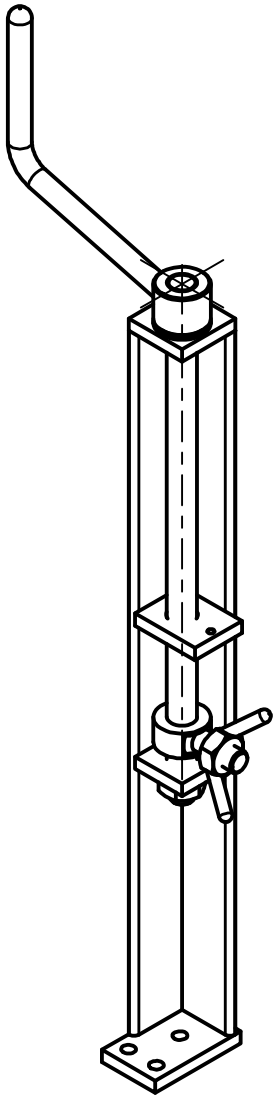
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| PART NAME | | FILE NAME | | | PART CODE |
| Shaft valve 3 | | oseg_cft_shaft-valve-3.ipt | | | 6.7.3 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  |  | PART | Steel C45 | 3 |
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| | | | CC.BY.SA 4.0 | 1:2 | 68 /90 |






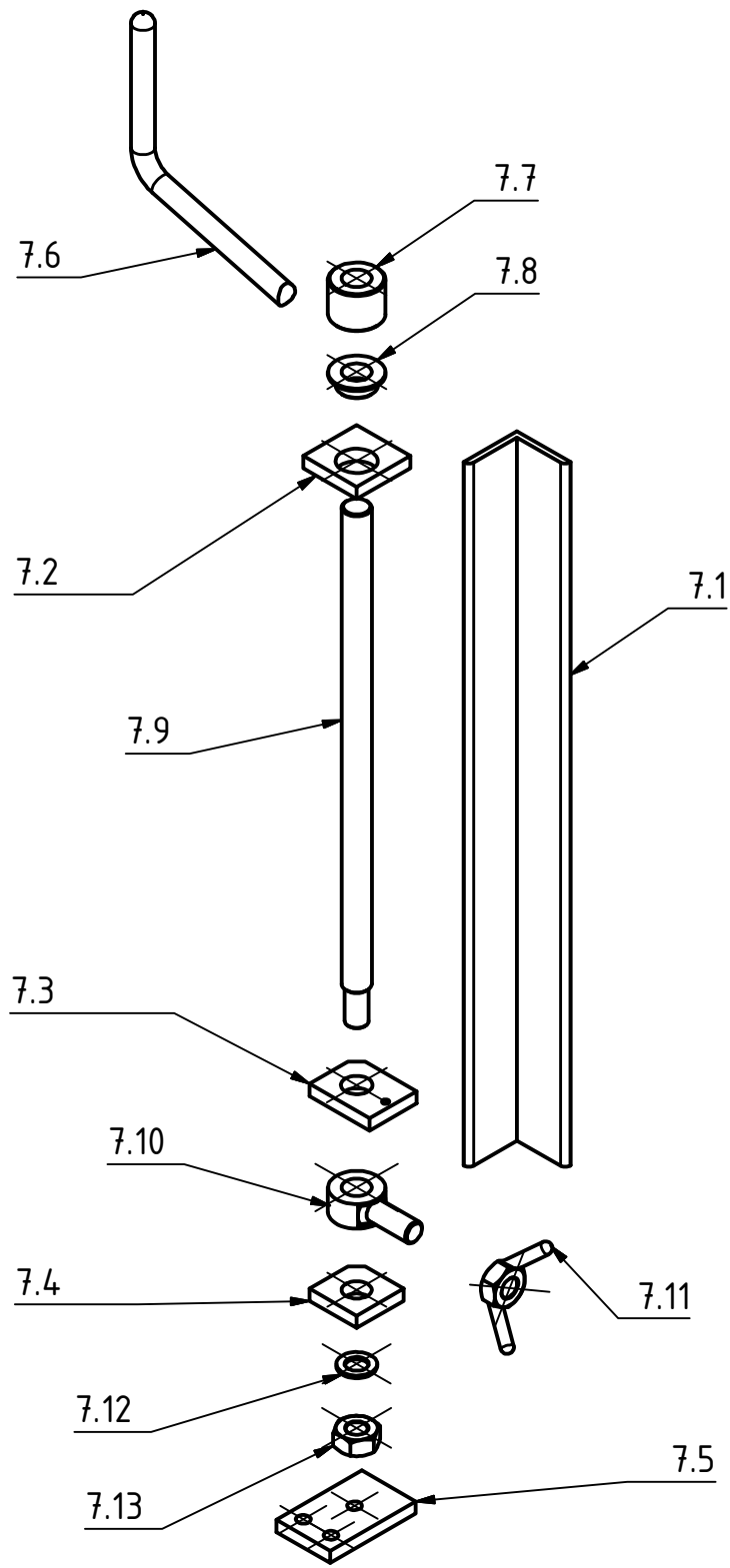
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| shaft valve 4 | | oseg_cft_shaft-valve-4.ipt | | | | | | 6.7.4 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | Steel C45 | |
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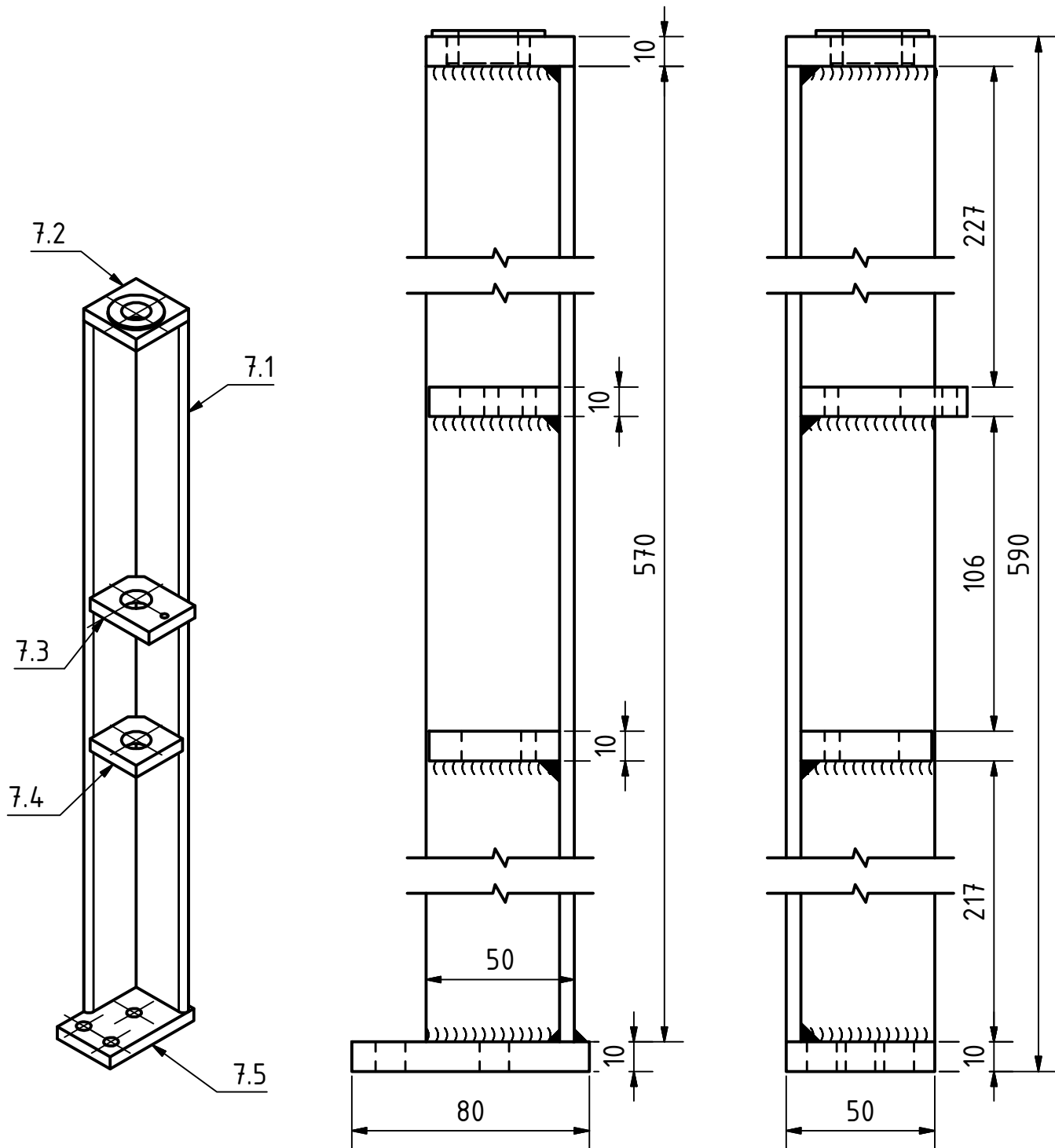
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Lever | | oseg_cft_lever.ipt | | | | | | 6.8 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | Steel C45 | |
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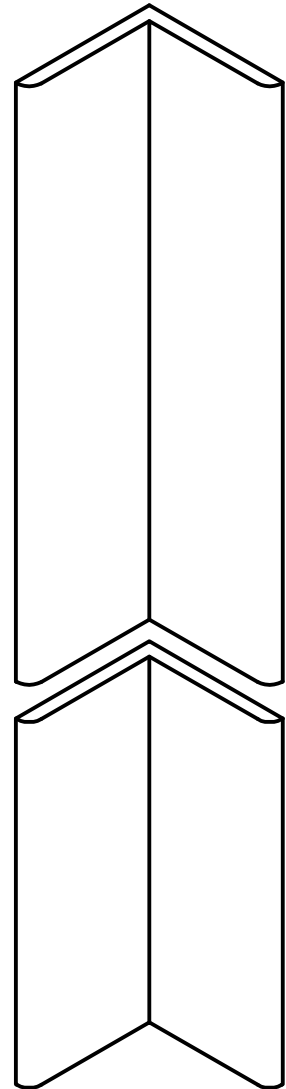
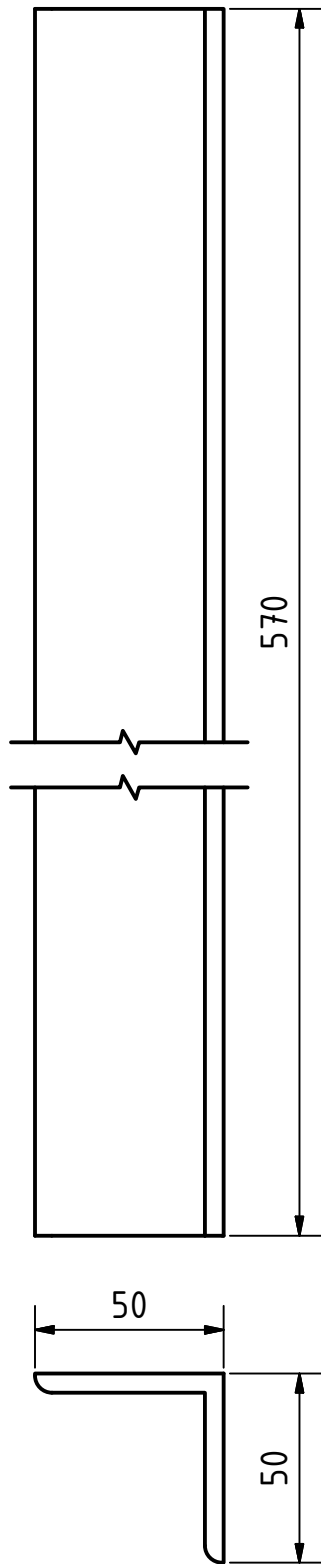
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Support | | oseg_cft_Support.iam | | | | | | 7 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  E.ON STIFTUNG | | ASSEMBLY | | | |
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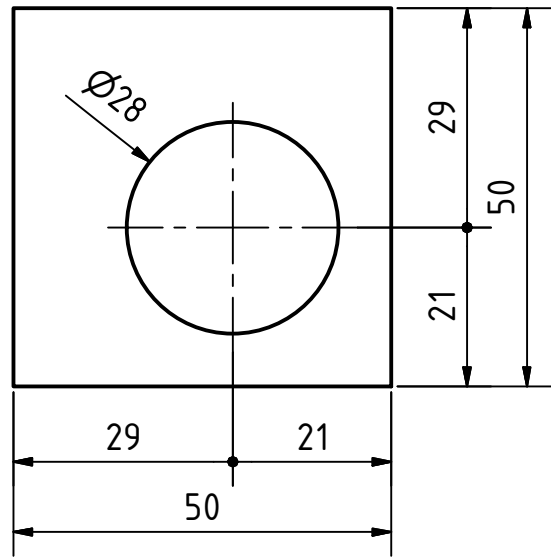
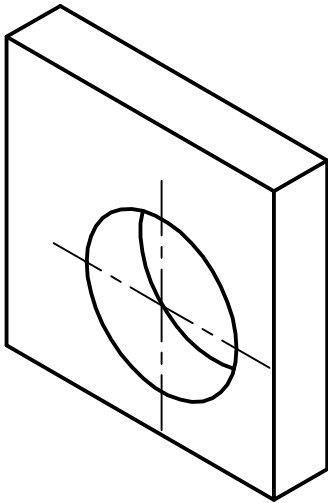
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| PART NAME | | FILE NAME | | | | | | | PART CODE | |
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| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | | QUANTITY |
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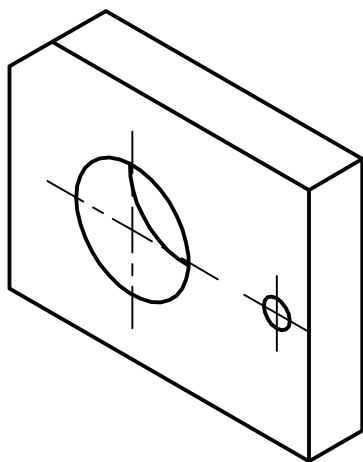
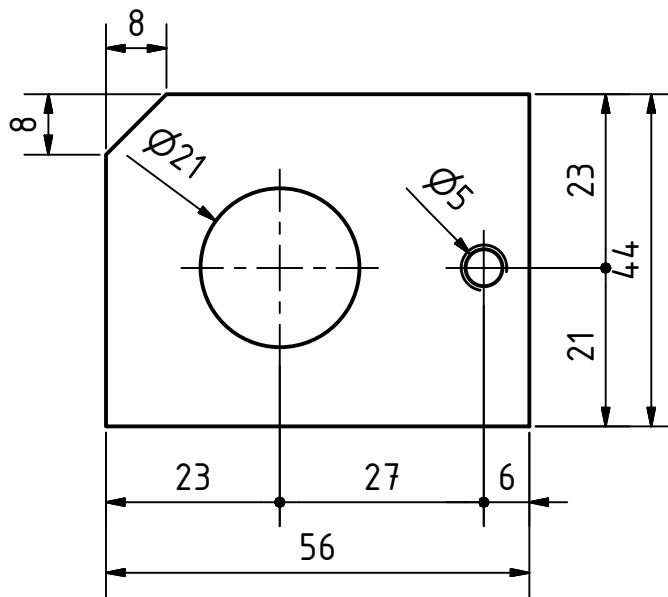
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | | |
| PART NAME | | FILE NAME | | | | | | | PART CODE | |
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| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | | QUANTITY |
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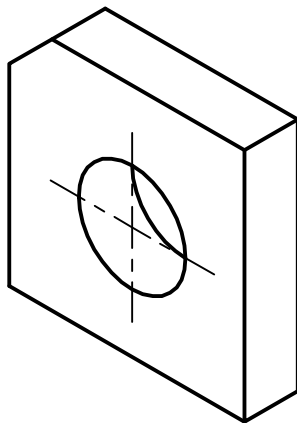
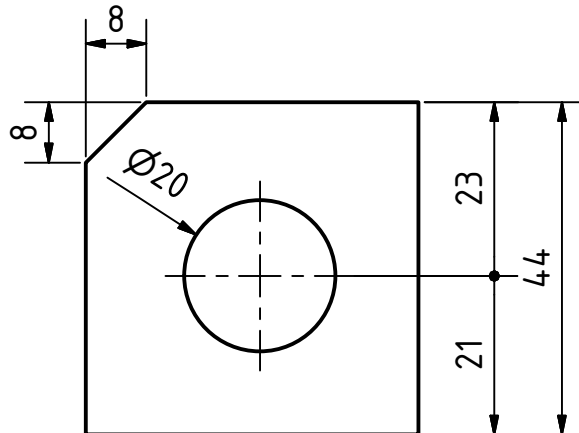
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| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Support angle | | oseg_cft_support-angle.ipt | | | 7.1 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  OPEN SOURCE ECOLOGY GERMANY OSEG |  | PART | ASTM-A36 | 1 |
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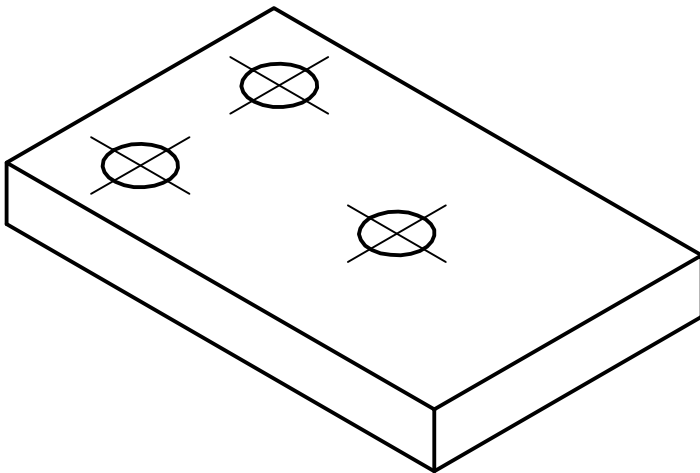
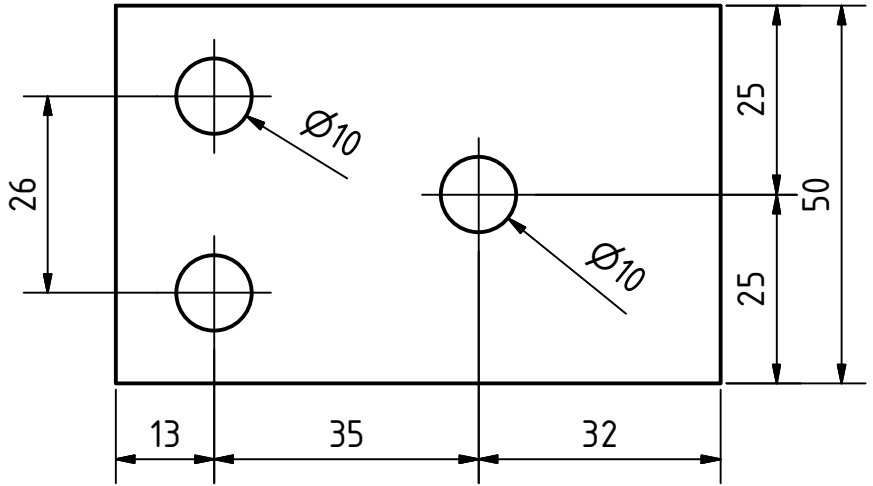
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| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Stopper top plate | | oseg_cft_stopper-top-plate.ipt | | | 7.2 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  OPEN SOURCE ECOLOGY GERMANY |  STIFTUNG | PART | Steel C45 | |
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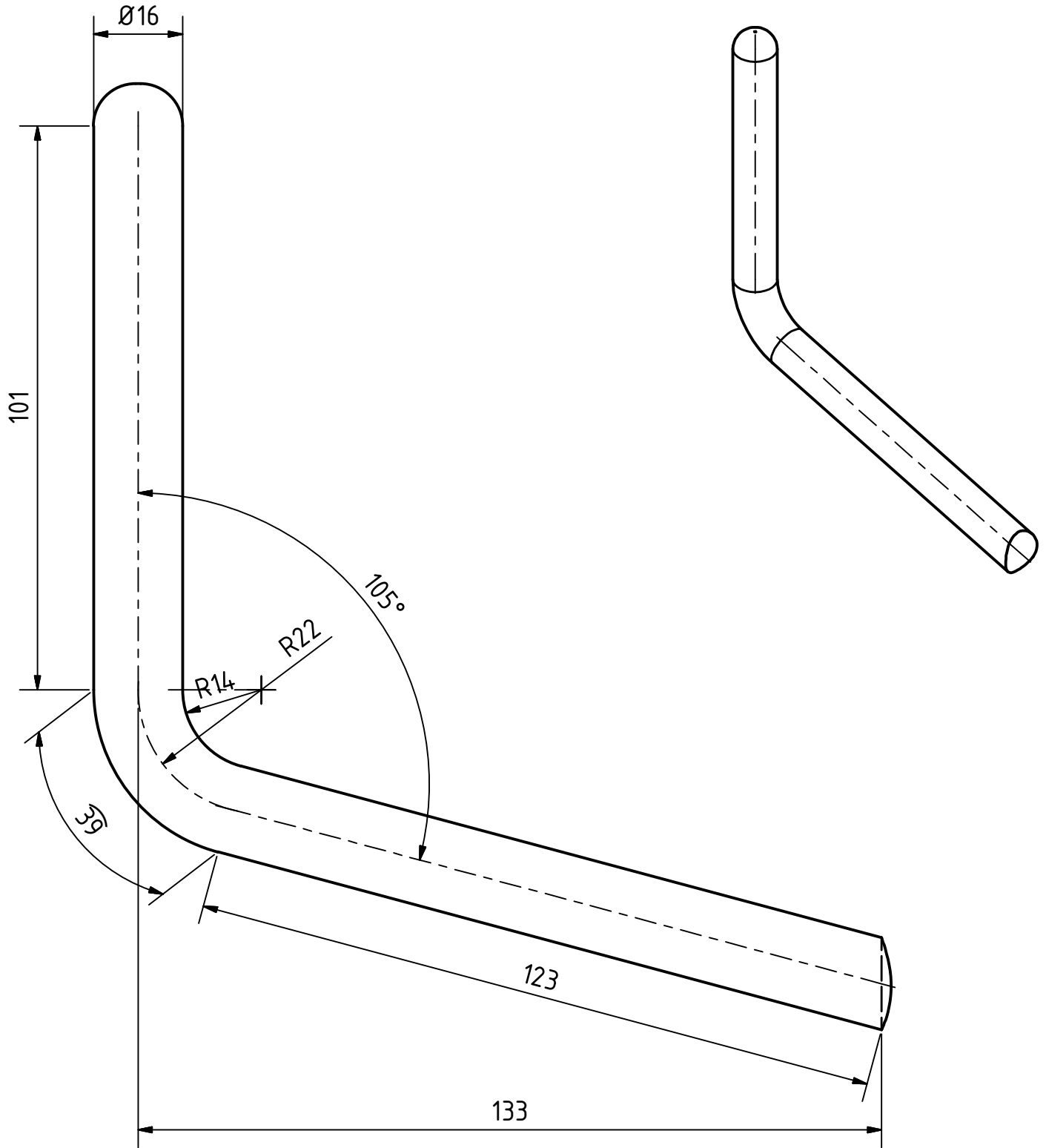
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| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Stopper plate top | | oseg_cft_stopper-plate-top.ipt | | | 7.3 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  OPEN SOURCE ECOLOGY GERMANY OSEG |  | PART LICENCE | Steel C45 | 1 |
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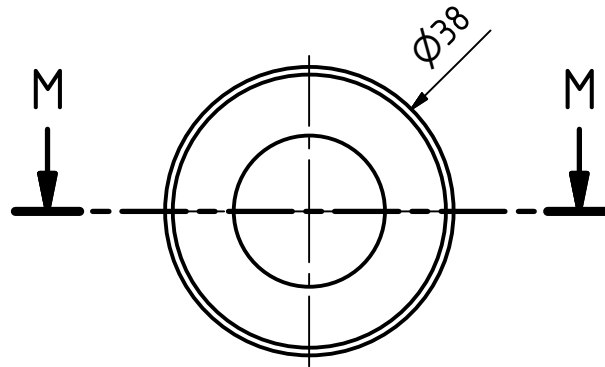
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Stopper plate bottom | | oseg_cft_stopper-plate-bottom.ipt | | | | | | 7.4 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | Steel C45 | |
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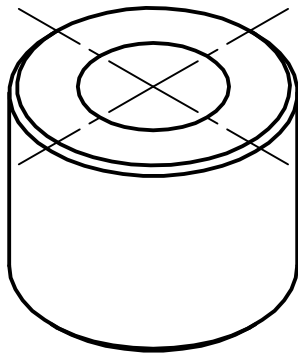
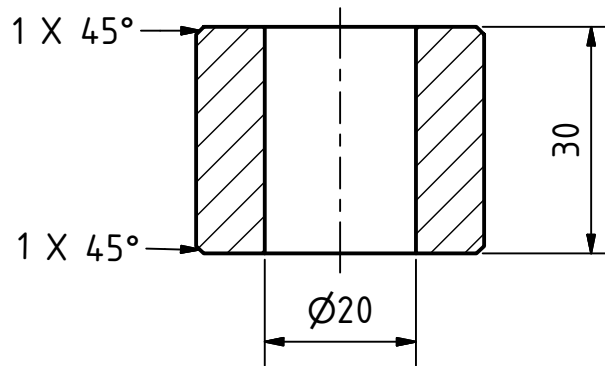
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Base plate | | oseg_cft_base-plate.ipt | | | | | | 7.5 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | Steel C45 | |
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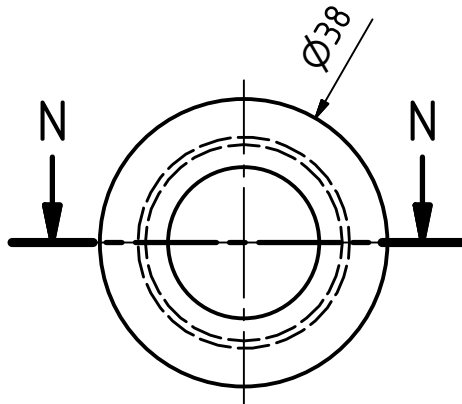
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Handle bar | | oseg_cft_handle-bar.ipt | | | | | | 7.6 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  | |  | | PART | | Steel C45 | |
| | | | | | | LICENCE | | SCALE | |
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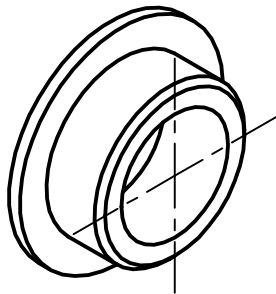
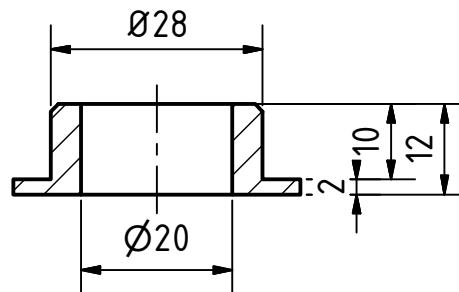
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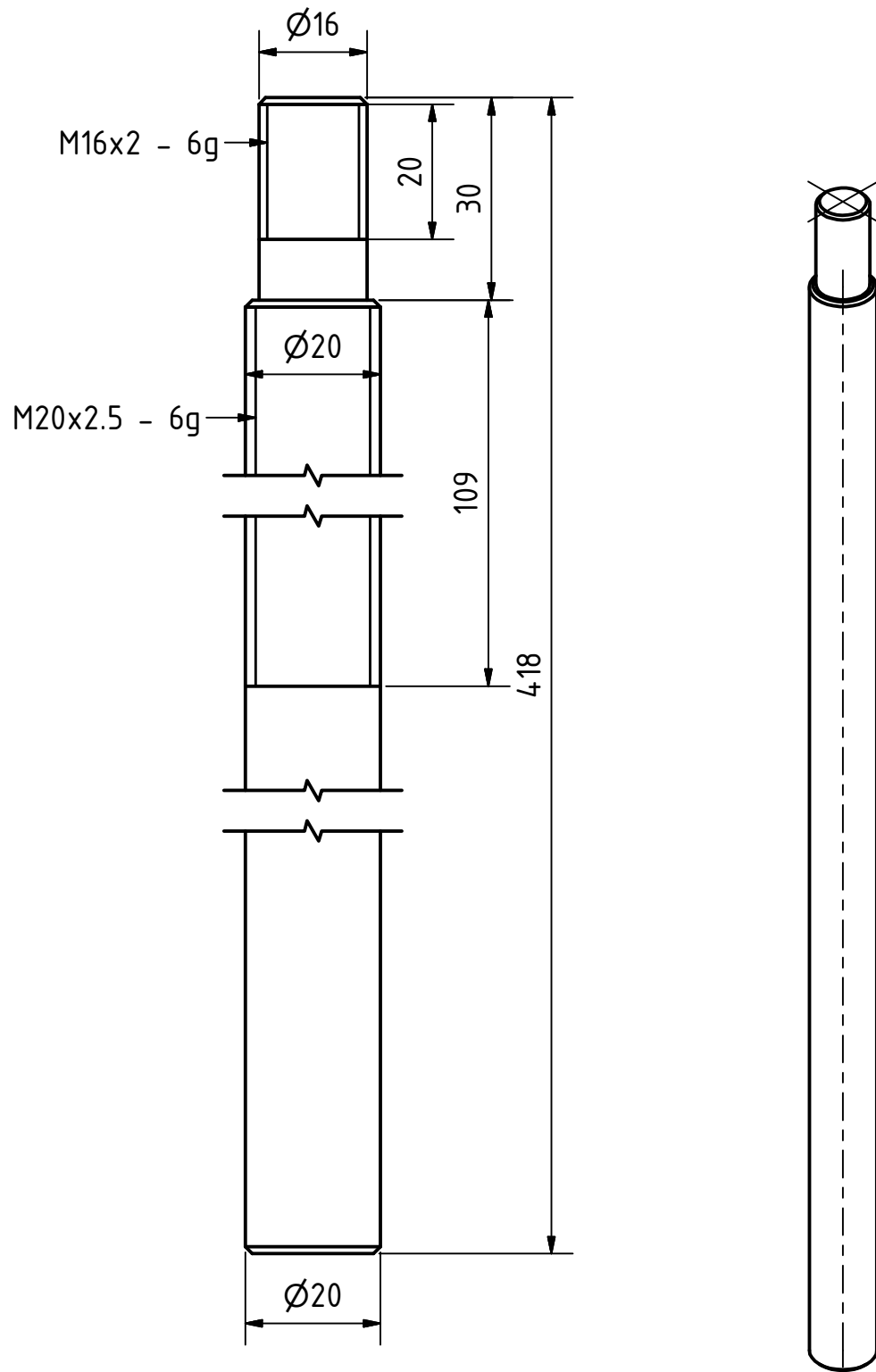
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Knob ring | | oseg_cft_knob-ring.ipt | | | | | | 7.7 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
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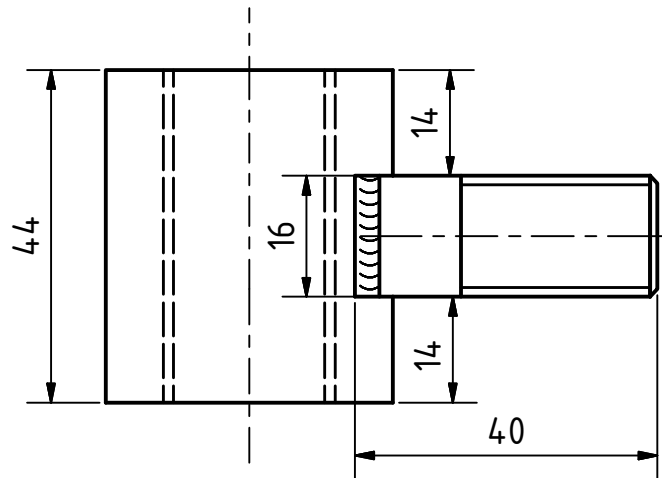
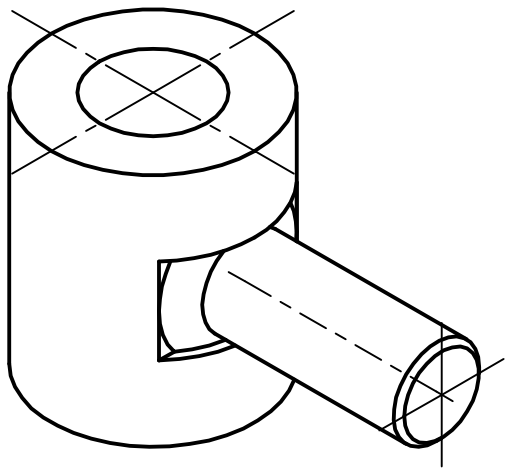
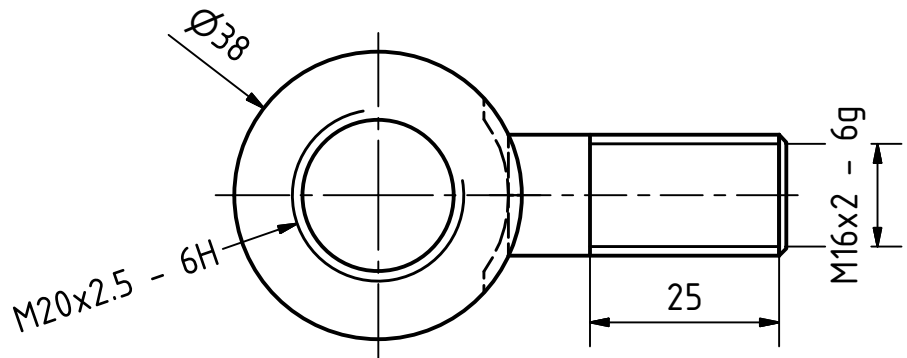
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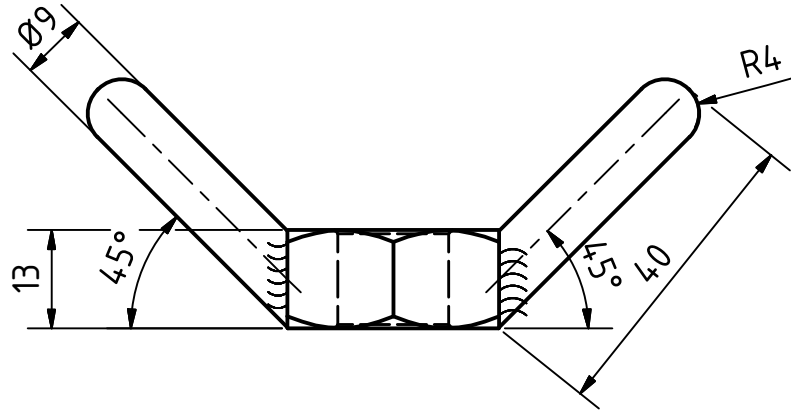
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Bush | | oseg_cft_bush.ipt | | | | | | 7.8 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  | |  | | PART LICENCE | | Steel C45 | |
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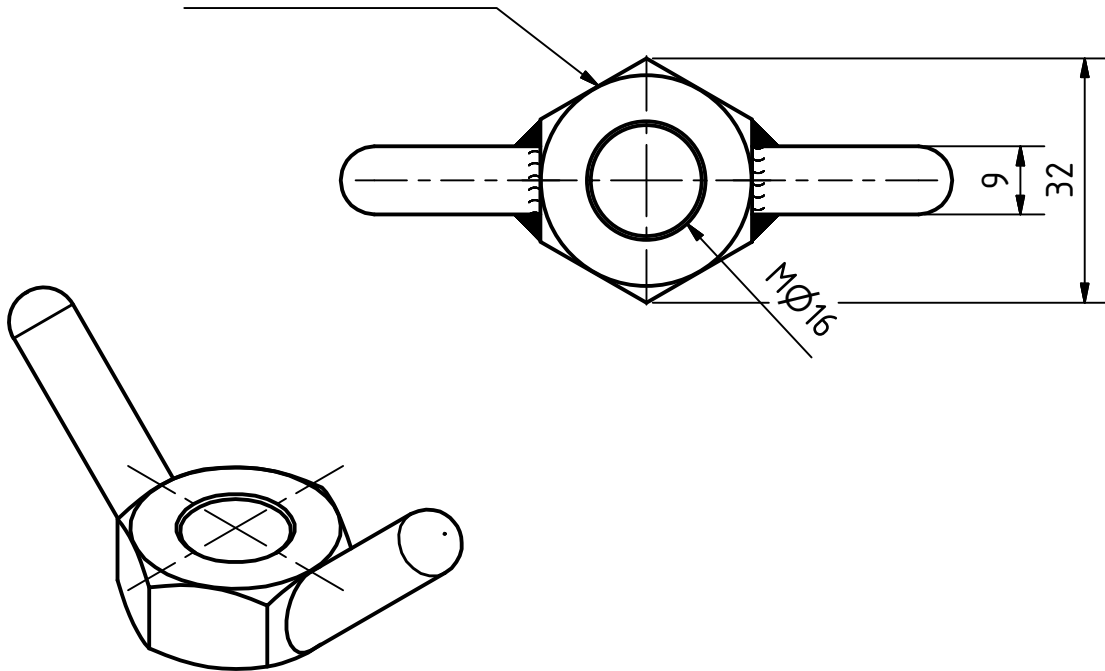
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Spindle | | oseg_cft_spindle.ipt | | | | | | 7.9 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  | |  | | PART | | Steel C45 | |
| | | | | | | LICENCE | | SCALE | |
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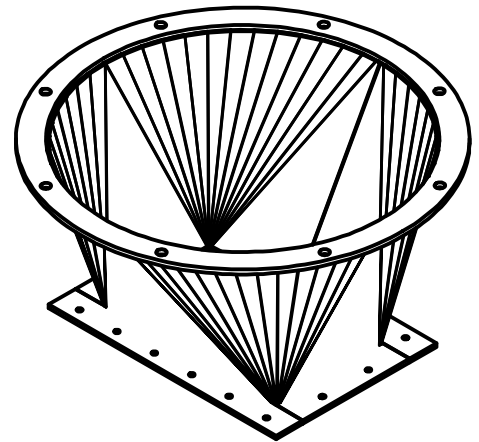
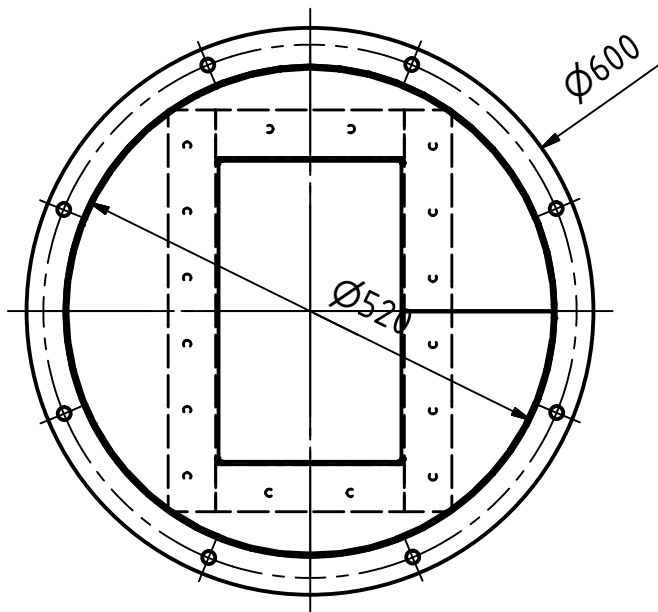
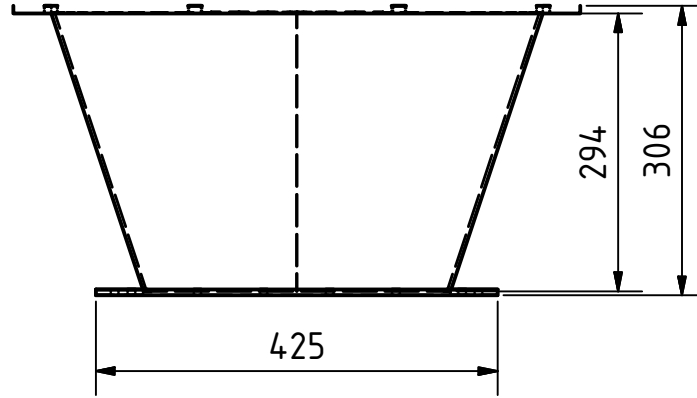
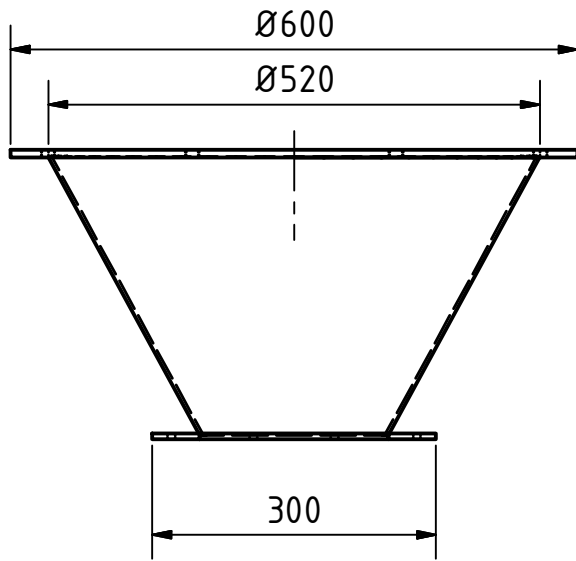
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| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Lock-nut | | oseg_cft_lock-nut.ipt | | | | | | 7.10 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | Steel C45 | |
| | | | | | | SCALE | | SHEET | |
| | | | | | | 1:1 | | 83 /90 | |
| | | | | | | CC.BY.SA 4.0 | | | |






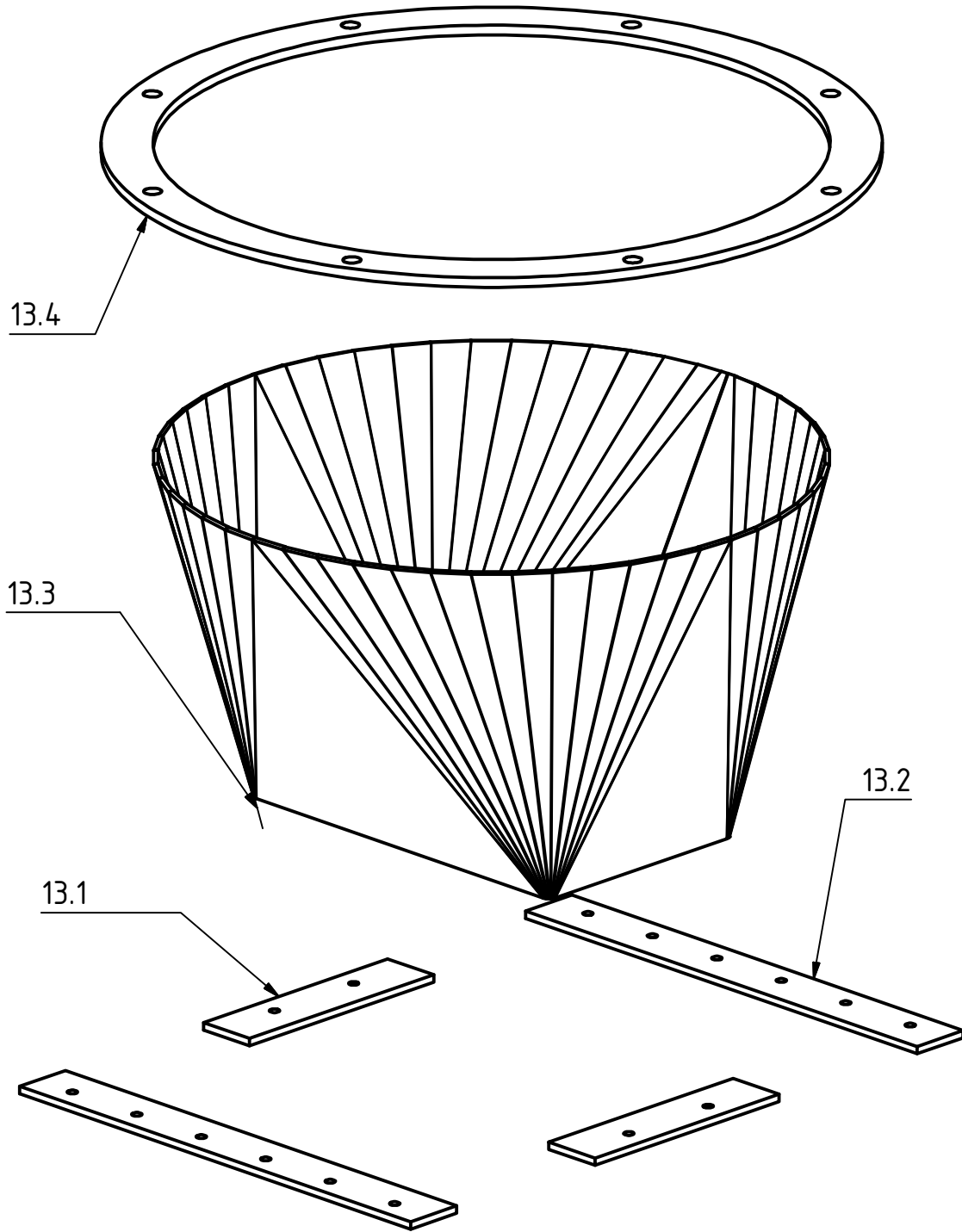
REGULAR M16 NUT






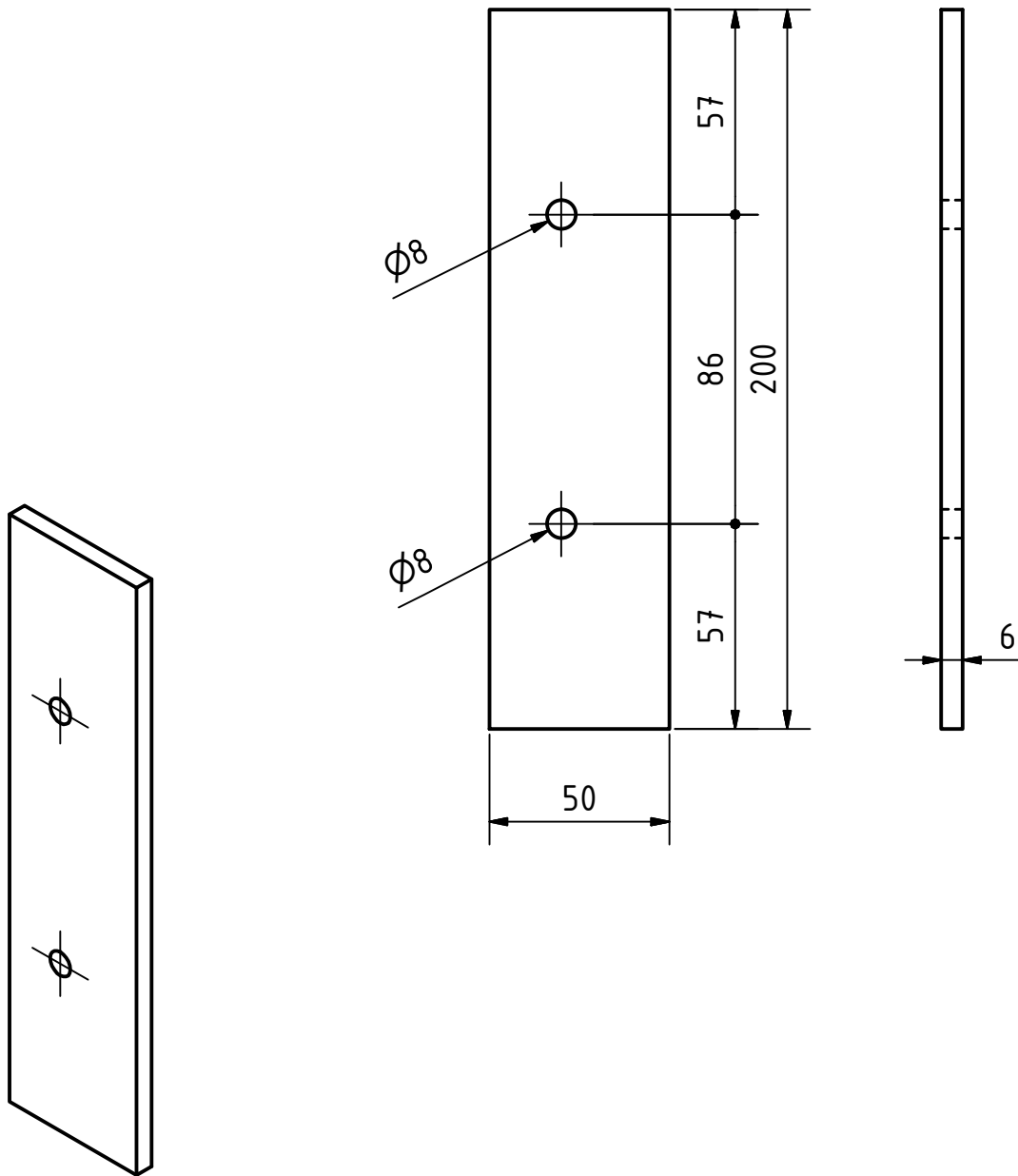
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| PROJECT | | CREATED BY | | APPROVED BY | | DATE | | VERSION | |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Wing nutM16 | | oseg_cft_wing-nutM16.ipt | | | | | | 7.11 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | Steel C45 | |
| | | | | | | CC.BY.SA 4.0 | | SCALE | |
| | | | | | | 1:1 | | SHEET | |
| | | | | | | | | 84 /90 | |






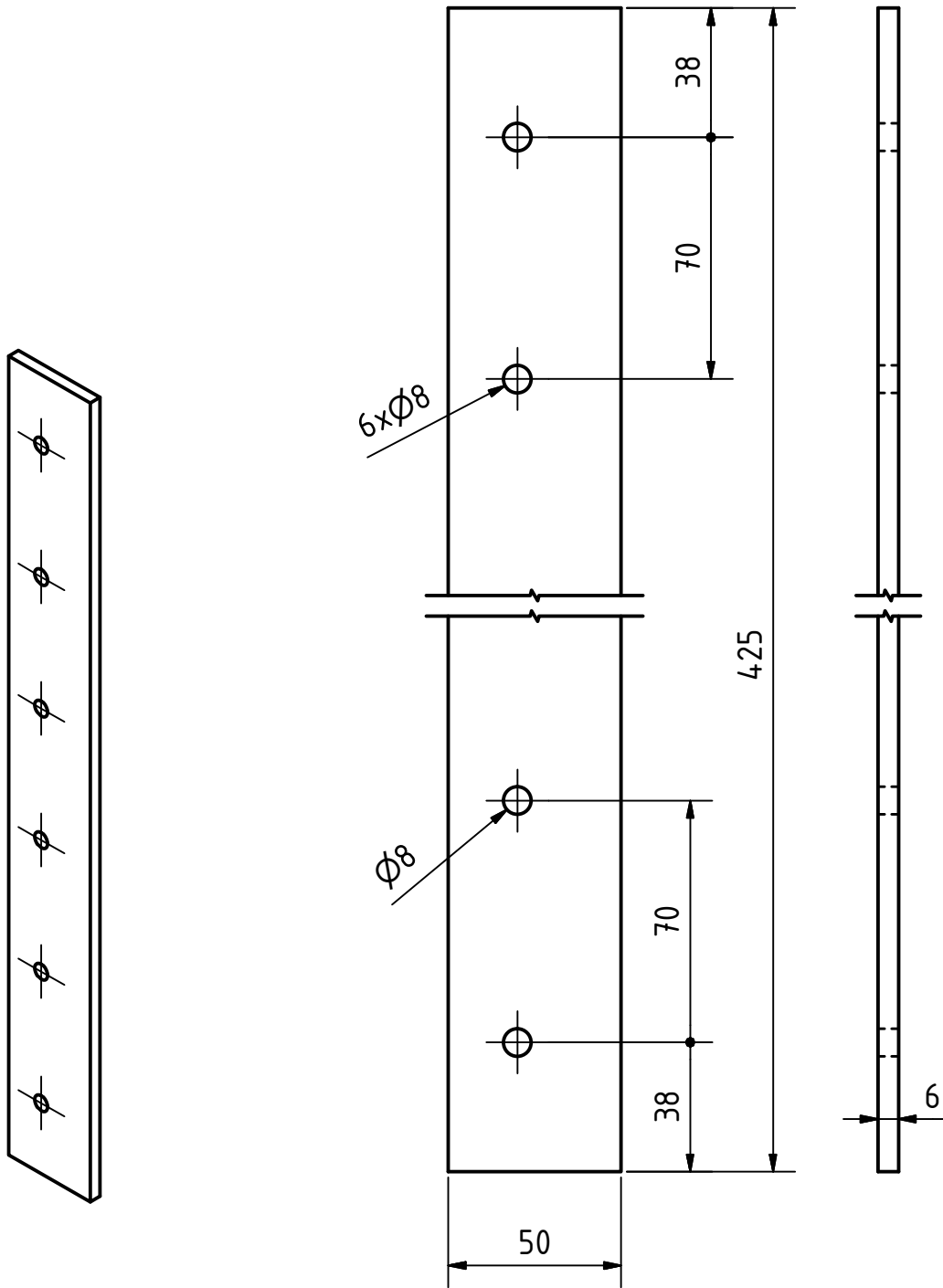
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| PROJECT | | CREATED BY | | APPROVED BY | | DATE | | VERSION | |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Adapter | | oseg_cft_Adapter | | | | | | 13 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | ASSEMBLY LICENCE | | | |
| | | | | | | SCALE | | SHEET | |
| | | | | | | 1:8 | | 85 /90 | |
| | | | | CC.BY.SA 4.0 | | | | | |






| | | | | | |
|---|---|--|------------------|----------|-----------|
| PROJECT | | CREATED BY | APPROVED BY | DATE | VERSION |
| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| Adapter | | oseg_cft_Adapter | | | 13 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  |  | ASSEMBLY LICENCE | | 1 |
| | | | CC.BY.SA 4.0 | SCALE | SHEET |
| | | | 1:5 | | 86 /90 |

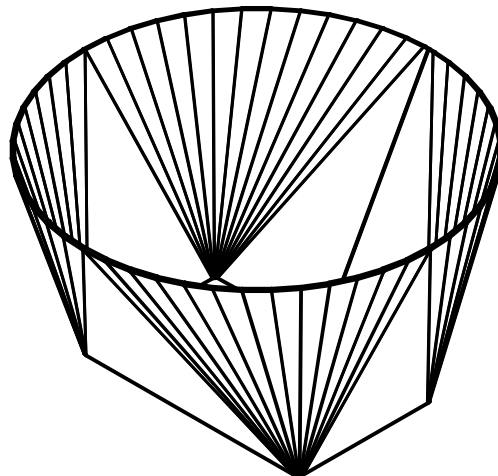
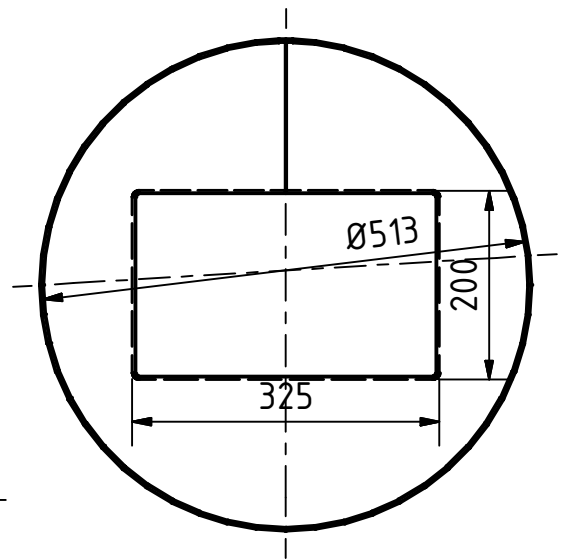
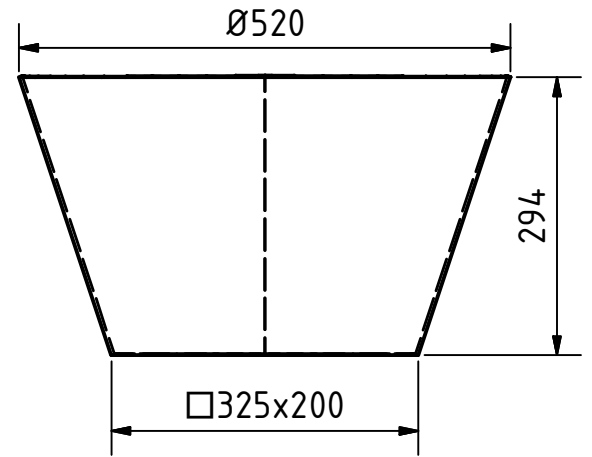
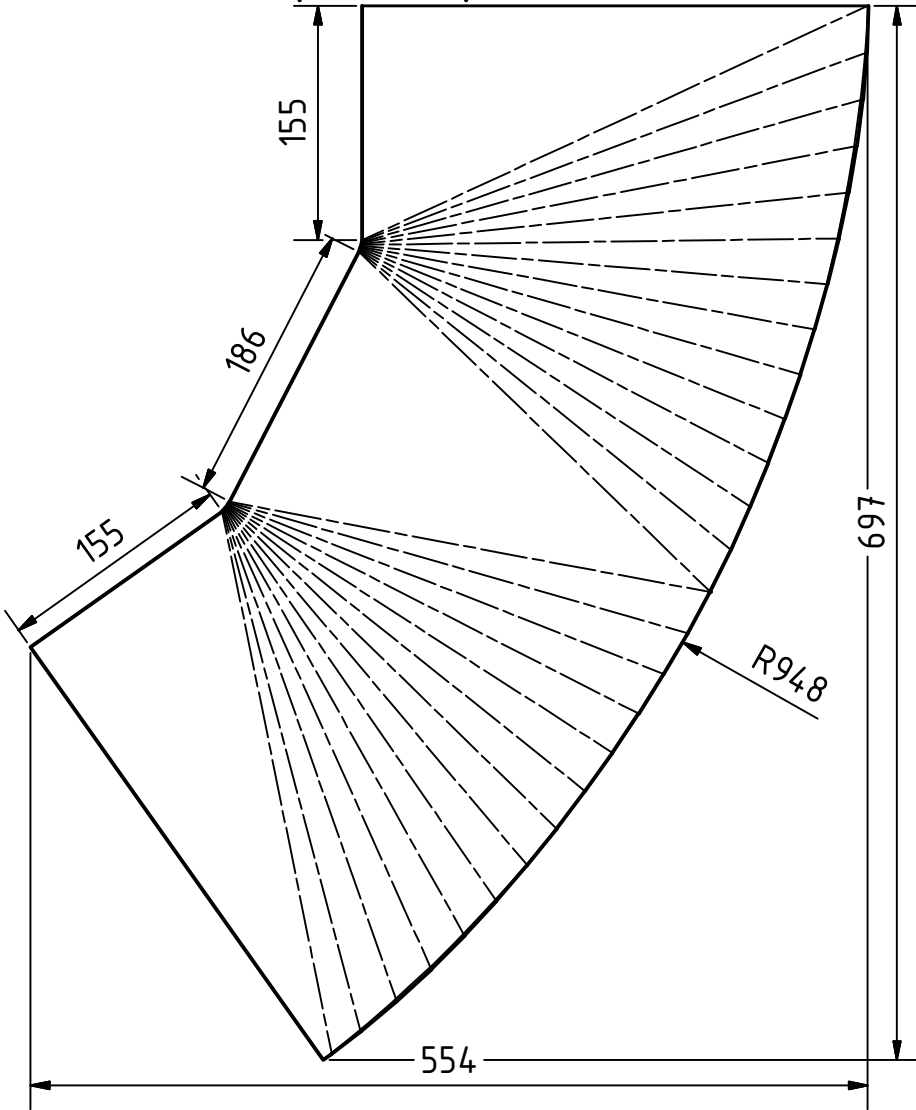





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| PROJECT | | CREATED BY | | APPROVED BY | | DATE | | VERSION | |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Sdapter flange | | oseg_cft_adapter-flange | | | | | | 13.1 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | Steel C45 | |
| | | | | | | SCALE | | QUANTITY | |
| | | | | | | 1:1 | | 2 | |
| | | | | | | CC.BY.SA 4.0 | | SHEET | |
| | | | | | | | | 87 /90 | |

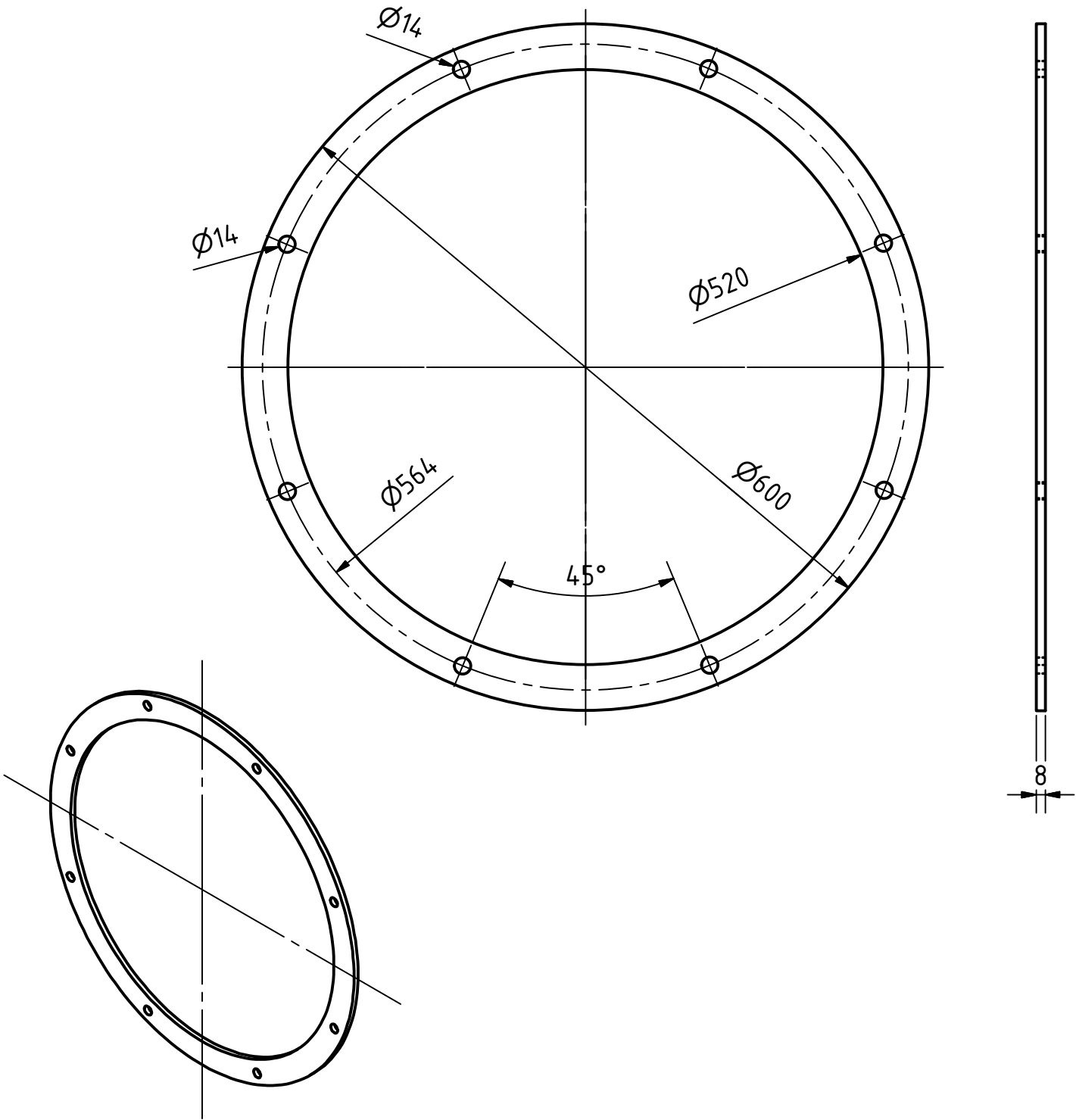





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| PROJECT | | CREATED BY | | APPROVED BY | | DATE | | VERSION | |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | |
| PART NAME | | FILE NAME | | | | | | PART CODE | |
| Adapter flange2 | | oseg_cft_adapter-flange2 | | | | | | 13.2 | |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  | | PART LICENCE | | Steel C45 | |
| | | | | | | CC.BY.SA 4.0 | | SCALE | |
| | | | | | | 1:1 | | SHEET | |
| | | | | | | | | 88 /90 | |

2 PZA (1 : 5)



| | | | | | | | | | | |
|---|--|---|--|--|--|--------------|--|-----------|--|-----------|
| PROJECT | | CREATED BY | | APPROVED BY | | DATE | | VERSION | | |
| Cross Flow Turbine | | D.MOSQUERA | | D. JAEGER | | 05-04-21 | | 1.0 | | |
| PART NAME | | FILE NAME | | | | | | | | PART CODE |
| Shaft-adapter | | oseg_cft_shaft-adapter | | | | | | | | 13.3 |
| DEVELOPED BY | | REDESIGNED BY | | SUPPORTED BY | | DOC. TYPE | | MATERIAL | | QUANTITY |
|  | |  OPEN SOURCE ECOLOGY GERMANY OSEG | |  STIFTUNG | | PART LICENCE | | Steel C45 | | 1 |
| | | | | CC.BY.SA 4.0 | | SCALE | | SHEET | | |
| | | | | | | 1:8 | | 89 /90 | | |



| | | | | | |
|---|---|--|-------------|-----------|-----------|
| PROJECT | | CREATED BY | APPROVED BY | DATE | VERSION |
| Cross Flow Turbine | | D.MOSQUERA | D. JAEGER | 05-04-21 | 1.0 |
| PART NAME | | FILE NAME | | | PART CODE |
| penstock flange | | oseg_cft_penstock-flange.ipt | | | 13.4 |
| DEVELOPED BY | REDESIGNED BY | SUPPORTED BY | DOC. TYPE | MATERIAL | QUANTITY |
|  |  |  | PART | Steel C45 | 1 |
| | | | LICENCE | SCALE | SHEET |
| CC.BY.SA 4.0 | | | 1:5 | 90 /90 | |