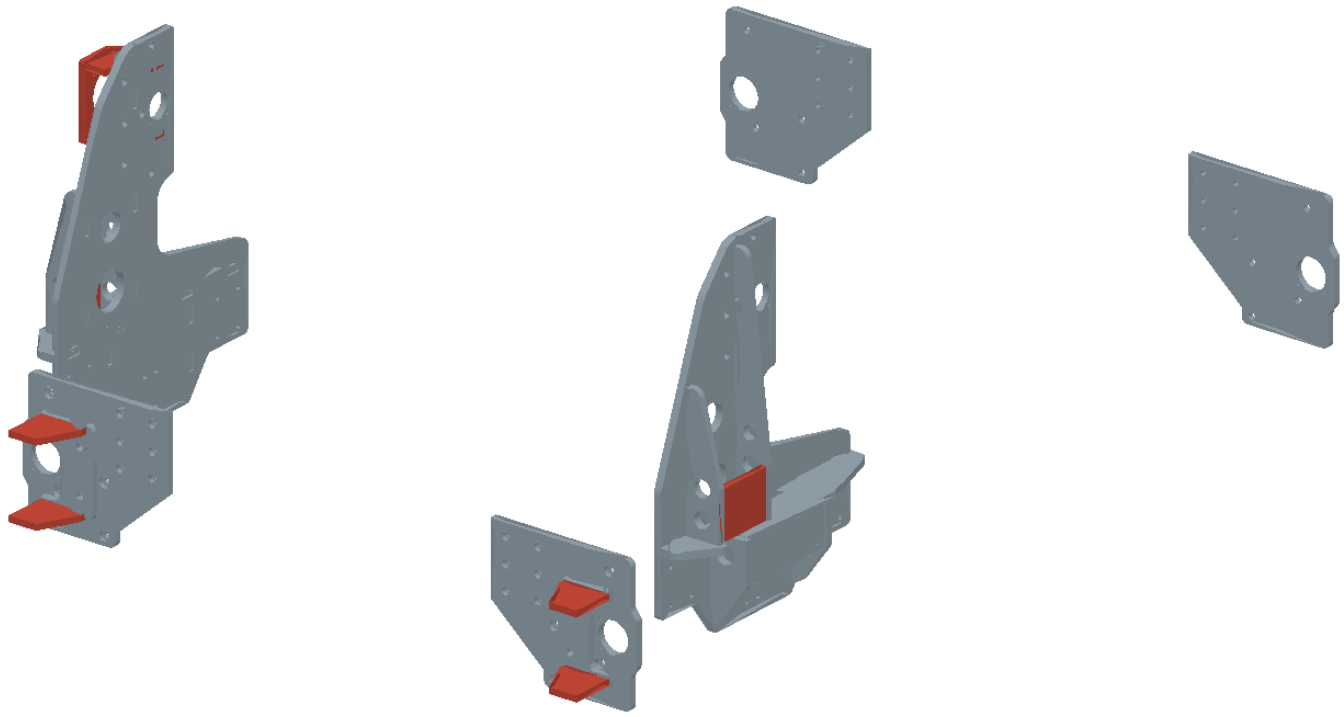
VALLDER / FABRICATION PACKAGE

CNC Router Steel Parts

From the 3D model to the finished set: laser-cut profiles, a complete parts list, secondary machining and trial assembly.



29
parts

3
thicknesses

192
cutting contours

Thicknesses in the original model

10 mm: 20 parts | 8 mm: 7 parts | 7 mm: 2 parts
P15 and P25 are 7 mm thick. Do not automatically substitute 8 or 10 mm plate.

Only the bodies included in the STEP file are shown. Extrusions, linear guides, drives and fasteners are not included in this set. Red parts in the 3D view are 7 or 8 mm thick.

CNC ROUTER / TECHNICAL DOCUMENTATION

How to Use This Package

01 Select the material and thickness

The material is steel; the model does not specify a grade. Agree the grade with your fabricator. Order 7, 8 and 10 mm plate separately.

02 Send the DXF for each thickness

Use the separate 07mm, 08mm and 10mm files. Alternatively, ALL_CUT contains every part on layers CUT_07_MM, CUT_08_MM and CUT_10_MM. Use one option only to avoid ordering duplicate parts.

03 Set up the cutting job in CAM

Units: mm; scale: 1:1. Profiles show nominal finished dimensions without kerf compensation. The operator sets compensation, lead-ins, cutting order and sheet nesting.

04 Machine the counterbores

The laser cuts only the smaller through hole. Machine the larger cylindrical recess for the screw head afterwards, from the specified side, to a depth of 5 mm.

05 Deburr and trial-fit the parts

Remove dross and sharp edges. Check each part against its ID, thickness and hole pattern. Trial-fit tabs and slots before permanent fastening.

Drawing line conventions

Solid dark line = laser-cut profile. Dashed red circle = secondary machining; DO NOT laser-cut this diameter. PDF illustrations are not at 1:1 scale.

The DXF contains only closed polylines with straight and circular arc segments. It contains no text, dimensions, counterbore profiles, lead-ins or marking paths.

PARTS LIST / PART 1 OF 2

Complete Cutting List

Each ID represents one individual body in the STEP file and one copy in the DXF.

ID	Profile	Overall X × Y	t, mm	Qty	Holes[1]	C-bores[2]
P01		246.00 × 220.00	10	1	17	10
P02		86.00 × 138.00	10	1	2	0
P03		75.00 × 70.00	8	1	0	0
P04		75.00 × 70.00	8	1	0	0
P05		246.00 × 220.00	10	1	17	10
P06		246.00 × 220.00	10	1	15	10
P07		246.00 × 220.00	10	1	15	10
P08		75.00 × 70.00	8	1	0	0
P09		75.00 × 70.00	8	1	0	0
P10		86.00 × 138.00	10	1	2	0
P11		410.00 × 560.90	10	1	38	0
P12		71.00 × 410.00	10	1	0	0
P13		66.00 × 134.47	10	1	1	0
P14		165.00 × 70.00	10	1	0	0
P15		93.92 × 78.06	7	1	0	0

[1] Number of internal closed profiles, including circular holes and slots.
[2] Screw-head counterbores; their larger diameters are excluded from the cutting DXF.

PARTS LIST / PART 2 OF 2

Complete Cutting List

Each ID represents one individual body in the STEP file and one copy in the DXF.

ID	Profile	Overall X × Y	t, mm	Qty	Holes[1]	C-bores[2]
P16		66.00 × 134.47	10	1	1	0
P17		61.00 × 216.09	10	1	2	0
P18		61.00 × 384.19	10	1	3	0
P19		72.00 × 76.00	8	1	0	0
P20		72.00 × 76.00	8	1	0	0
P21		100.00 × 120.00	8	1	5	0
P22		61.00 × 384.19	10	1	3	0
P23		61.00 × 216.09	10	1	2	0
P24		66.00 × 134.47	10	1	1	0
P25		93.92 × 78.06	7	1	0	0
P26		165.00 × 70.00	10	1	0	0
P27		66.00 × 134.47	10	1	1	0
P28		71.00 × 410.00	10	1	0	0
P29		410.00 × 560.90	10	1	38	0

[1] Number of internal closed profiles, including circular holes and slots.
[2] Screw-head counterbores; their larger diameters are excluded from the cutting DXF.

Total: 29 parts / 163 internal profiles / 40 counterbores

Theoretical mass after laser cutting: approx. 49.27 kg (density = 7,850 kg/m³).

CNC ROUTER / TECHNICAL DOCUMENTATION

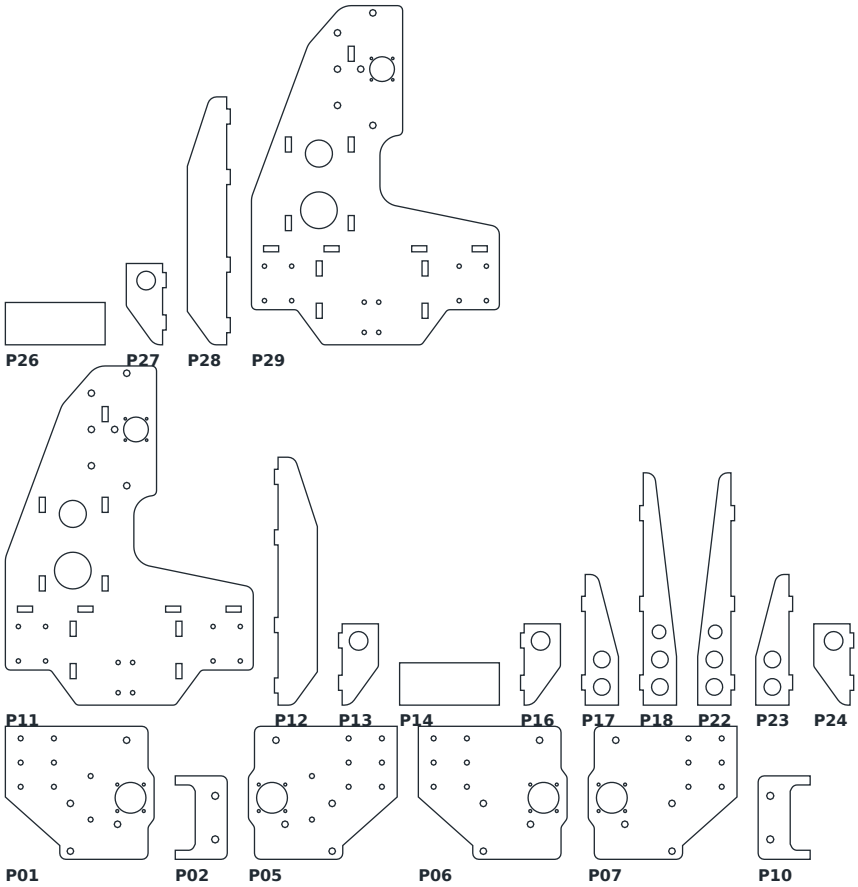
Combined DXF Layout Map

The positions below match the combined ALL_CUT file. Part IDs appear only in this PDF, keeping the production DXF free of annotations.

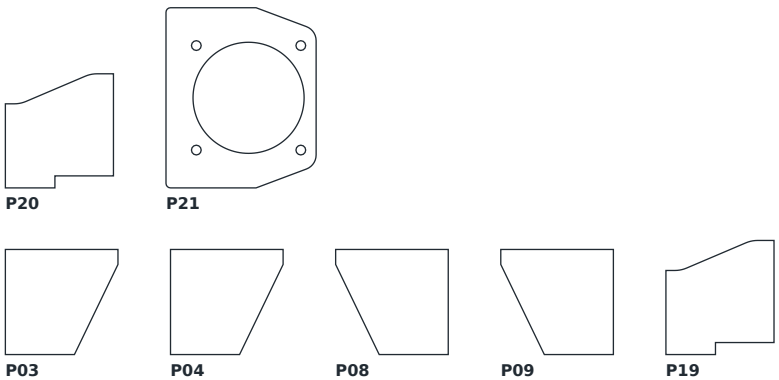
The combined DXF is organized into three cutting layers by plate thickness:

10 mm: CUT_10_MM | 8 mm: CUT_08_MM | 7 mm: CUT_07_MM

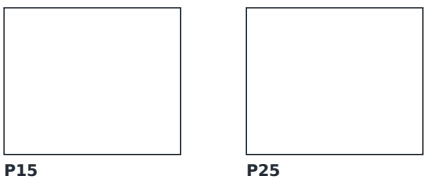
10 mm / 20 parts



8 mm / 7 parts



7 mm / 2 parts



This layout is for identification; it is not an optimized nest for a specific sheet size.

SECONDARY MACHINING / DO NOT LASER-CUT

Socket-Head Counterbores

Each plate below has 6 × Ø13 counterbores, 5 deep, for Ø8.5 through holes; and 4 × Ø17 counterbores, 5 deep, for Ø11 through holes. Dimensions are taken from the model. Verify fastener selection separately.

P01 / machine from side A

Ref.	X	Y	Through Ø	C-bore Ø	Depth
H1	107.500	13.500	11.0	17.0	5.0
H2	185.497	57.997	11.0	17.0	5.0
H3	107.500	92.500	11.0	17.0	5.0
H4	25.286	120.000	8.5	13.0	5.0
H5	80.286	120.000	8.5	13.0	5.0
H6	25.286	160.000	8.5	13.0	5.0
H7	80.286	160.000	8.5	13.0	5.0
H8	200.500	197.000	11.0	17.0	5.0
H9	25.286	200.000	8.5	13.0	5.0
H10	80.286	200.000	8.5	13.0	5.0

P05 / machine from side A

Ref.	X	Y	Through Ø	C-bore Ø	Depth
H1	138.500	13.500	11.0	17.0	5.0
H2	60.503	57.997	11.0	17.0	5.0
H3	138.500	92.500	11.0	17.0	5.0
H4	165.714	120.000	8.5	13.0	5.0
H5	220.714	120.000	8.5	13.0	5.0
H6	165.714	160.000	8.5	13.0	5.0
H7	220.714	160.000	8.5	13.0	5.0
H8	45.500	197.000	11.0	17.0	5.0
H9	165.714	200.000	8.5	13.0	5.0
H10	220.714	200.000	8.5	13.0	5.0

Coordinates refer to the catalogue view: X to the right, Y upwards; (0,0) is the lower-left corner of the bounding rectangle. Side A faces the reader; B is the reverse. Transform coordinates for the machining setup when turning the part over.

SECONDARY MACHINING / DO NOT LASER-CUT

Socket-Head Counterbores

Each plate below has 6 × Ø13 counterbores, 5 deep, for Ø8.5 through holes; and 4 × Ø17 counterbores, 5 deep, for Ø11 through holes. Dimensions are taken from the model. Verify fastener selection separately.

P06 / machine from side B

Ref.	X	Y	Through Ø	C-bore Ø	Depth
H1	107.500	13.500	11.0	17.0	5.0
H2	185.497	57.997	11.0	17.0	5.0
H3	107.500	92.500	11.0	17.0	5.0
H4	25.286	120.000	8.5	13.0	5.0
H5	80.286	120.000	8.5	13.0	5.0
H6	25.286	160.000	8.5	13.0	5.0
H7	80.286	160.000	8.5	13.0	5.0
H8	200.500	197.000	11.0	17.0	5.0
H9	25.286	200.000	8.5	13.0	5.0
H10	80.286	200.000	8.5	13.0	5.0

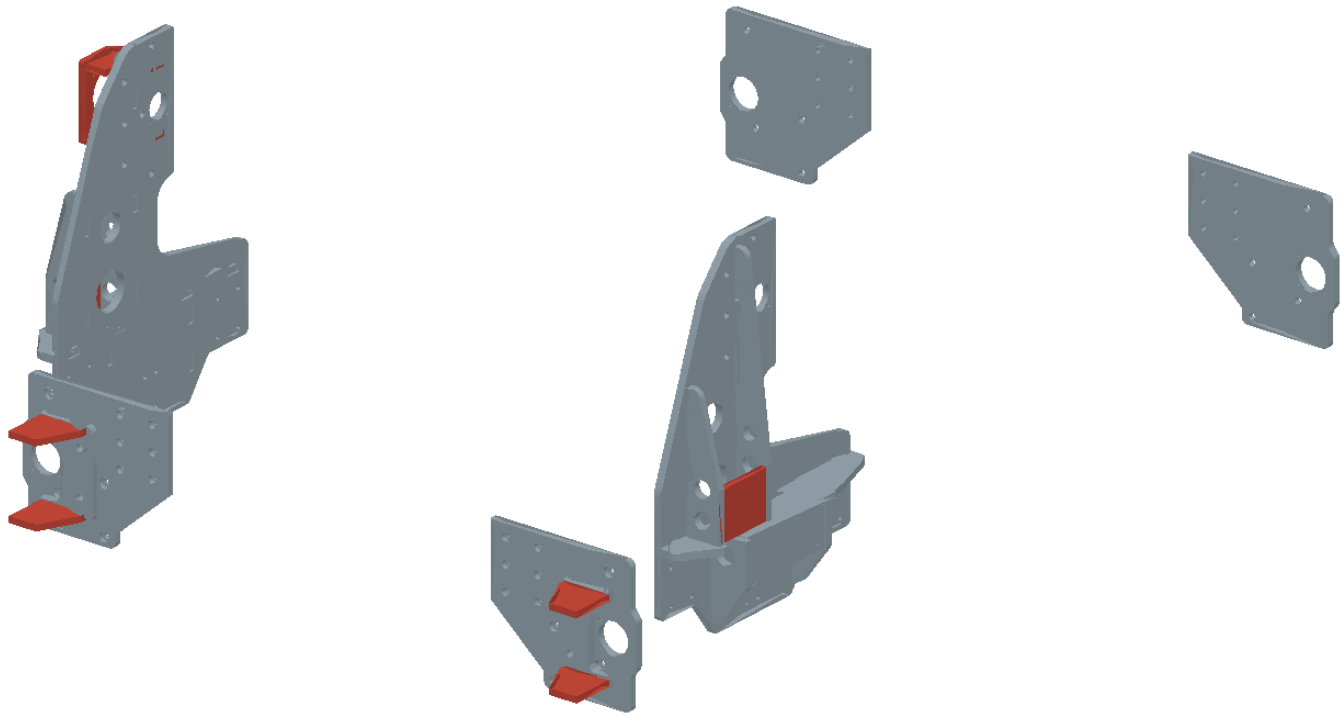
P07 / machine from side B

Ref.	X	Y	Through Ø	C-bore Ø	Depth
H1	138.500	13.500	11.0	17.0	5.0
H2	60.503	57.997	11.0	17.0	5.0
H3	138.500	92.500	11.0	17.0	5.0
H4	165.714	120.000	8.5	13.0	5.0
H5	220.714	120.000	8.5	13.0	5.0
H6	165.714	160.000	8.5	13.0	5.0
H7	220.714	160.000	8.5	13.0	5.0
H8	45.500	197.000	11.0	17.0	5.0
H9	165.714	200.000	8.5	13.0	5.0
H10	220.714	200.000	8.5	13.0	5.0

Coordinates refer to the catalogue view: X to the right, Y upwards; (0,0) is the lower-left corner of the bounding rectangle. Side A faces the reader; B is the reverse. Transform coordinates for the machining setup when turning the part over.

CNC ROUTER / TECHNICAL DOCUMENTATION

Trial Assembly Overview



1. Sort the parts into subassemblies

End plates: P01, P05, P06, P07. Associated small supports: P02-P04 and P08-P10. Main side assemblies: P11-P18 and P22-P29. Additional small bracket: P19-P21.

2. Preserve left-hand and right-hand orientation

Similar outlines do not always have the same hole pattern. P01/P05 form a mirrored pair; P06/P07 form another. Do not interchange plates based solely on overall dimensions.

3. Follow the positions in the original STEP file

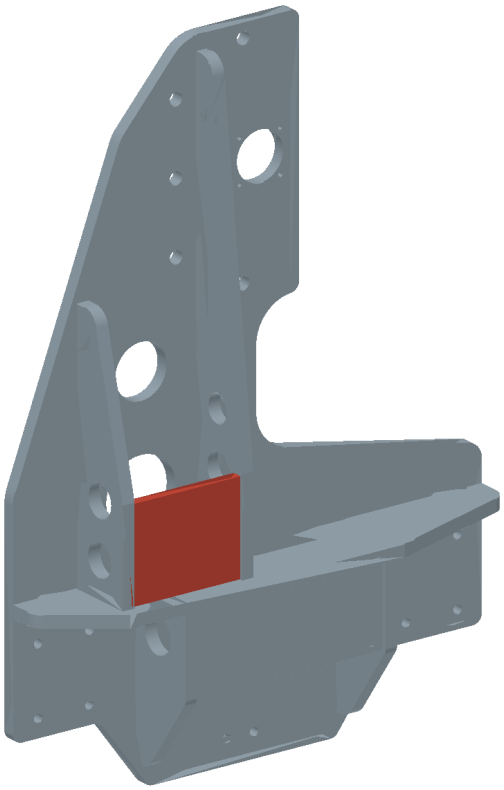
Use the supplied 3D model as the reference for spatial arrangement. The illustration shows only the steel parts, not the complete machine.

Scope of this guide

The STEP file does not specify a fastener list, weld details, tightening torques or assembly tolerances. This guide covers identification and trial fitting; it is not a complete machine assembly specification.

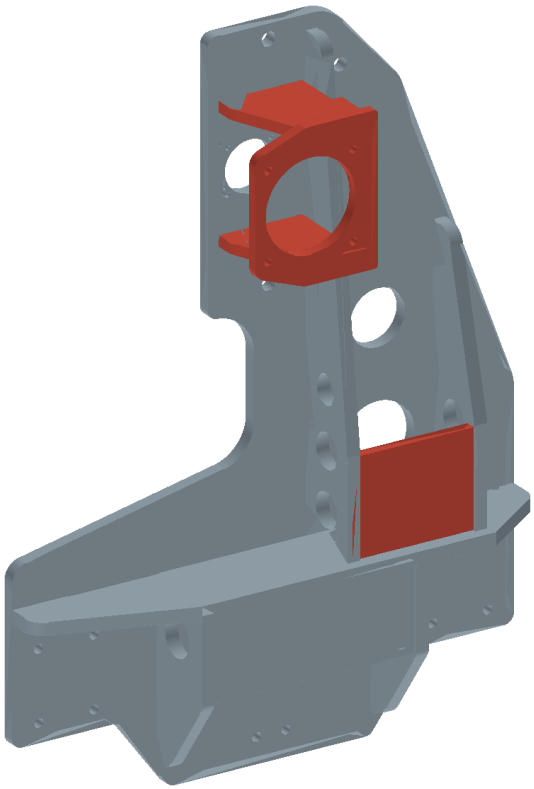
CNC ROUTER / TECHNICAL DOCUMENTATION

Side Assemblies and Trial Fitting



Assembly P11-P18

Main plate P11; horizontal plate P12; ribs P13, P16-P18; plates P14 and P15.



Assembly P19-P29

Main plate P29; horizontal plate P28; ribs P22-P24 and P27; plates P25/P26; bracket P19-P21.

Before fastening

Position the parts on a flat reference surface. Check squareness and contact between mating faces. Fit tabs into slots without forcing or bending the parts.

Before final machining

Check tool access and the machining side of every counterbore. Small holes, mating surfaces and precision fits may require further drilling, reaming or milling.

After trial assembly

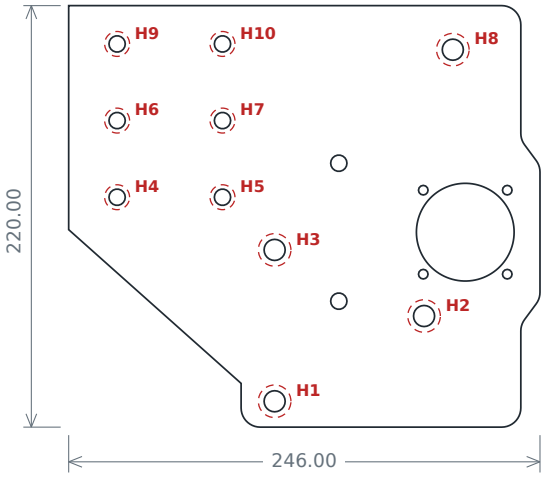
Check the fit with the actual extrusions and components. Confirm the joint design before permanent fastening and application of a protective finish.

PROFILES / VIEW A / NOMINAL DIMENSIONS

Parts Catalogue

P01

10 mm | 1 pcs total | 17 internal profiles per part

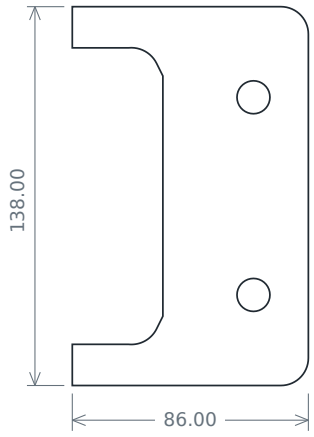


Circular holes: 4 × Ø5; 8 × Ø8.5; 4 × Ø11; 1 × Ø51
Red circles H1-H10: counterbores; see tables on pages 6-7.

Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

P02

10 mm | 1 pcs total | 2 internal profiles per part



Circular holes: 2 × Ø12
View A is shown. Use the DXF for cutting profiles.

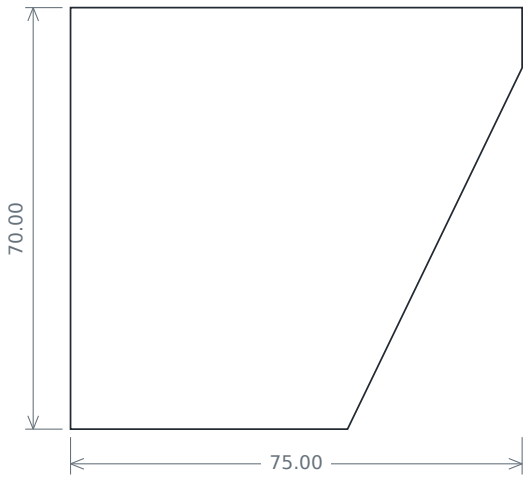
Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

PROFILES / VIEW A / NOMINAL DIMENSIONS

Parts Catalogue

P03 / P04

8 mm | 2 pcs total | 0 internal profiles per part

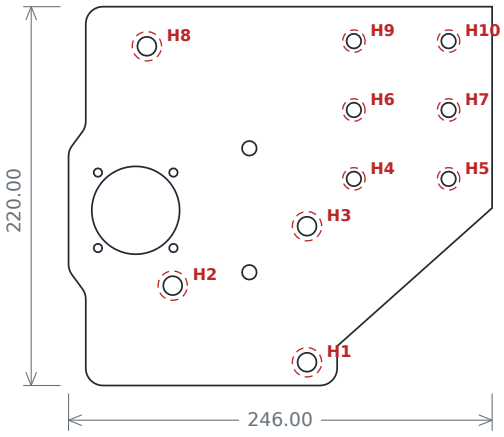


Circular holes: none
View A is shown. Use the DXF for cutting profiles.

Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

P05

10 mm | 1 pcs total | 17 internal profiles per part



Circular holes: 4 × Ø5; 8 × Ø8.5; 4 × Ø11; 1 × Ø51
Red circles H1-H10: counterbores; see tables on pages 6-7.

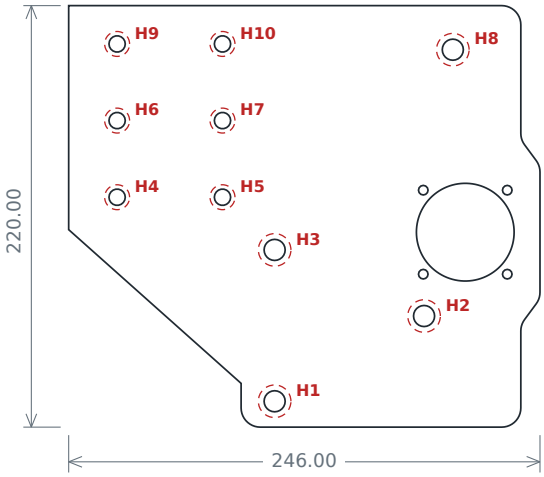
Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

PROFILES / VIEW A / NOMINAL DIMENSIONS

Parts Catalogue

P06

10 mm | 1 pcs total | 15 internal profiles per part

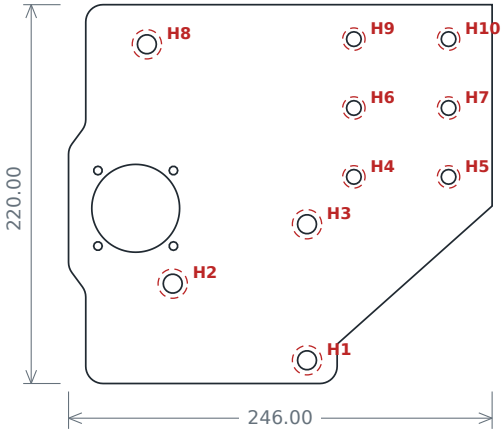


Circular holes: 4 × Ø5; 6 × Ø8.5; 4 × Ø11; 1 × Ø51
Red circles H1-H10: counterbores; see tables on pages 6-7.

Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

P07

10 mm | 1 pcs total | 15 internal profiles per part



Circular holes: 4 × Ø5; 6 × Ø8.5; 4 × Ø11; 1 × Ø51
Red circles H1-H10: counterbores; see tables on pages 6-7.

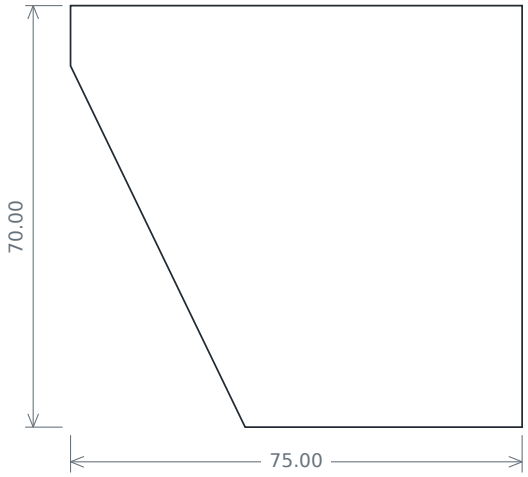
Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

PROFILES / VIEW A / NOMINAL DIMENSIONS

Parts Catalogue

P08 / P09

8 mm | 2 pcs total | 0 internal profiles per part

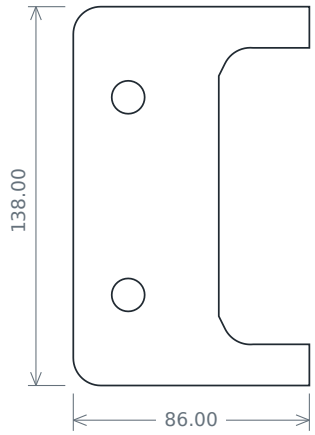


Circular holes: none
View A is shown. Use the DXF for cutting profiles.

Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

P10

10 mm | 1 pcs total | 2 internal profiles per part



Circular holes: 2 × Ø12
View A is shown. Use the DXF for cutting profiles.

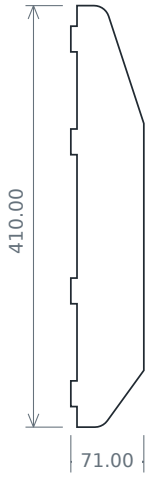
Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

PROFILES / VIEW A / NOMINAL DIMENSIONS

Parts Catalogue

P12

10 mm | 1 pcs total | 0 internal profiles per part

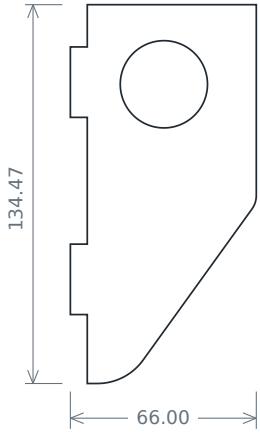


Circular holes: none
View A is shown. Use the DXF for cutting profiles.

Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

P13 / P16

10 mm | 2 pcs total | 1 internal profiles per part



Circular holes: 1 × Ø30.972
View A is shown. Use the DXF for cutting profiles.

Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

PROFILES / VIEW A / NOMINAL DIMENSIONS

Parts Catalogue

P14 / P26

10 mm | 2 pcs total | 0 internal profiles per part

Circular holes: none
View A is shown. Use the DXF for cutting profiles.

Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

P15 / P25

7 mm | 2 pcs total | 0 internal profiles per part

Circular holes: none
View A is shown. Use the DXF for cutting profiles.

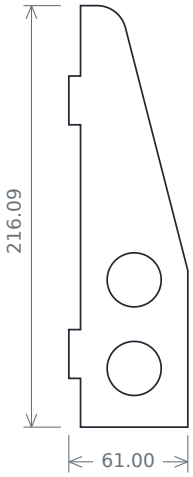
Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

PROFILES / VIEW A / NOMINAL DIMENSIONS

Parts Catalogue

P17

10 mm | 1 pcs total | 2 internal profiles per part

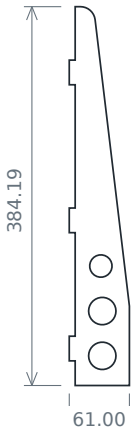


Circular holes: 2 × Ø27.734
View A is shown. Use the DXF for cutting profiles.

Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

P18

10 mm | 1 pcs total | 3 internal profiles per part



Circular holes: 1 × Ø22.683; 2 × Ø27.734
View A is shown. Use the DXF for cutting profiles.

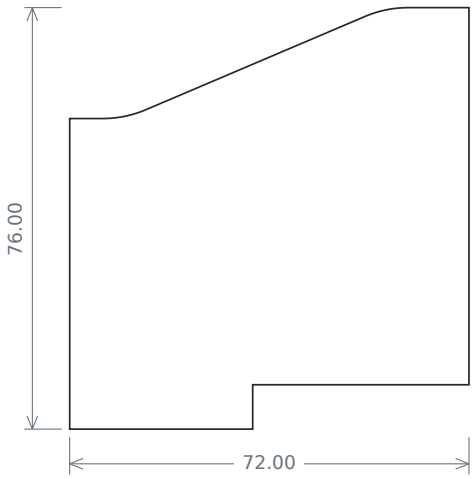
Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

PROFILES / VIEW A / NOMINAL DIMENSIONS

Parts Catalogue

P19 / P20

8 mm | 2 pcs total | 0 internal profiles per part

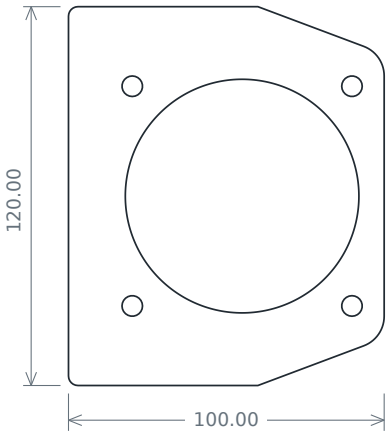


Circular holes: none
View A is shown. Use the DXF for cutting profiles.

Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

P21

8 mm | 1 pcs total | 5 internal profiles per part



Circular holes: 4 × Ø6.5; 1 × Ø74
View A is shown. Use the DXF for cutting profiles.

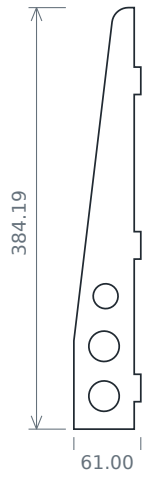
Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

PROFILES / VIEW A / NOMINAL DIMENSIONS

Parts Catalogue

P22

10 mm | 1 pcs total | 3 internal profiles per part

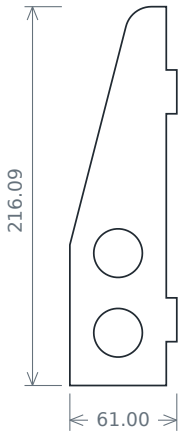


Circular holes: 1 × Ø22.683; 2 × Ø27.734
View A is shown. Use the DXF for cutting profiles.

Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

P23

10 mm | 1 pcs total | 2 internal profiles per part



Circular holes: 2 × Ø27.734
View A is shown. Use the DXF for cutting profiles.

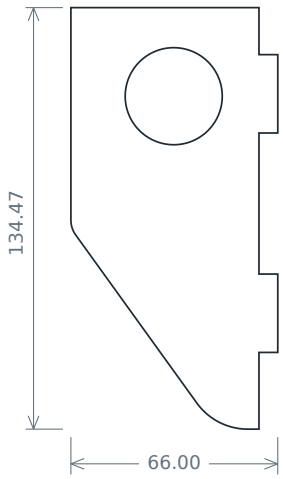
Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

PROFILES / VIEW A / NOMINAL DIMENSIONS

Parts Catalogue

P24 / P27

10 mm | 2 pcs total | 1 internal profiles per part



Circular holes: 1 × Ø30.972
View A is shown. Use the DXF for cutting profiles.

Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

P28

10 mm | 1 pcs total | 0 internal profiles per part

Circular holes: none
View A is shown. Use the DXF for cutting profiles.

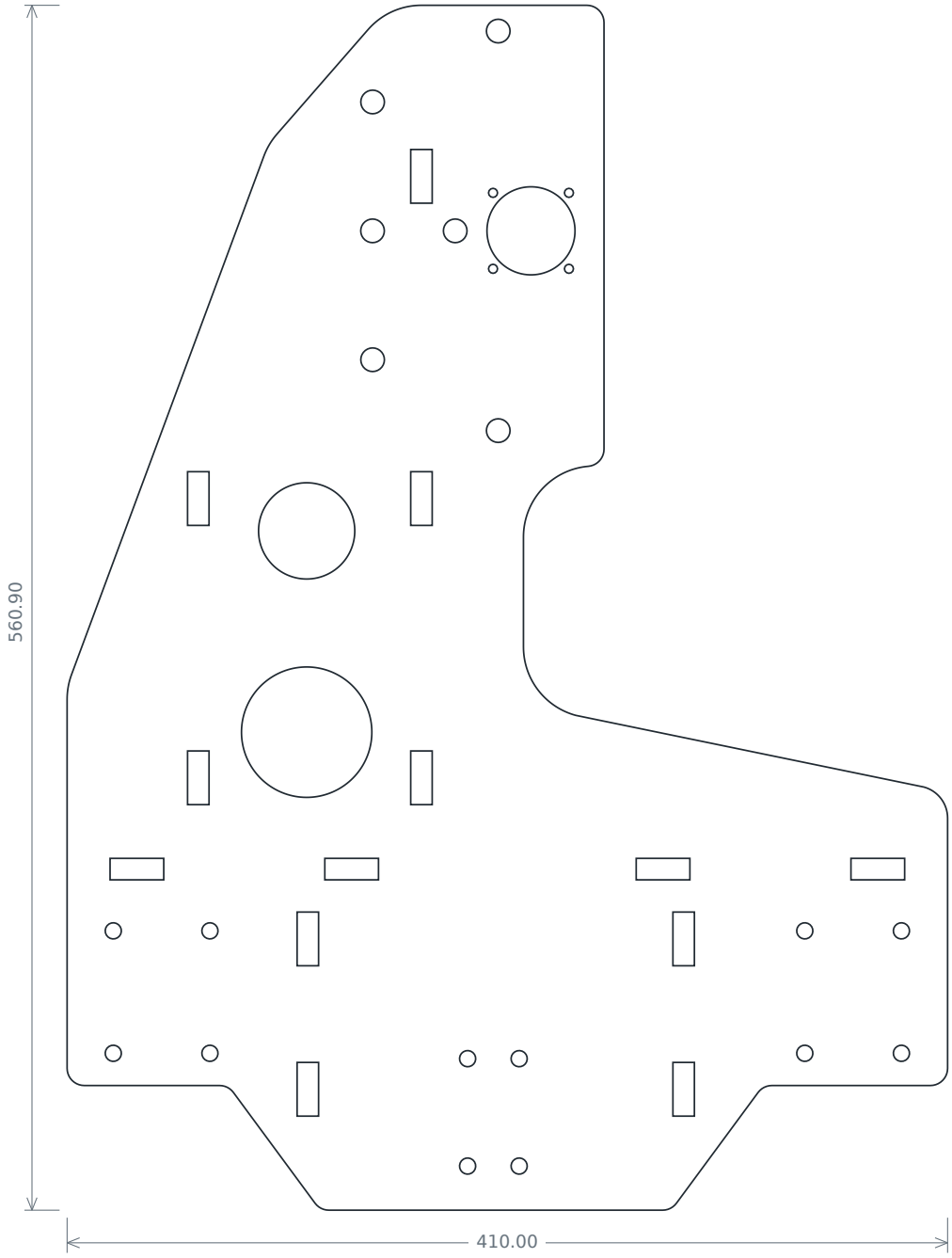
Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.

PROFILES / SHARED OUTLINE FOR P11 AND P29

Main Side Plates

P11 / P29

10 mm | 2 pcs total | 38 internal profiles per part



Circular holes: 4 × Ø4.2; 12 × Ø7.52; 6 × Ø11; 1 × Ø41; 1 × Ø44.814; 1 × Ø60.708
View A is shown. Use the DXF for cutting profiles.

Overall dimensions; illustration not to scale. Quantity: 1 piece per part ID.