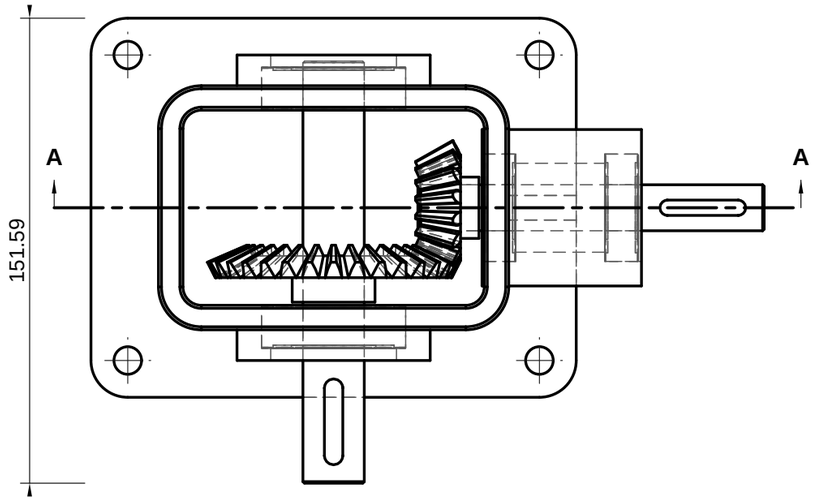
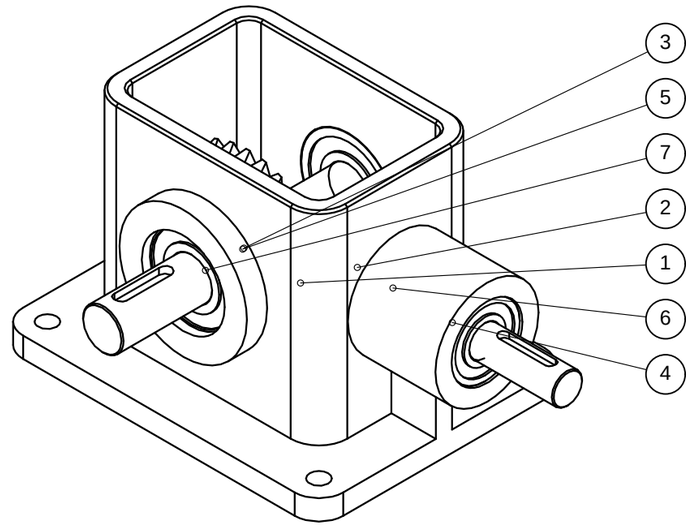
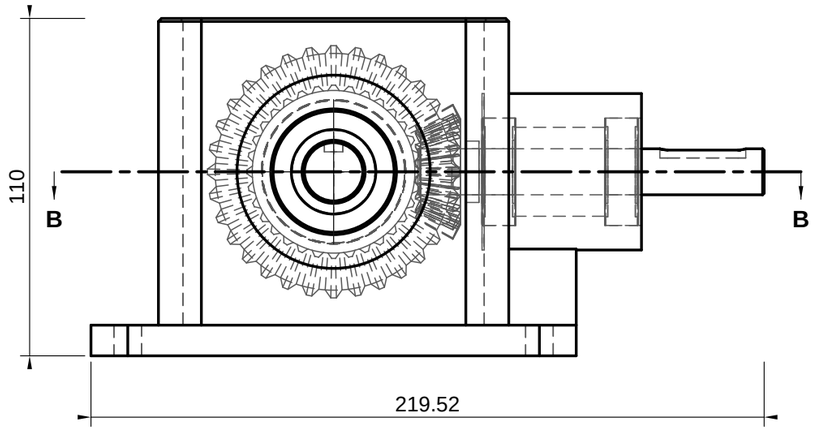
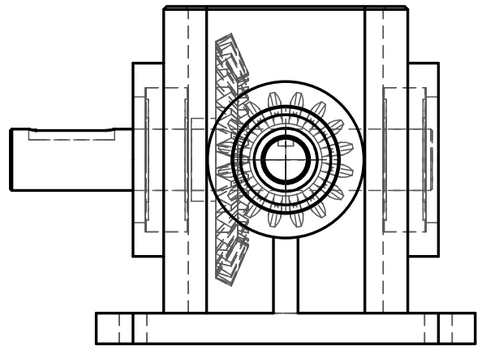




ISOMETRIC VIEW (NOT TO SCALE)





NOTES

1. ALL DIMENSIONS IN MILLIMETRES.
2. GENERAL TOLERANCES: ISO 2768-m on machined features, ISO 2768-c on as-cast surfaces UNLESS STATED.
3. MATERIAL: SEE PARTS LIST.
4. FINISH: HOUSING AS CAST; BEARING SEATS MACHINED RA 1.6 UM; BASE UNDERSIDE AND TOP RIM MACHINED RA 3.2 UM. GEAR FLANKS HARDENED..
5. GEOMETRIC TOLERANCES PER ISO GPS (ISO 8015); EACH PART'S FRAMES AND DATUMS: ON ITS OWN DRAWING (PARTS ZIP) AND IN THE REPORT.
6. FITS: HOUSING: BEARING HOUSING SEAT Ø35 H7 (HOLE +0.025/0), +5 MORE: SEE REPORT.
7. 6204 SEATS DIA 47, FRONT AND REAR WALLS: H7, COAXIAL WITHIN 0.02, LINE BORED IN ONE SETUP.
8. 6202 SEATS DIA 35 IN THE INPUT CARTRIDGE: H7, COAXIAL WITHIN 0.02.
9. INPUT AND OUTPUT BORE AXES: PERPENDICULAR WITHIN 0.03 AND INTERSECTING WITHIN 0.03.
10. LINE-BORE BOTH 6204 SEATS IN ONE SETUP AND BORE THE 6202 CARTRIDGE SQUARE TO THEM.
11. SET BACKLASH TO 0.05-0.10 MM WITH THE HUB SHIMS AND CHECK THE TOOTH CONTACT PATTERN WITH MARKING COMPOUND.
12. CAST FILLETS R3 AT INTERNAL JUNCTIONS WHERE NOT SHOWN.
13. OVERALL DIMENSIONS AND HOLE CHART ARE SHOWN. TAKE ALL OTHER DIMENSIONS FROM THE 3D MODEL (STEP) AND THE PARAMETER TABLE.
14. GENERATED AUTOMATICALLY. NOT CHECKED BY AN ENGINEER. VERIFY BEFORE MANUFACTURE.

PARTS LIST

ITEM	PART	MATERIAL	QTY	kg EACH	FINISH	TOL	DRG No.
1	housing	Aluminium A356-T6 (cast)	1	1.389	RA 1.6 UM	H7 +0.025/0	MP-EX01-01
2	pinion	Alloy steel 42CrMo4 (Q&T)	1	0.081	RA 1.6 UM	H7/s6 +0.018/0	MP-EX01-02
3	output_gear	Alloy steel 42CrMo4 (Q&T)	1	0.243	RA 1.6 UM	H7/s6 +0.021/0	MP-EX01-03
4	input_shaft	Carbon steel C45	1	0.154	RA 0.8 UM	k6 +0.012/+0.001	MP-EX01-04
5	output_shaft	Carbon steel C45	1	0.335	RA 0.8 UM	k6 +0.015/+0.002	MP-EX01-05
6	BEARING 6202	bearing steel 100Cr6 (purchase..	2	0.046	AS BOUGHT	MAKER'S	-
7	BEARING 6204	bearing steel 100Cr6 (purchase..	2	0.106	AS BOUGHT	MAKER'S	-

PARAMETERS (11 OF 31)

PARAMETER	VALUE
module	2.5 mm
pinion_teeth	16
gear_teeth	32
shaft_angle	90 deg
face_w	14 mm
input_d	15 mm
output_d	20 mm
input_bearing	6202
output_bearing	6204
wall	8 mm
base_t	10 mm

MECHPRO
AI-AUTOMATED CAD DESIGN

TITLE: **RIGHT-ANGLE BEVEL GEARBOX 2:1**

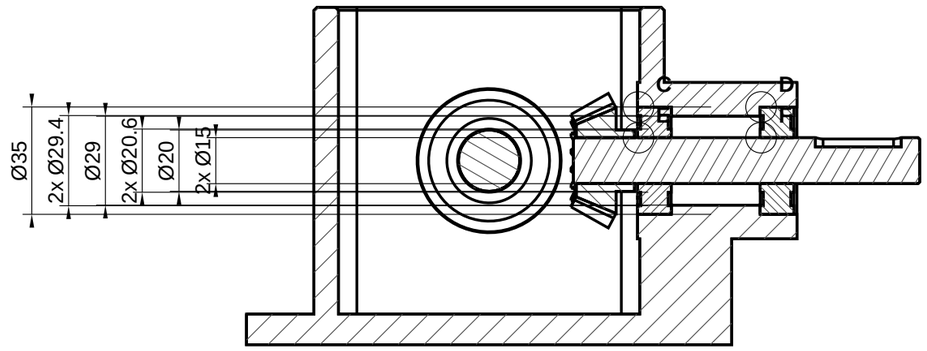
DRAWING No.	REV	SCALE	SHEET	PROJECTION
MP-EX01	A	1:2	1 OF 3 (A3)	3RD

MATERIAL	GENERAL TOLERANCE	MASS
SEE PARTS LIST	ISO 2768-m on machined features, ISO 2768-c on..	2.505 kg

DRAWN	CHECKED	DATE	UNITS
MECHPRO AI	NOT CHECKED	2026-10-25	mm

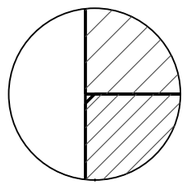
SECTION A-A

SCALE 1:2 THROUGH INPUT BEARING OUTER AND 2 MORE IN HOUSING, INPUT BEARING INNER, INPUT BEARING OUTER AND 1 MORE



DETAIL C

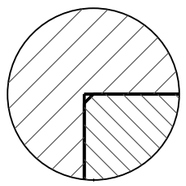
SCALE 5:1



NO CLEARANCE (A FIT, SEE THE TOLERANCES): INPUT BEARING INNER Ø35 IN HOUSING Ø35

DETAIL D

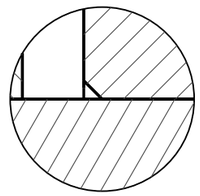
SCALE 5:1



NO CLEARANCE (A FIT, SEE THE TOLERANCES): INPUT BEARING OUTER Ø35 IN HOUSING Ø35

DETAIL E

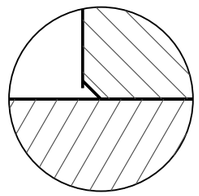
SCALE 10:1



NO CLEARANCE (A FIT, SEE THE TOLERANCES): INPUT SHAFT Ø15 IN INPUT BEARING INNER Ø15

DETAIL F

SCALE 10:1



NO CLEARANCE (A FIT, SEE THE TOLERANCES): INPUT SHAFT Ø15 IN INPUT BEARING OUTER Ø15

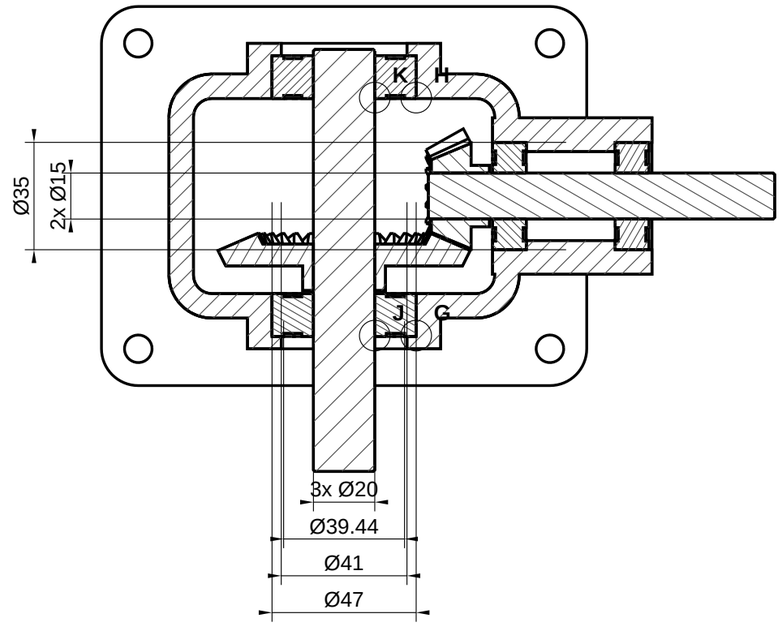
SECTIONS: THE PARTS THE PLANE PASSES THROUGH ARE CUT AND HATCHED; PARTS BEHIND IT ARE SHOWN WHOLE; PARTS IN FRONT OF IT ARE REMOVED. EVERY FIGURE IS MEASURED ON THE MODEL.
THE CUTTING PLANES ARE MARKED ON THE VIEWS OF SHEET 1 WHERE A VIEW SEES THEM EDGE-ON.

MECHPRO AI-AUTOMATED CAD DESIGN	TITLE: **RIGHT-ANGLE BEVEL GEARBOX 2:1**			
DRAWING No.: **MP-EX01**	REV: A	SCALE: 1:2	SHEET: 2 OF 3 (A3)	PROJECTION: 3RD
MATERIAL: SEE PARTS LIST	GENERAL TOLERANCE: ISO 2768-m on machined features, ISO 2768-c on..	MASS: 2.505 kg		
DRAWN: MECHPRO AI	CHECKED: NOT CHECKED	DATE: 2026-10-25	UNITS: mm	

0.000 0.000 0.000

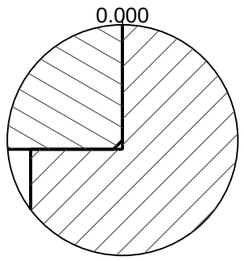
SECTION B-B

SCALE 1:2 THROUGH OUTPUT BEARING FRONT AND 2 MORE IN HOUSING, OUTPUT BEARING FRONT, OUTPUT BEARING REAR AND 1 MORE



DETAIL G

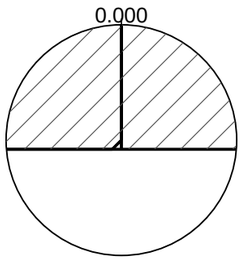
SCALE 5:1



NO CLEARANCE (A FIT, SEE THE TOLERANCES): OUTPUT BEARING FRONT Ø47 IN HOUSING Ø47

DETAIL H

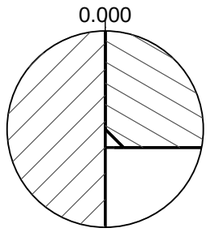
SCALE 5:1



NO CLEARANCE (A FIT, SEE THE TOLERANCES): OUTPUT BEARING REAR Ø47 IN HOUSING Ø47

DETAIL J

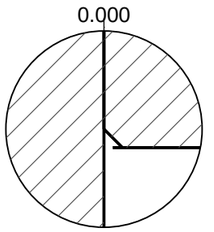
SCALE 10:1



NO CLEARANCE (A FIT, SEE THE TOLERANCES): OUTPUT SHAFT Ø20 IN OUTPUT BEARING FRONT Ø20

DETAIL K

SCALE 10:1



NO CLEARANCE (A FIT, SEE THE TOLERANCES): OUTPUT SHAFT Ø20 IN OUTPUT BEARING REAR Ø20

SECTIONS: THE PARTS THE PLANE PASSES THROUGH ARE CUT AND HATCHED; PARTS BEHIND IT ARE SHOWN WHOLE;
PARTS IN FRONT OF IT ARE REMOVED. EVERY FIGURE IS MEASURED ON THE MODEL.
THE CUTTING PLANES ARE MARKED ON THE VIEWS OF SHEET 1 WHERE A VIEW SEES THEM EDGE-ON.

MECHPRO AI-AUTOMATED CAD DESIGN	TITLE **RIGHT-ANGLE BEVEL GEARBOX 2:1**			
DRAWING No. **MP-EX01**	REV A	SCALE 1:2	SHEET 3 OF 3 (A3)	PROJECTION 3RD
MATERIAL SEE PARTS LIST	GENERAL TOLERANCE ISO 2768-m on machined features, ISO 2768-c on..		MASS 2.505 kg	
DRAWN MECHPRO AI	CHECKED NOT CHECKED	DATE 2026-10-25	UNITS mm	