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Pusat Prestasi Nasional



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KISI-KISI

**LOMBA KOMPETENSI SISWA (LKS)-SMK
TINGKAT NASIONAL XXX TAHUN 2022**

BIDANG LOMBA

**Teknik Pencetakan Plastik
(Plastic Die Engineering)**



Teknologi Manufaktur dan Rekayasa



KISI - KISI

PLASTIC DIE ENGINEERING

LKS SMK
TINGKAT NASIONAL
KE XXX

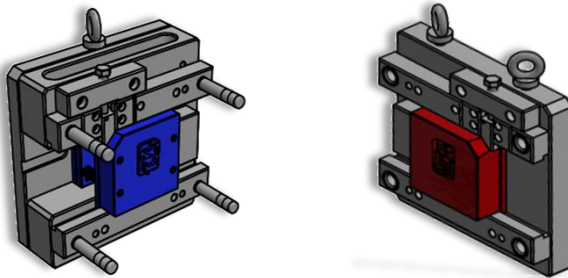
2022

CREATED BY : - MURYANTO
- LUTFY E.B

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI
PUSAT PRESTASI NASIONAL

JL. JENDERAL SUDIRMAN GEDUNG C LT.19
SENAYAN - JAKARTA

**LOMBA KOMPETENSI SISWA
(DARING)
SEKOLAH MENENGAH KEJURUAN
TINGKAT NASIONAL KE- XXX TAHUN 2022**



SOAL

**BIDANG LOMBA
PLASTIC DIE ENGINEERING**

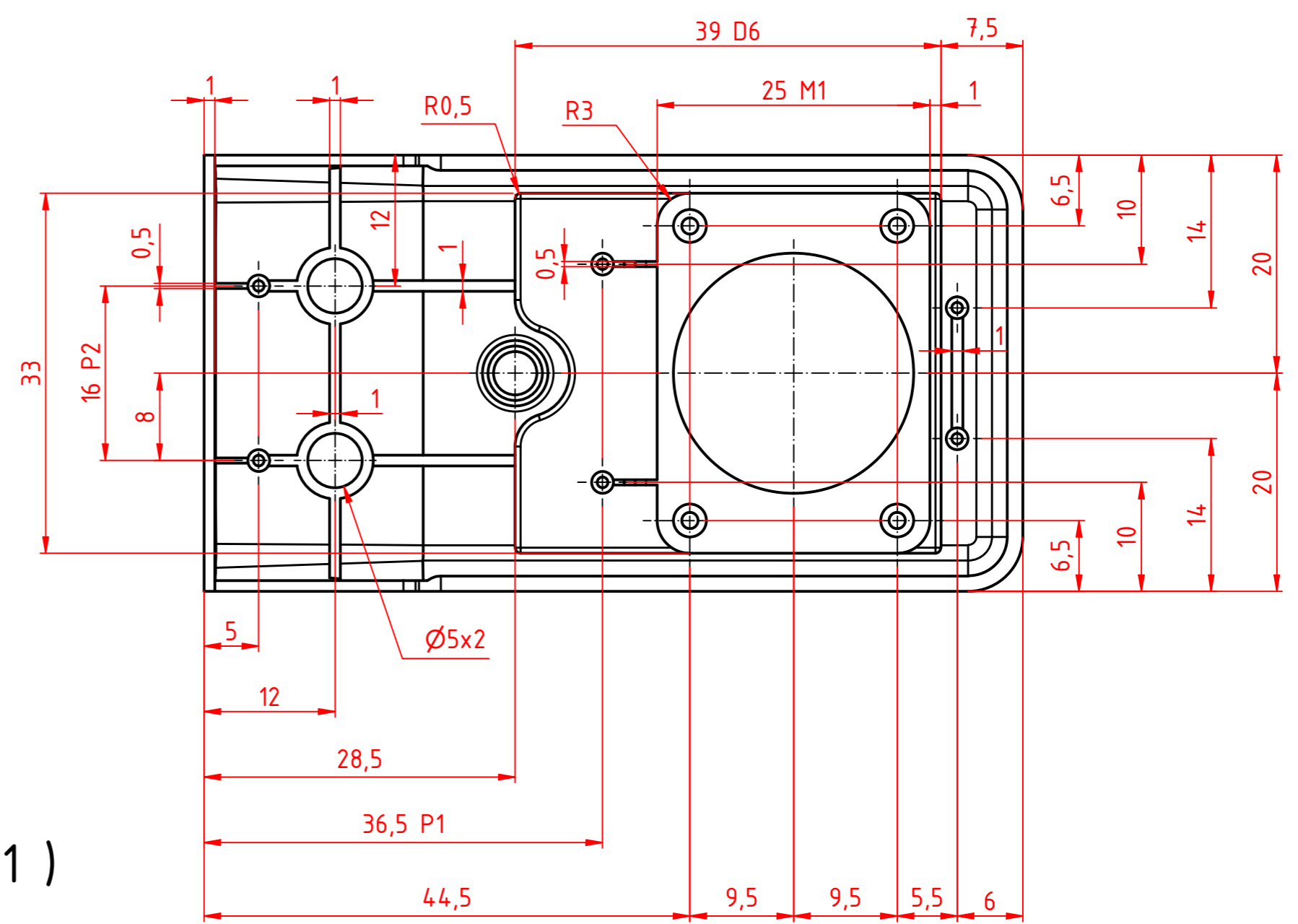
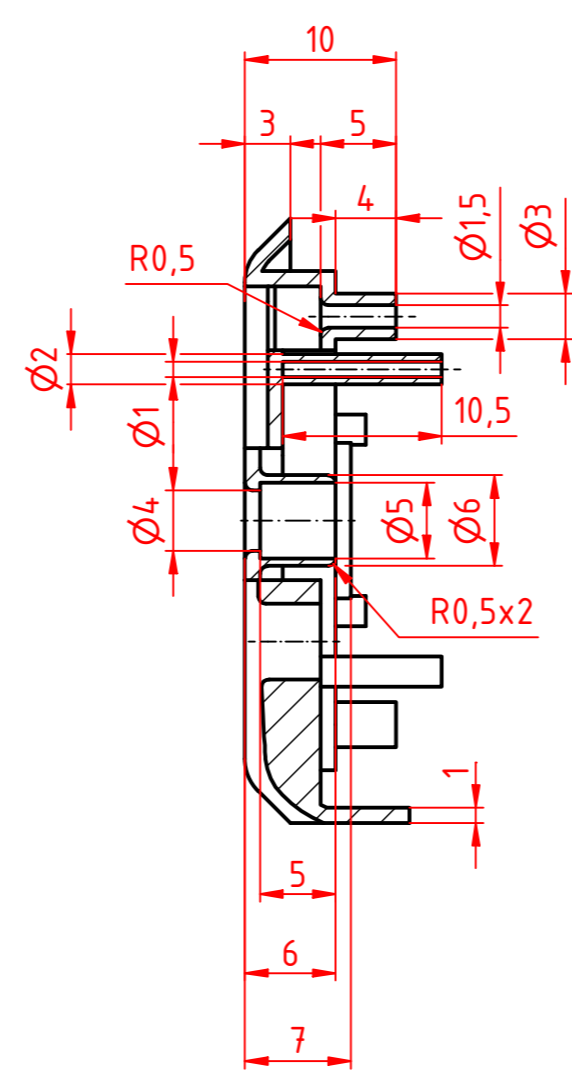
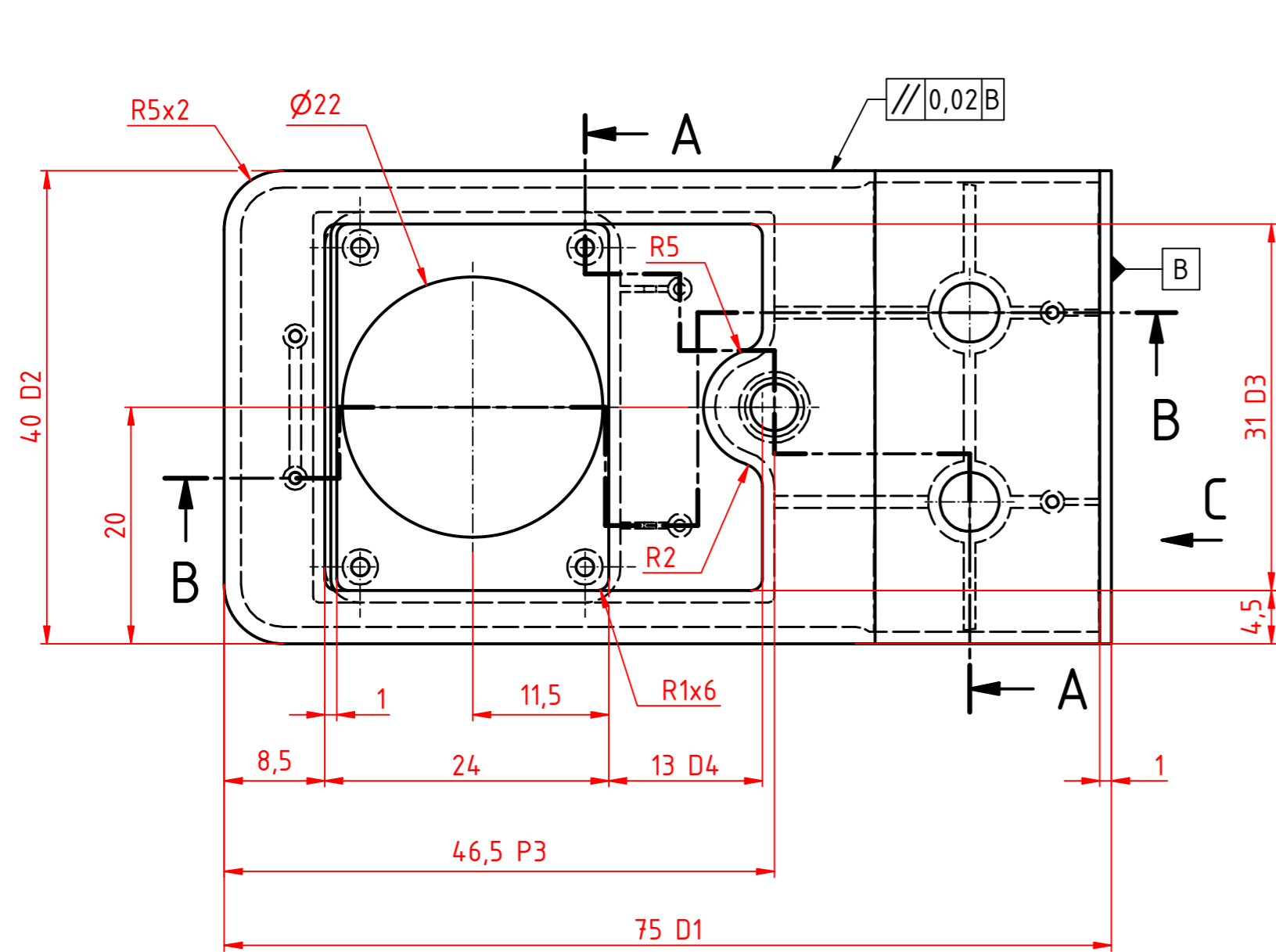


KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI

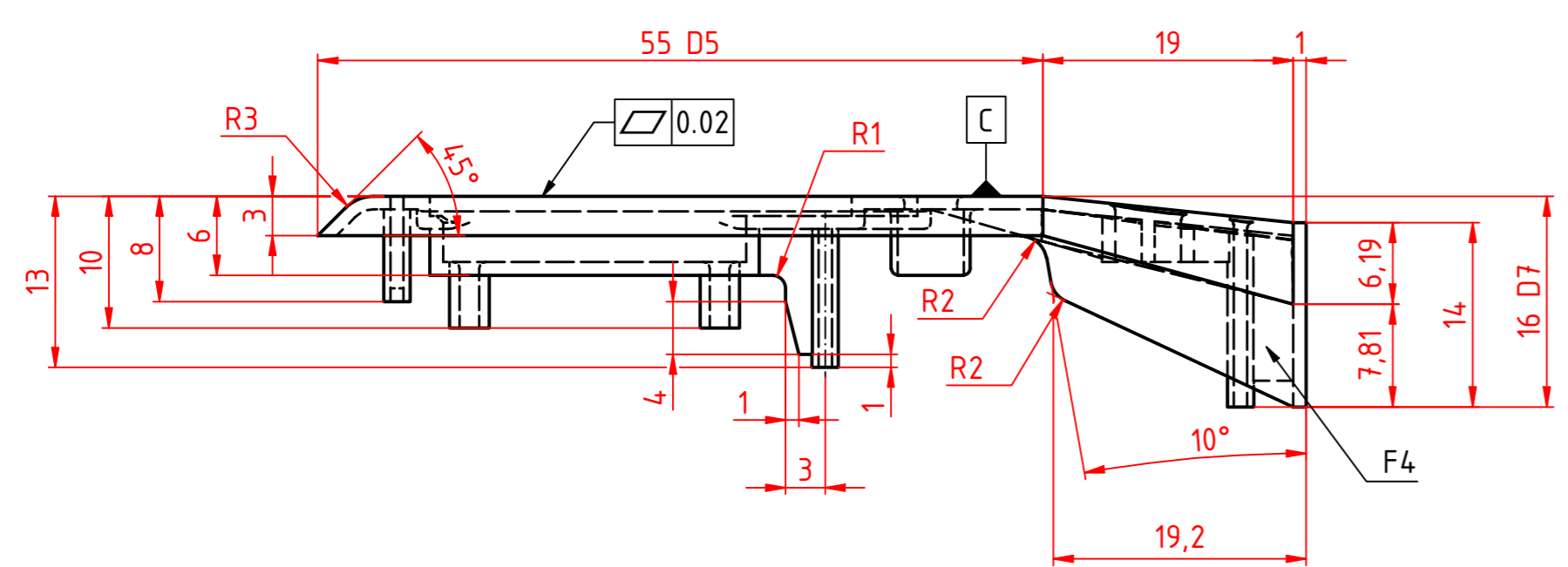
PUSAT PRESTASI NASIONAL

JL. JENDERAL SUDIRMAN GEDUNG C LT.19
SENAYAN - JAKARTA

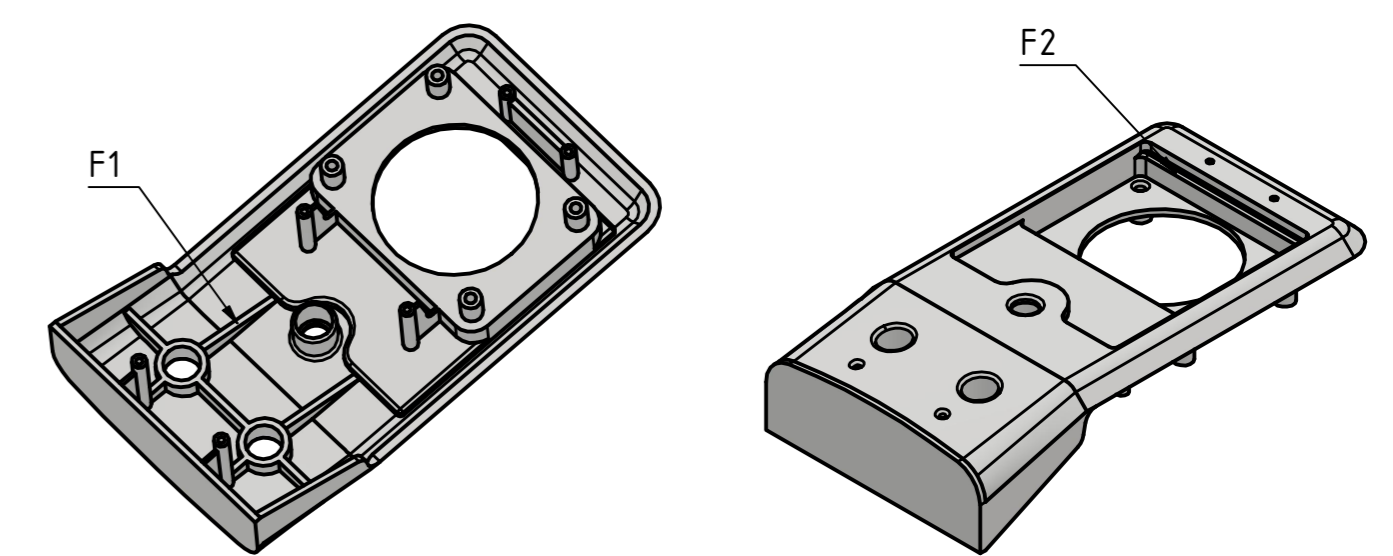
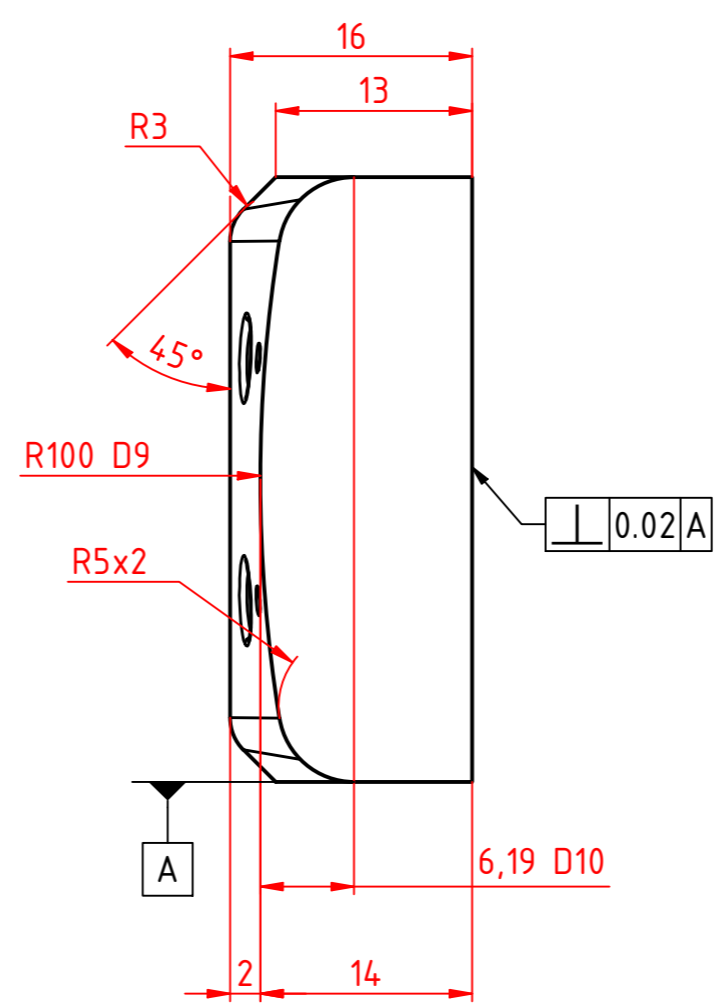
SECTION A-A



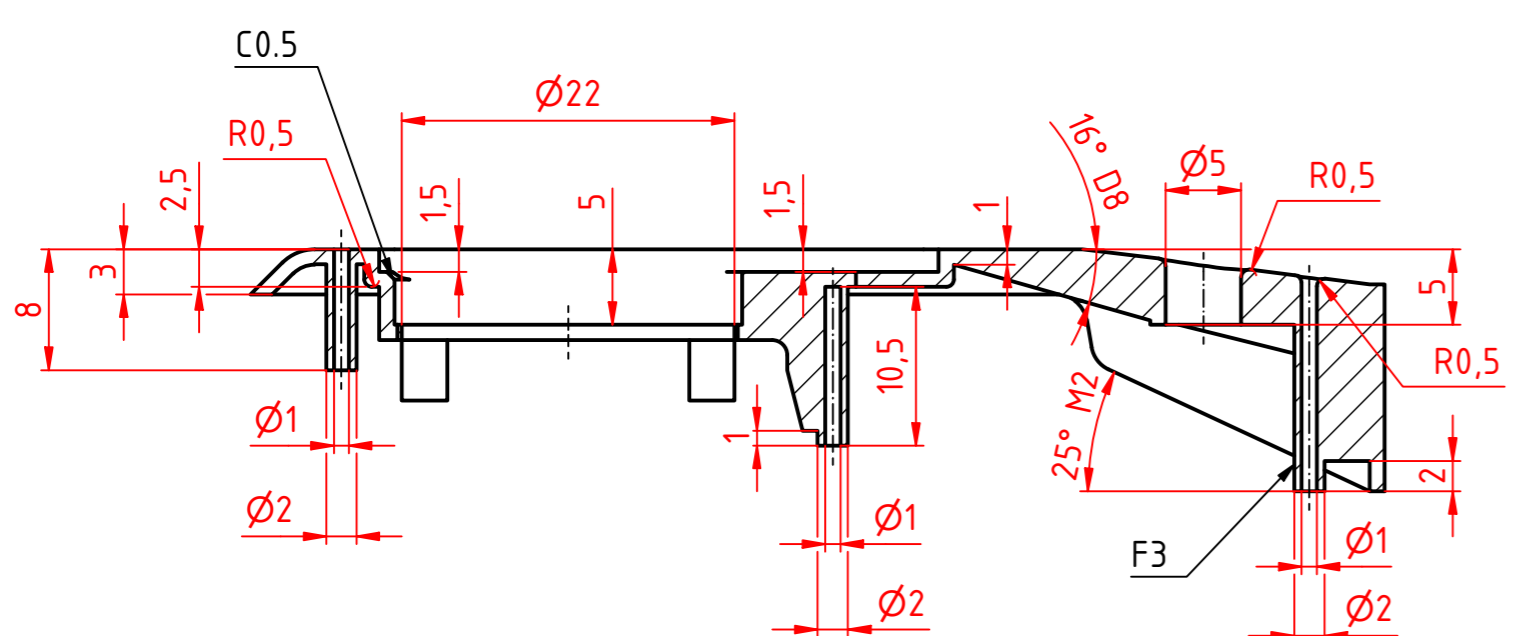
C (2 : 1)



SECTION B-B



3D VIEW

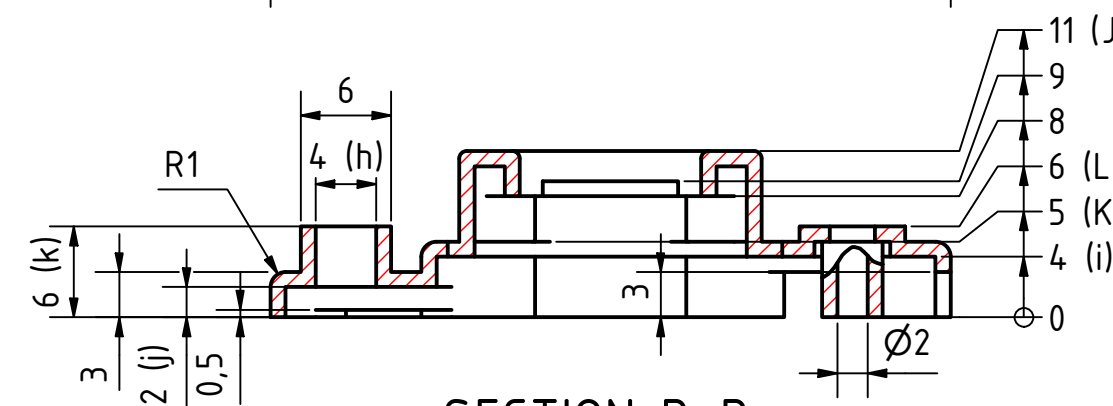
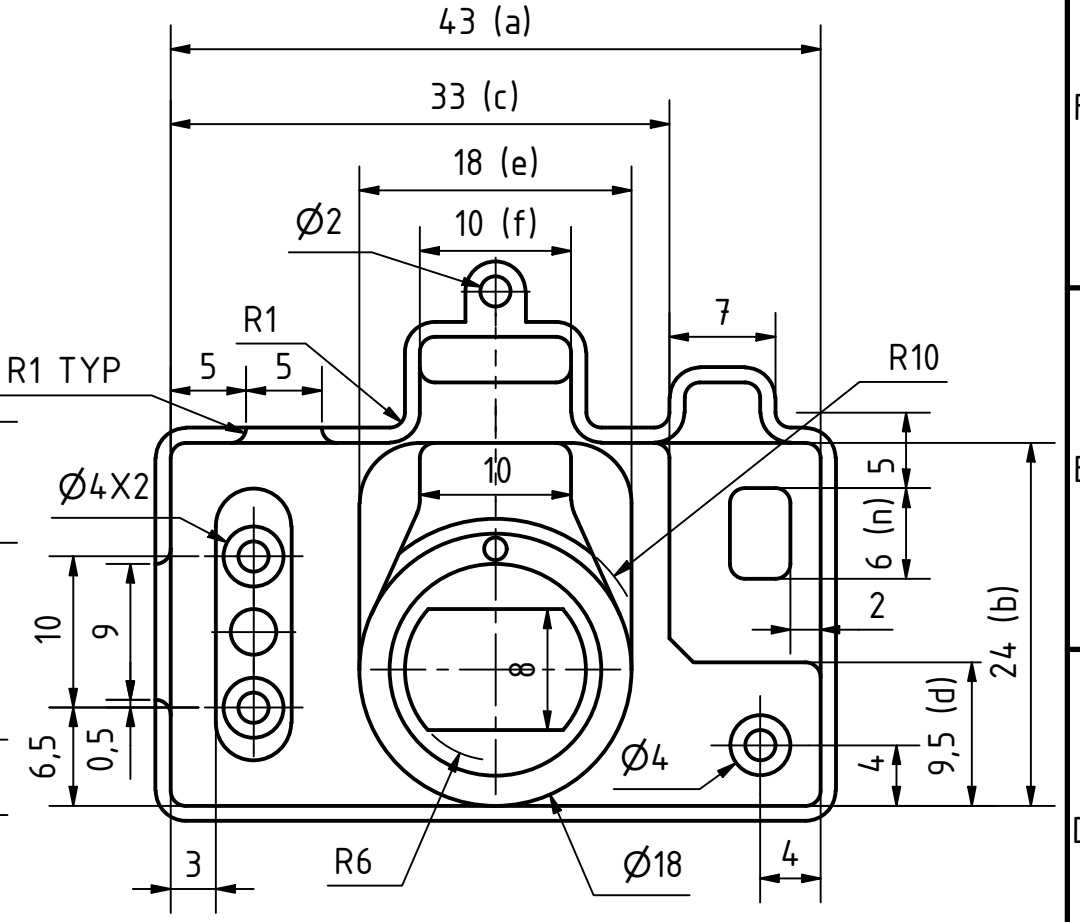
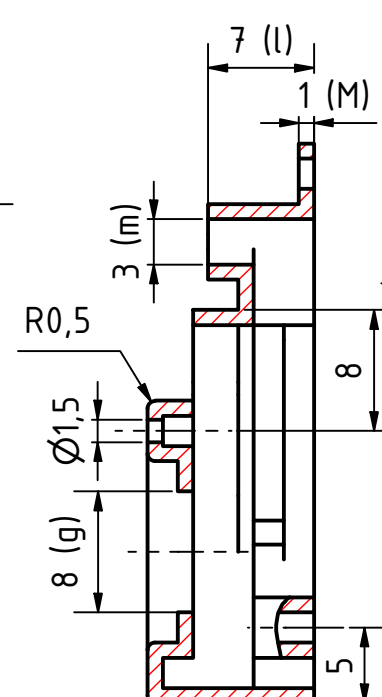
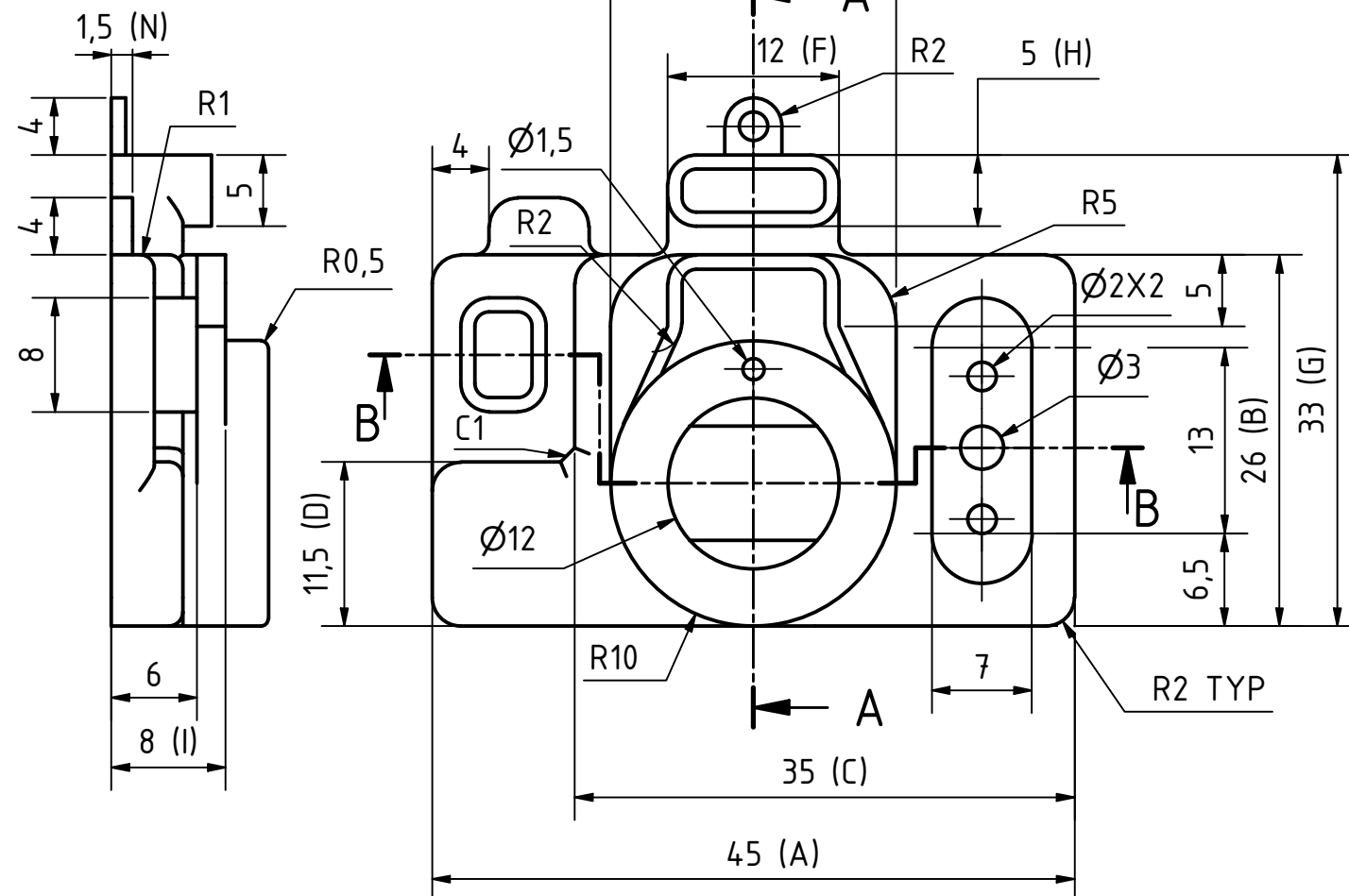


- Ensure that:**
1. The moulding compound is polystyrene (shrinkage approx. 0.5%).
 2. There are no burrs on the product (molded compound).
 3. There are no cutter marks of machining on the surface of the product (molded part).
 4. There are no scratches,dents,etc on the surface of the product (molded compound).
 5. There are no defective moldings such as flow marks,weld line,burns,etc.

Note :
 1. Unspecified radius : R0.5
 2. Unspecified chamfer : C0.5
 3. Thickness product : 1mm

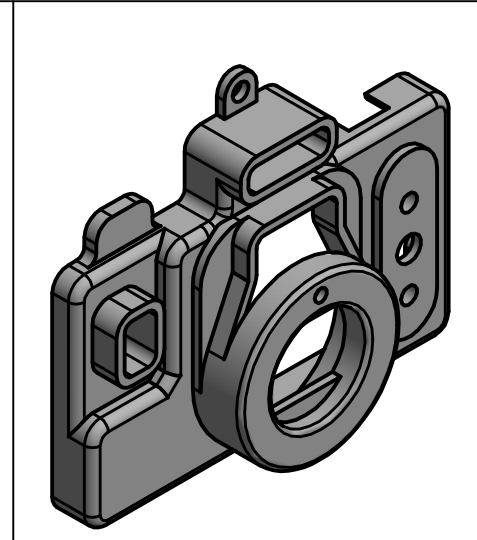
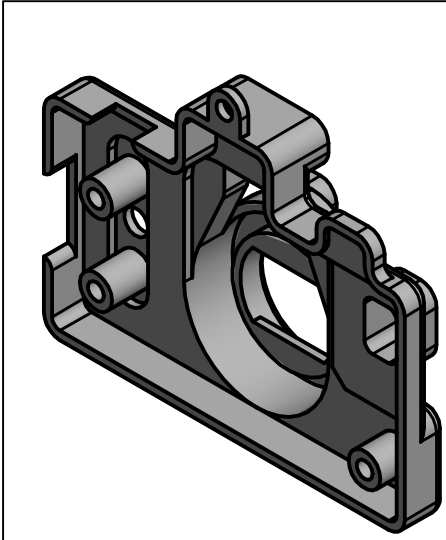
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|---------------------------------|-------------------|------------|------------------------------------|------------|
| Skill : Plastic Die Engineering | | | Projektion A ISO 5456-2 | |
| Scale : 2 : 1 | Date : 30-03-2022 | Paper : A2 | | |
| Drawn / Design by : MURYANTO | | | Drawing No : LKS SMK_NASIONAL_2022 | |
| Description : Product Design | | | Rev : - | Page : 1/1 |





SECTION A-A

SECTION B-B



ISOMETRIC BACK VIEW

ISOMETRIC FRONT VIEW

- Note :
1. Unspecified Radius : R1
 2. Unspecified Chamfer : C1
 3. Wall Thickness : 1 mm

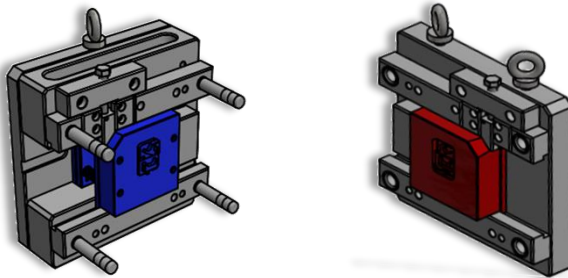
- Ensure that;
- 1) The molding compound is polystyrene (shrinkage approx. 0.5%).
 - 2) There are no burrs on the product (molded compound).
 - 3) There are no cutter marks of machining on the surface of the product (molded part).
 - 4) There are no scratches, dents, etc on the surface of the product (molded compound).
 - 5) There are no defective moldings such as flow marks, weld line, burns, etc.
 - 6) Steps of ejector pin marks are within 0.1. (Protrusions are not allowed).

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| | | | | |
|--------------------------------|------------------|-----------|----------------------------|---------|
| Skill: Plastic Die Engineering | | | Projektion A ISO 5456-2 | |
| Scale: 2 : 1 | Date: 30/03/2022 | Paper: A3 | | |
| Drawn / Design by: Muryanto | | | | |
| Description: Camera | | | Rev: - | Page: - |
| | | | Appd: | Sign: |

**LOMBA KOMPETENSI SISWA
(DARING)
SEKOLAH MENENGAH KEJURUAN
TINGKAT NASIONAL KE- XXX TAHUN 2022**



**CONTOH
Pengerjaan Soal**

BIDANG LOMBA

PLASTIC DIE ENGINEERING



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI

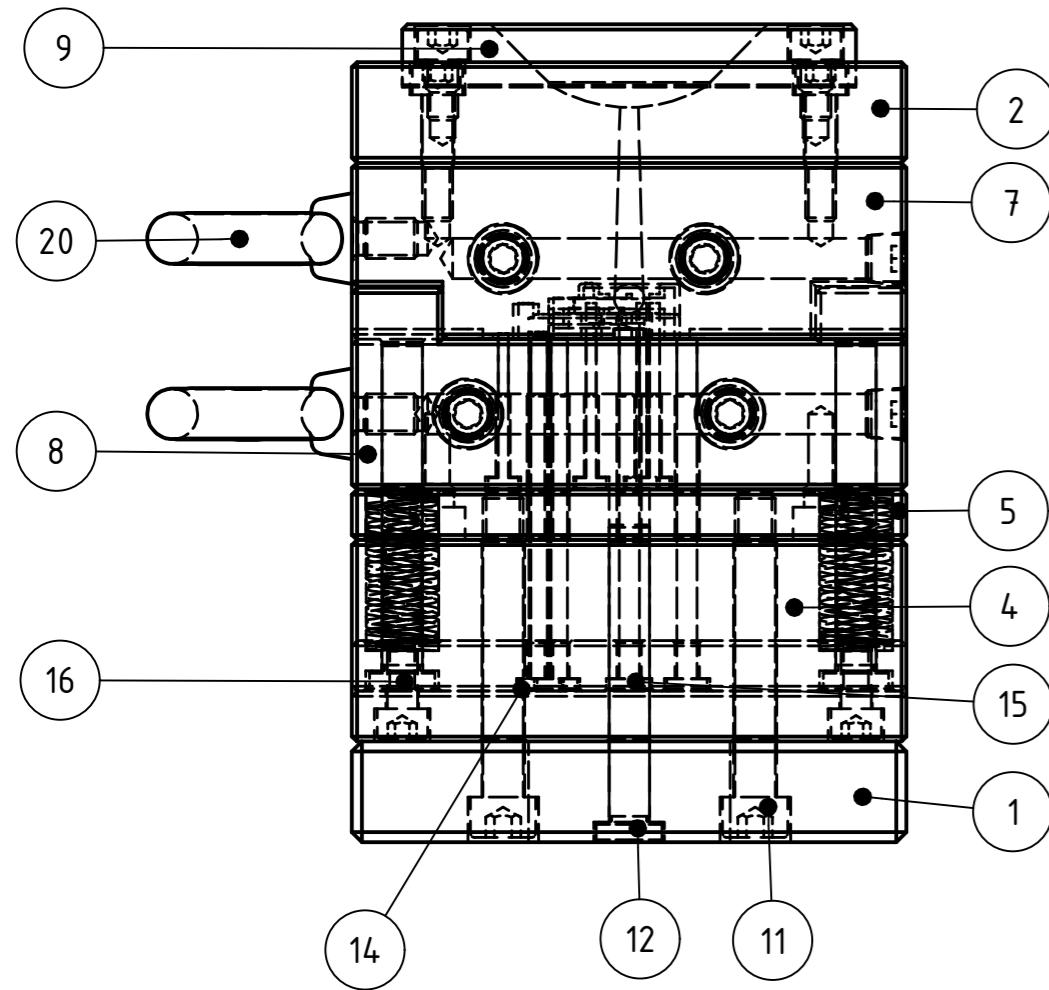
PUSAT PRESTASI NASIONAL

JL. JENDERAL SUDIRMAN GEDUNG C LT.19

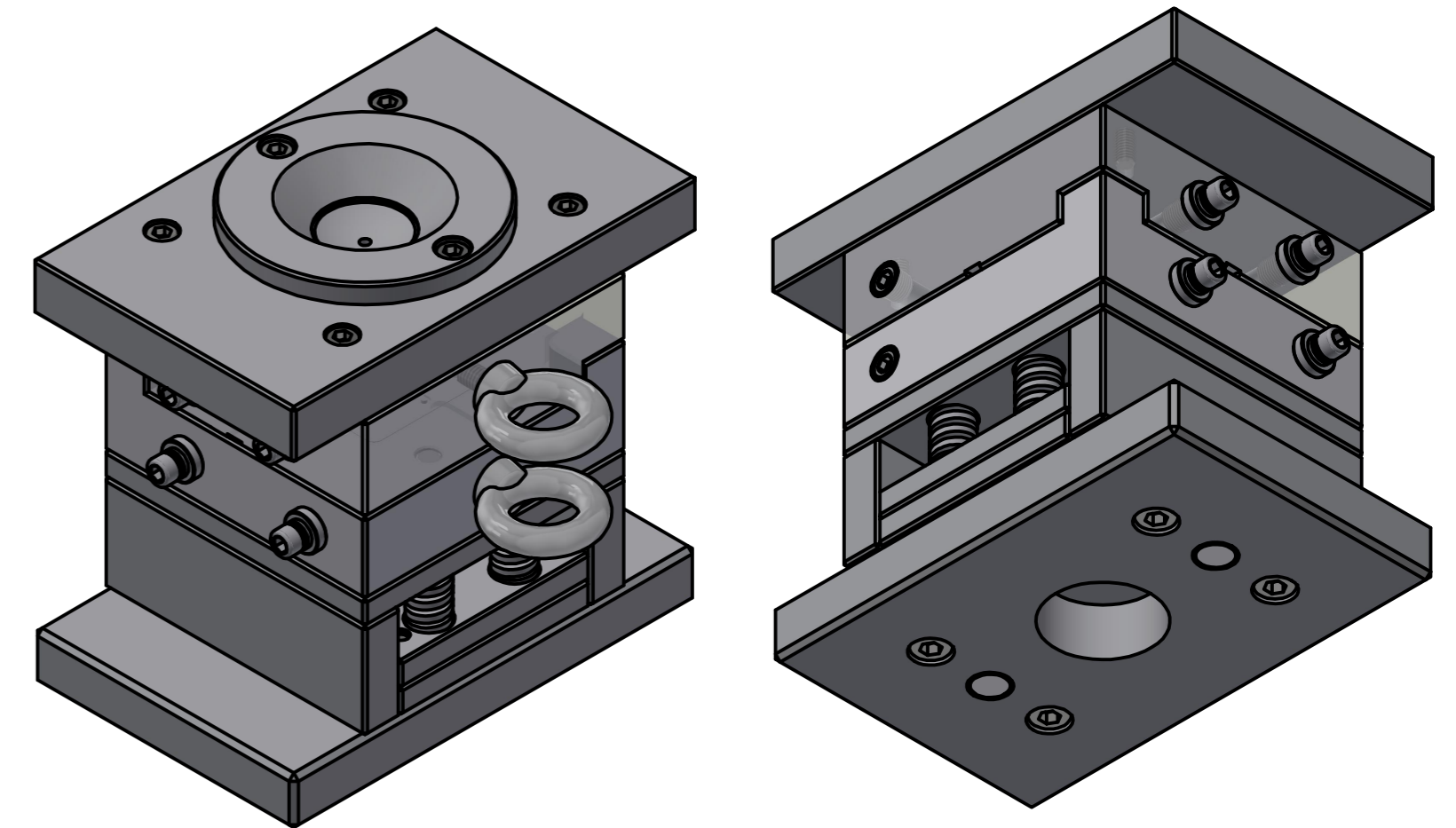
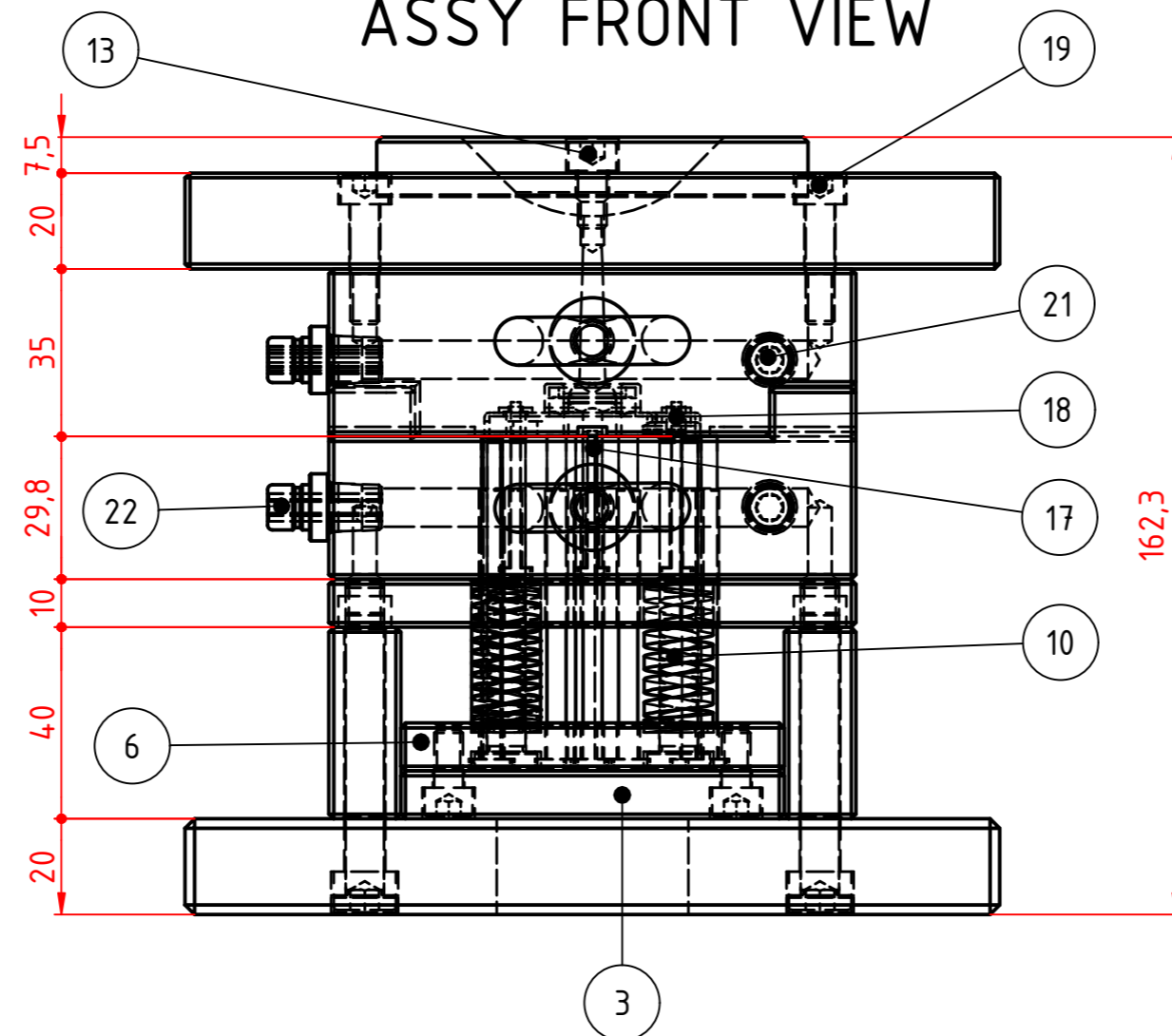
SENAYAN - JAKARTA

EXAMPLE

ASSY SIDE VIEW

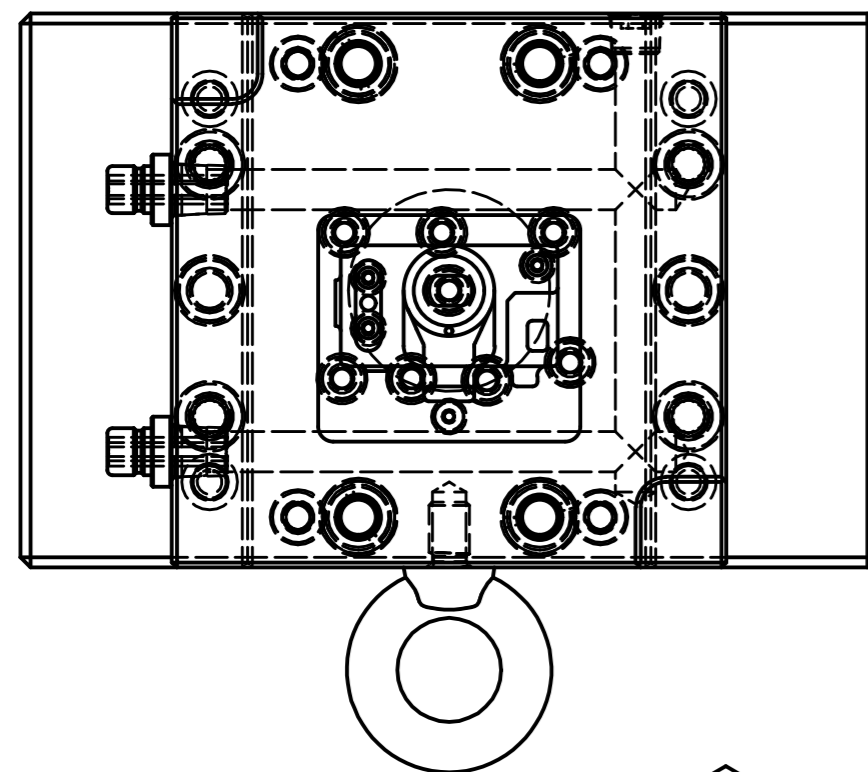


ASSY FRONT VIEW

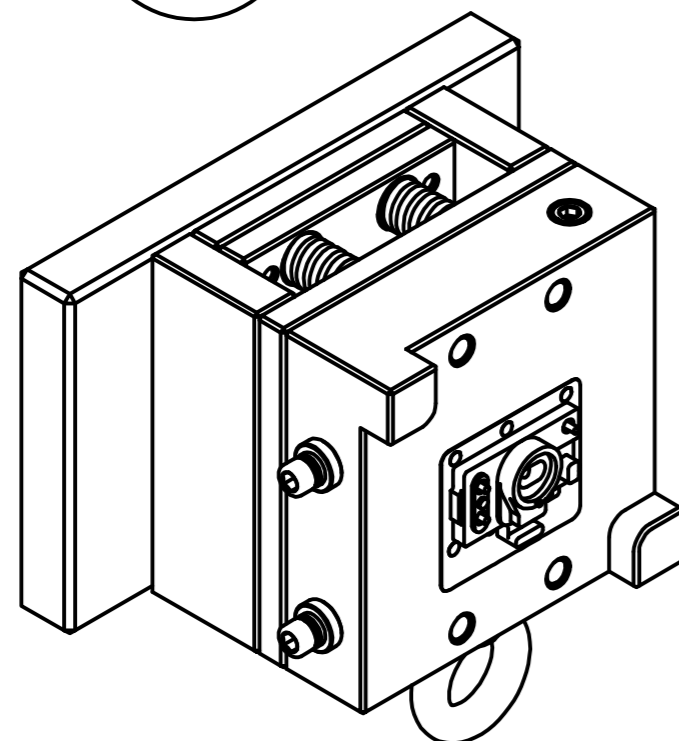
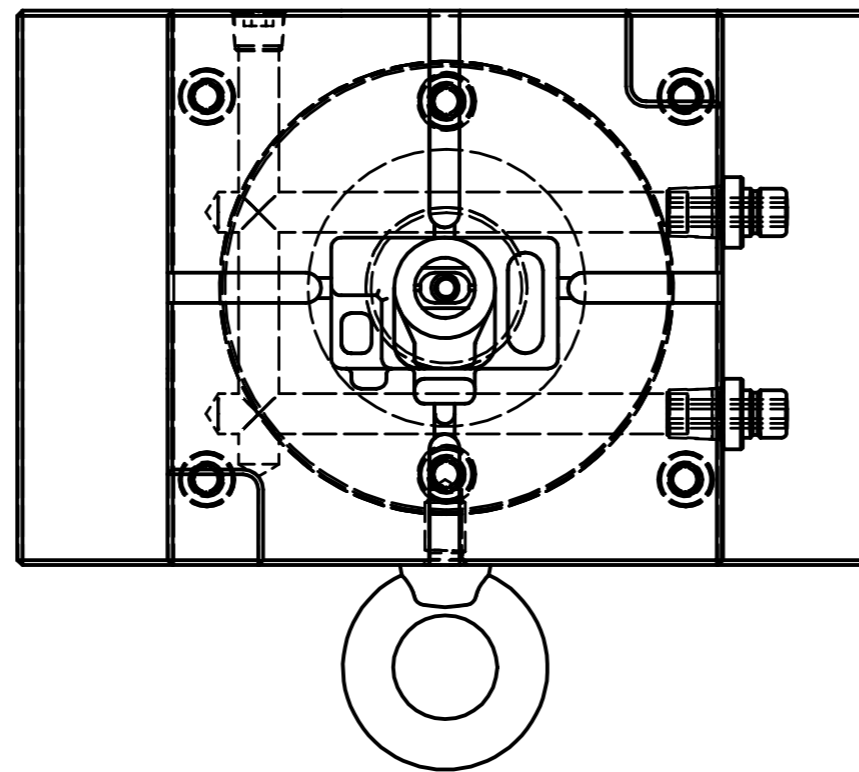


3D VIEW ISOMETRIC

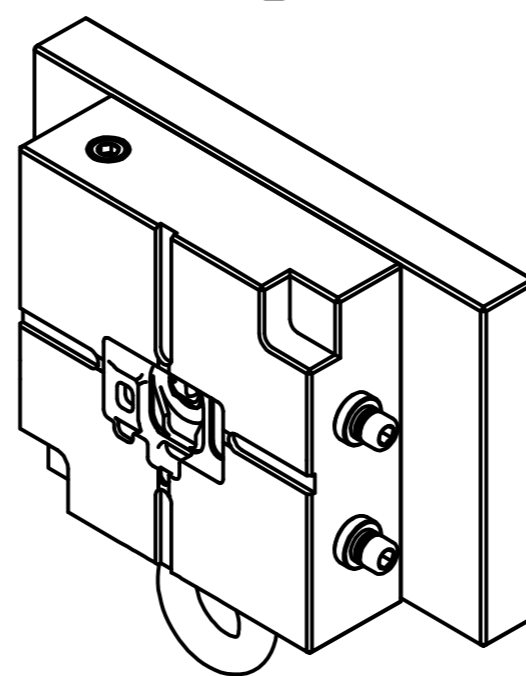
CORE TOP VIEW



CAVITY TOP VIEW



CORE VIEW



CAVITY VIEW

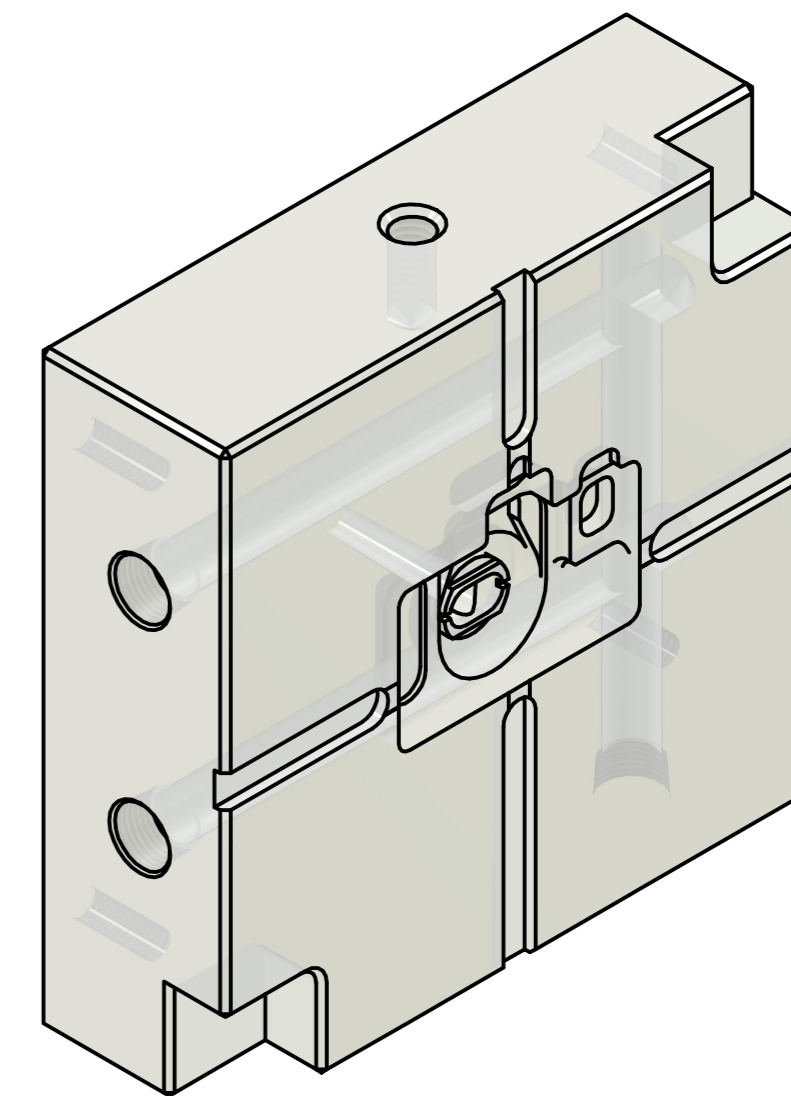
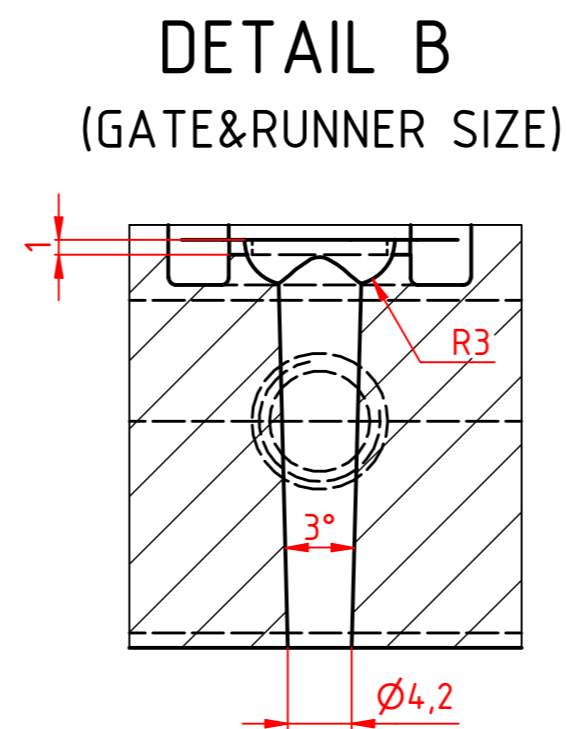
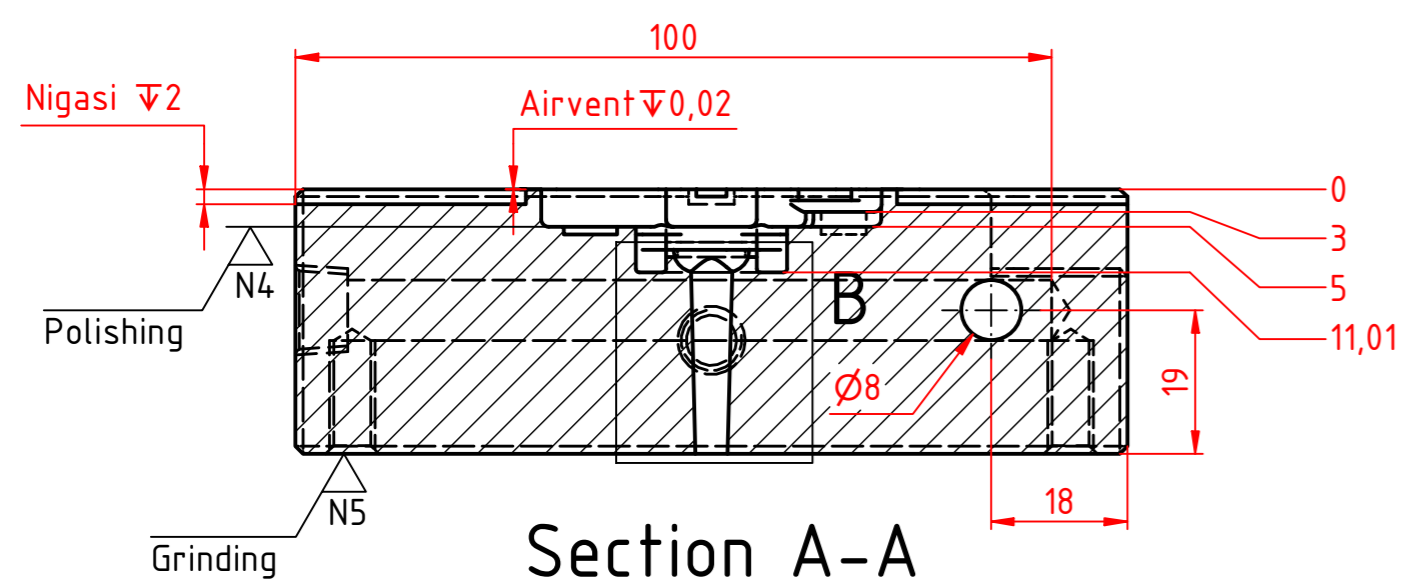
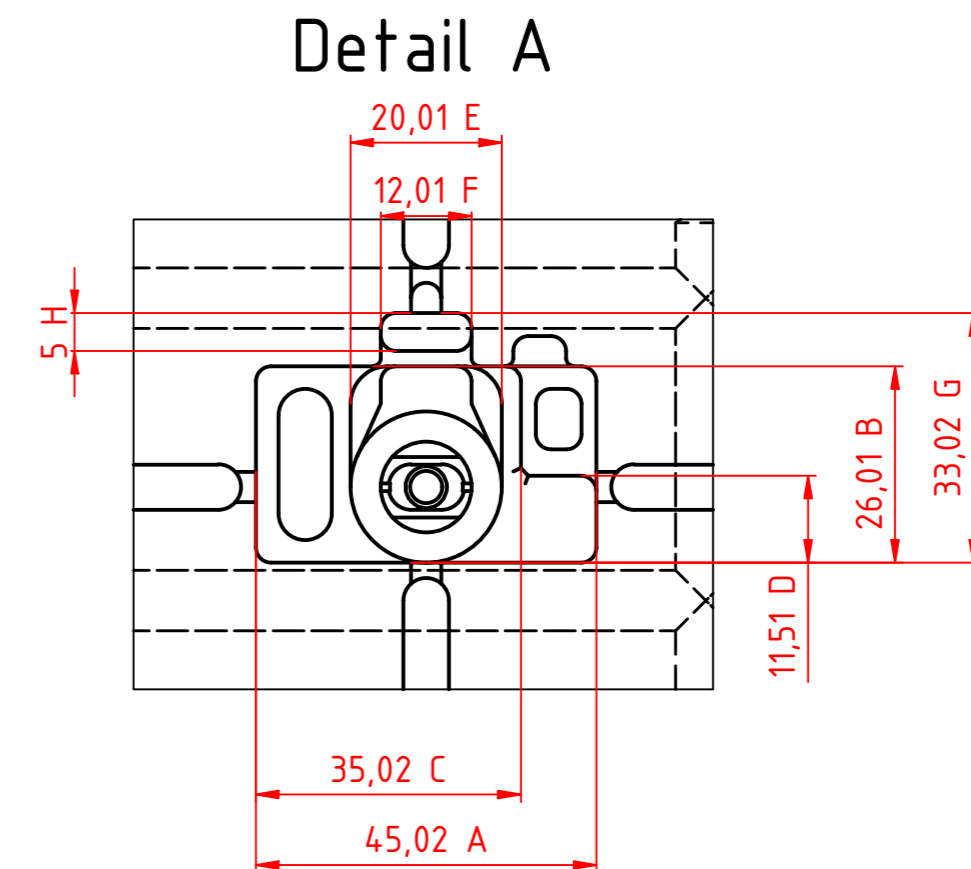
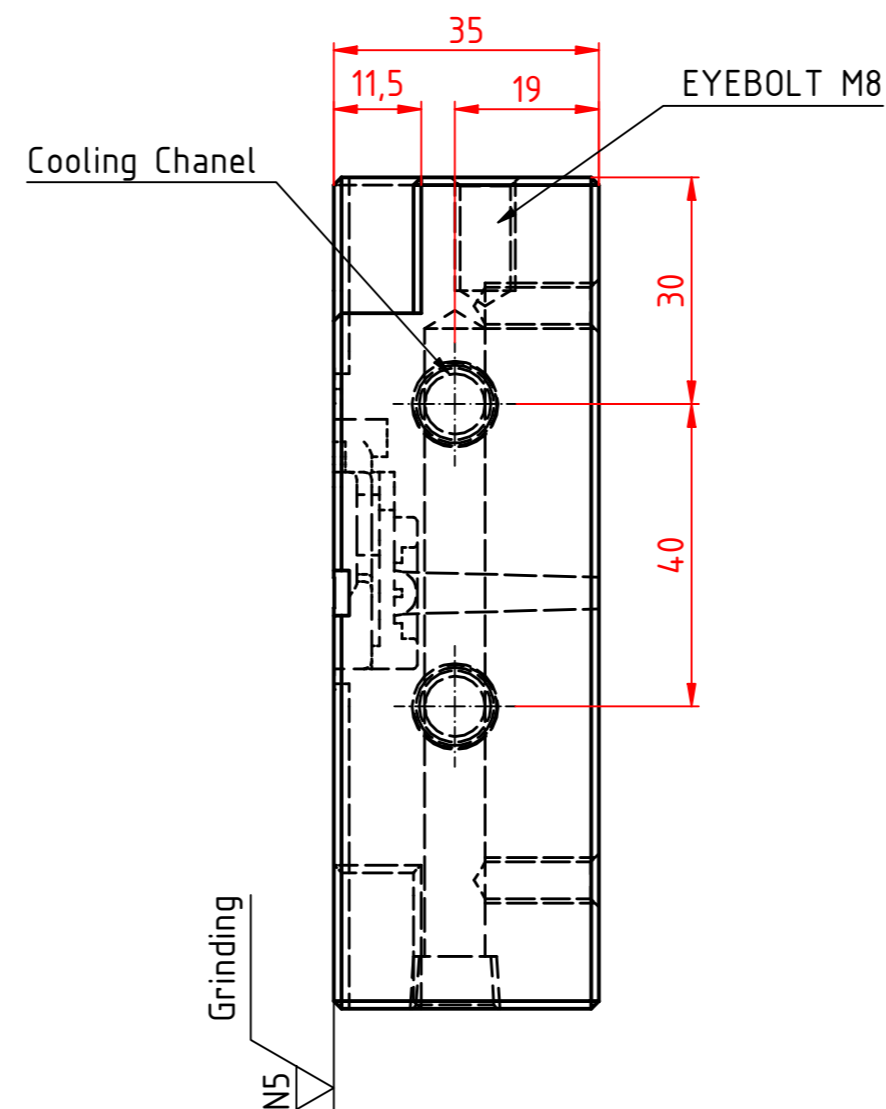
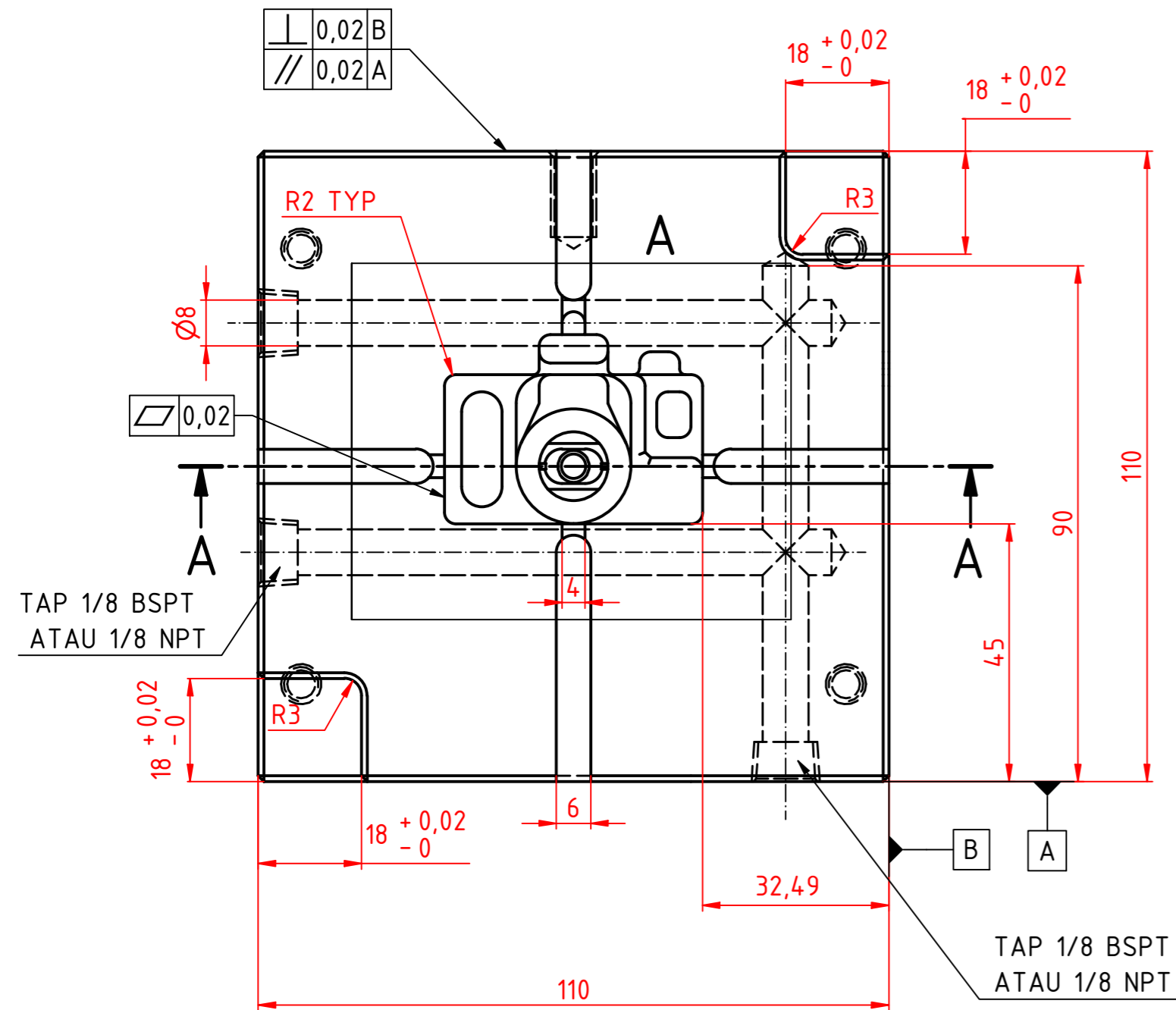
| PARTS LIST | | | | |
|------------|--------------------------|-----------------------|-----------------------|-----|
| ITEM | PART NUMBER | SIZE | MATERIAL | QTY |
| 1 | ADAPTOR BASE | 70X110X20 | Stell S50C/S45C/ST37 | 1 |
| 2 | ADAPTOR CAVITY | 70X110X20 | Stell S50C/S45C/ST37 | 1 |
| 3 | RETAINER PLATE | 110X110X10 | Stell S50C/S45C/ST37 | 1 |
| 4 | STRIPER | 110X15X40 | Stell S50C/S45C/ST37 | 2 |
| 5 | CORE BACK PLATE | 110X110X10 | Stell S50C/S45C/ST37 | 1 |
| 6 | EJECTOR RETAINER PLATE | 110X110X10 | Stell S50C/S45C/ST37 | 1 |
| 7 | CAVITY PLATE | 110X110X35 | Stell S50C/S45C/ST37 | 1 |
| 8 | CORE PLATE | 110X110X40 | Stell S50C/S45C/ST37 | 1 |
| 9 | LOCATING RING | Dia 90 | Stell S50C/S45C/ST37 | 1 |
| 10 | SPRING | Dia 16 | Generic | 4 |
| 11 | BOLT | ISO 4762 - M8 x 60 | Stainless Steel, 440C | 4 |
| 12 | Guide Pin Striper | Return Pin E 8x63 | Generic | 2 |
| 13 | BOLT | ISO 4762 - M8 x 12 | Stainless Steel, 440C | 6 |
| 14 | Ej.Pin | Dia 4 | Generic | 7 |
| 15 | Ej.Pin Runner | Dia 4 | Generic | 1 |
| 16 | Return Pin | Return Pin E 8x69 | Generic | 4 |
| 17 | core Pin 1 | Dia 2 | Generic | 1 |
| 18 | core Pin 2 | Dia 2 | Generic | 3 |
| 19 | BOLT | ISO 4762 - M6 x 25 | Stainless Steel, 440C | 4 |
| 20 | EYE BOLT | M8x13 | Steel, Mild | 2 |
| 21 | PLUG COOLING CHANEL | 1/8 BSPT atau 1/8 NPT | Copper,Cu | 2 |
| 22 | CONNECTOR COOLING CHANEL | 1/8 BSPT atau 1/8 NPT | Copper,Cu | 4 |

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| | | | |
|---------------------------------|-------------------|------------------------------------|------------|
| Skill : Plastic Die Engineering | | | |
| Scale : 2 : 1 | Date : 30-03-2022 | Paper : A2 | |
| Drawn / Design by : MURYANTO | | Drawing No : LKS SMK_NASIONAL_2022 | |
| Description : ASSEMBLY | | Rev : - | Page : 1/1 |

EXAMPLE



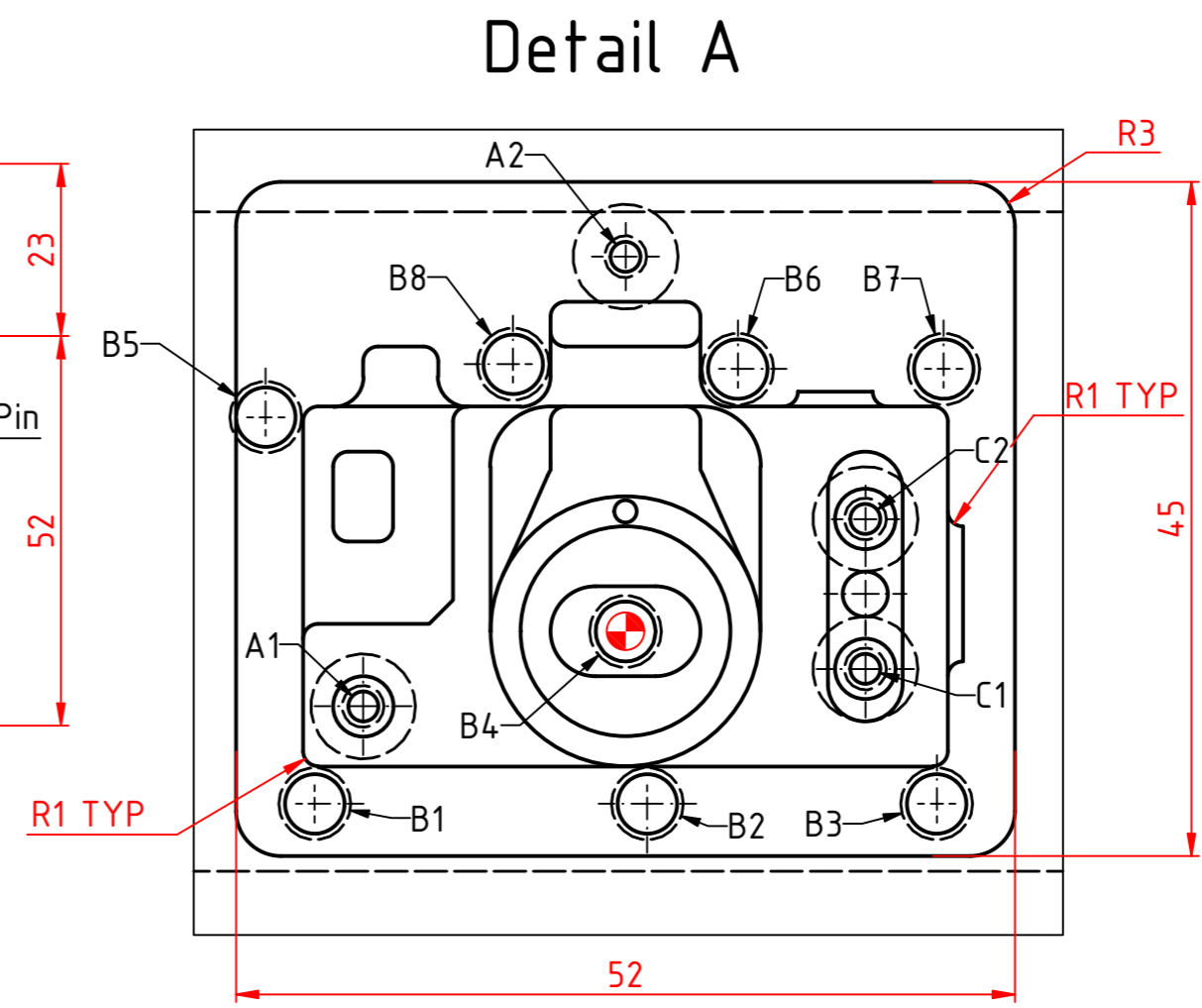
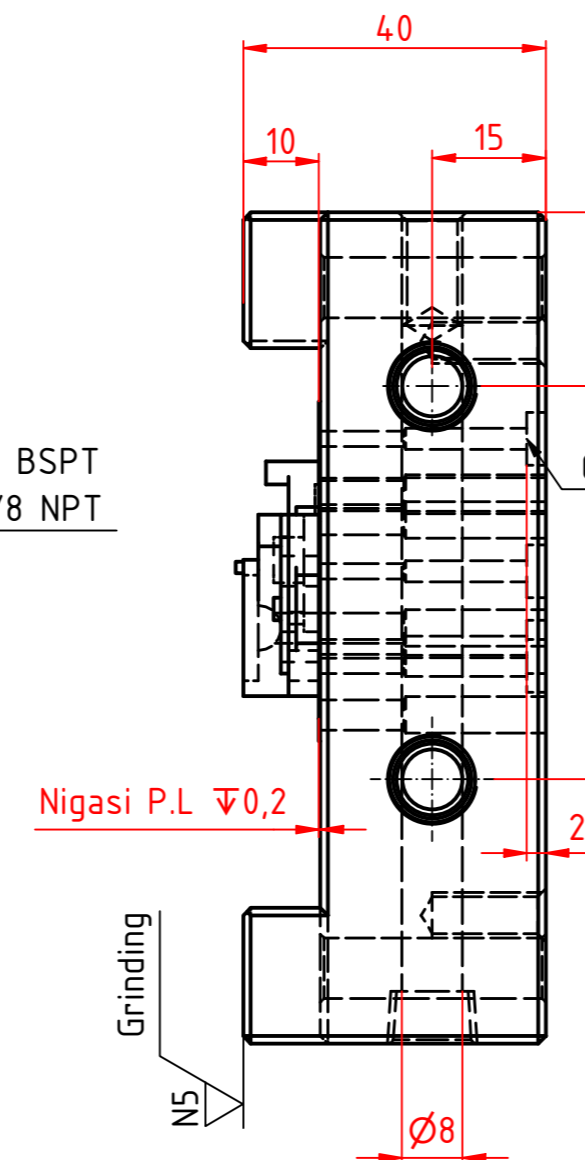
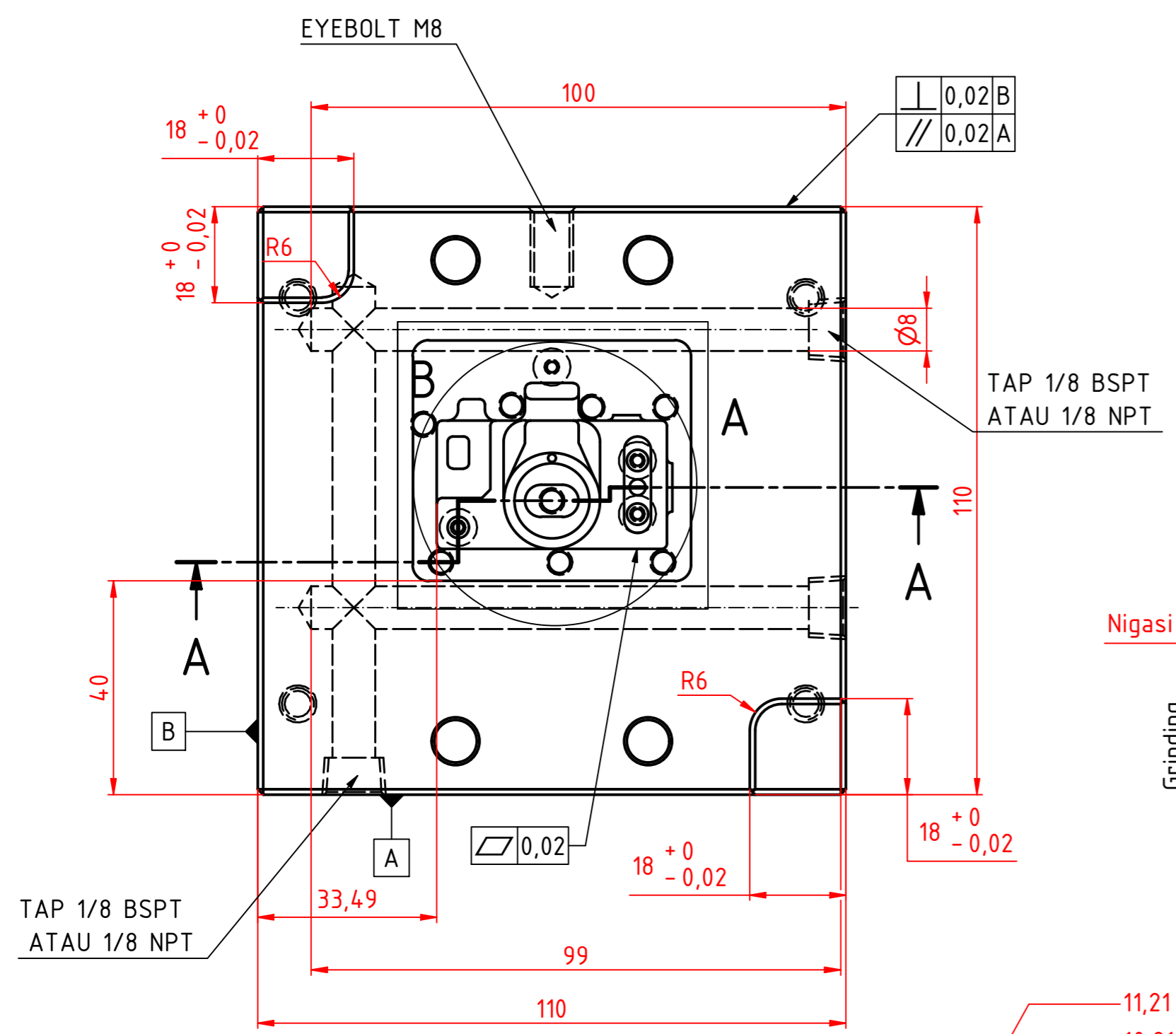
- Note :
1. Gambar ini hanya contoh (Kisi-kisi).
 2. Ukuran, Simbol, Toleransi, dll perlu dilengkapi

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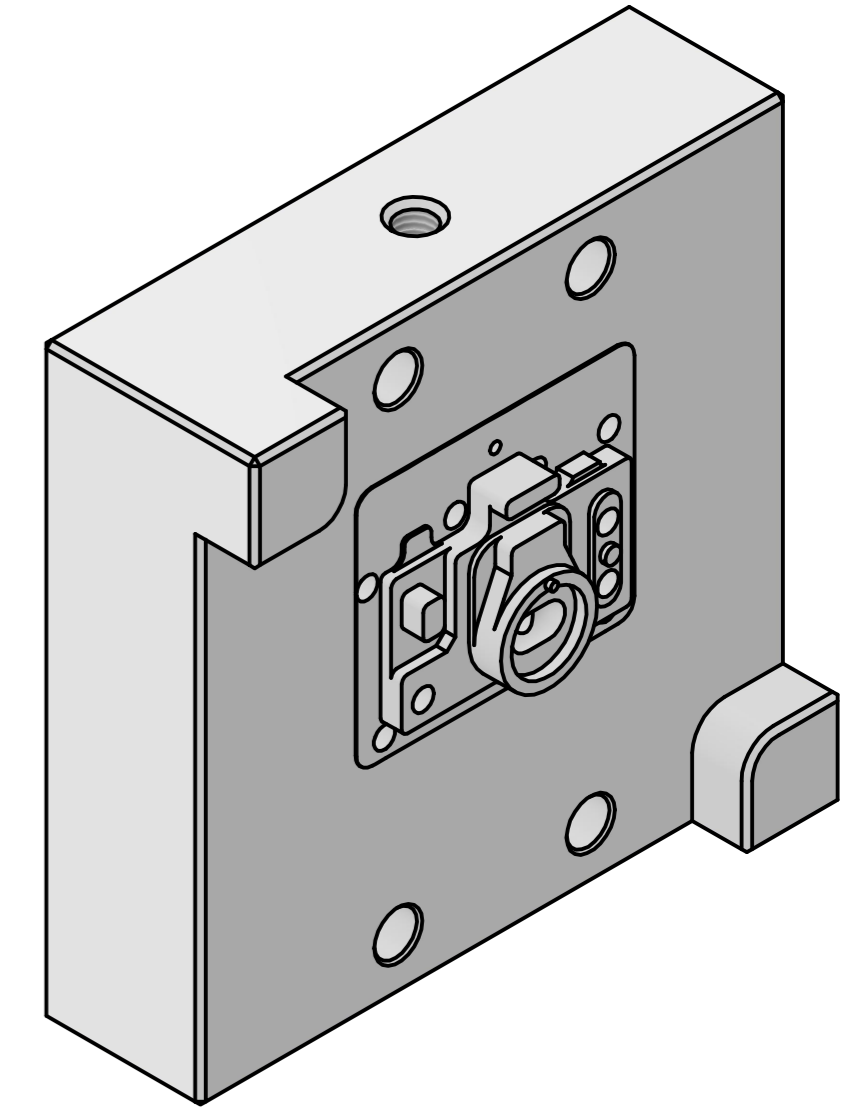
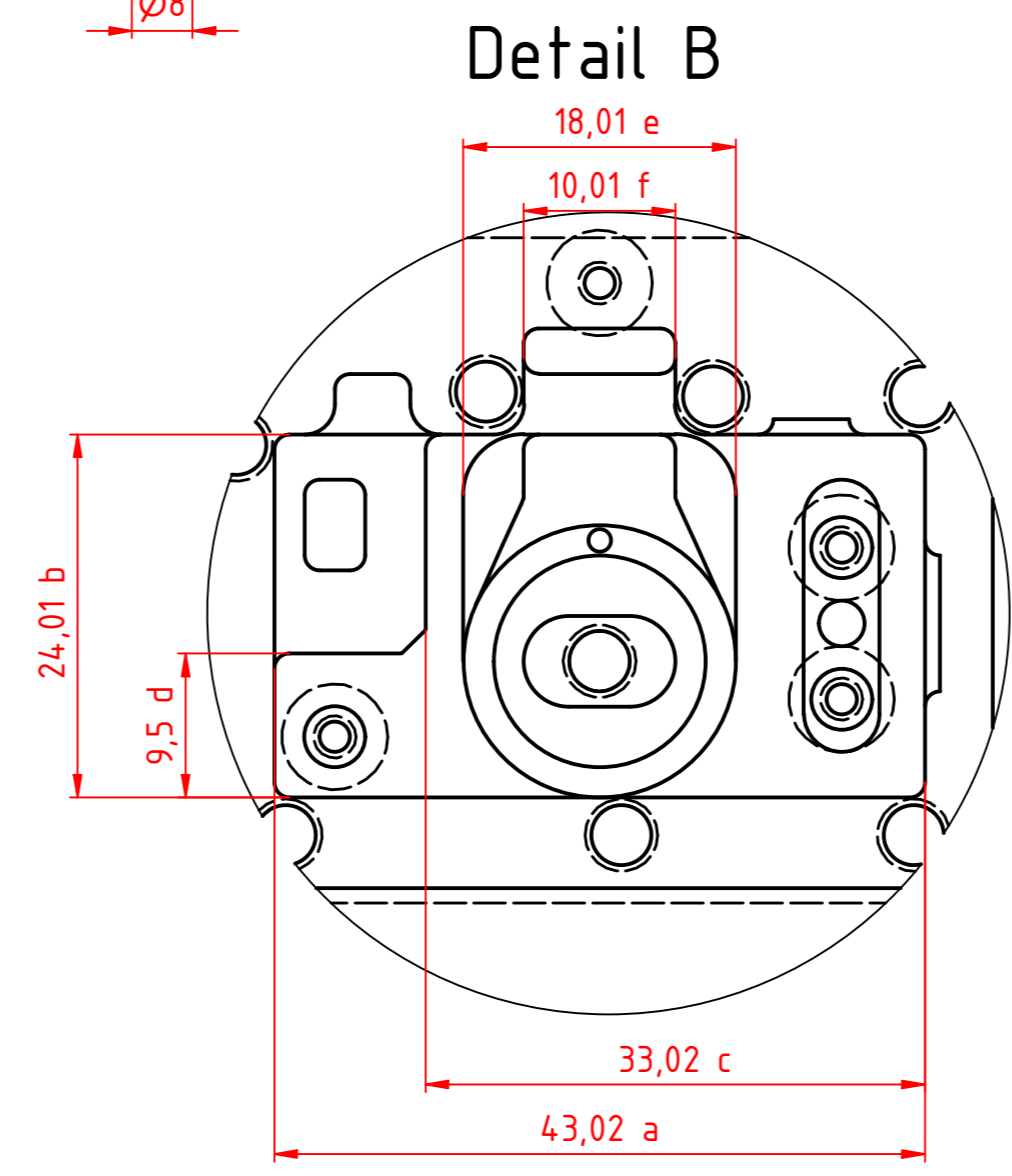
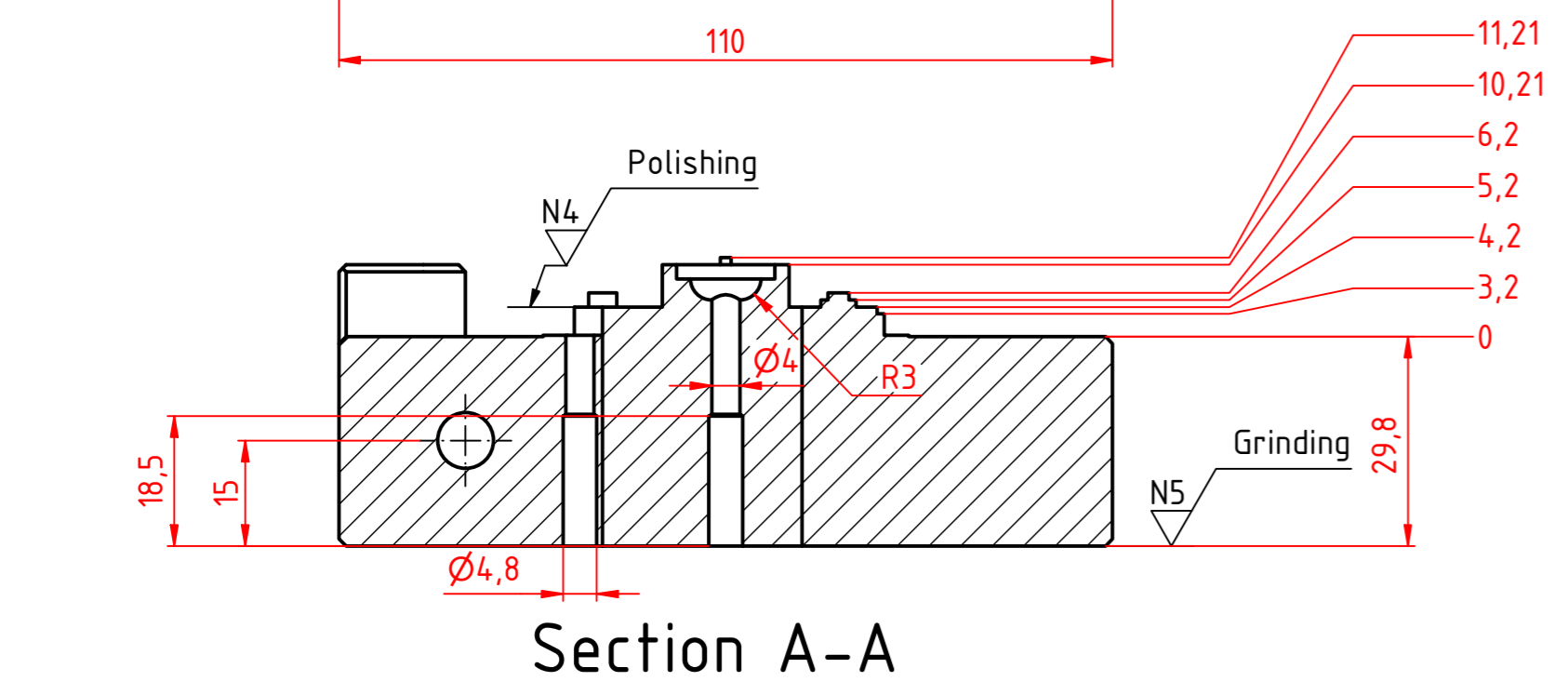


| | | | | | |
|---------------------------------|-------------------|------------|------------------------------------|------------|--|
| Skill : Plastic Die Engineering | | | Projektion A | ISO 5456-2 | |
| Scale : 2 : 1 | Date : 30-03-2022 | Paper : A2 | ISO 5456-2 | | |
| Drawn / Design by : MURYANTO | | | Drawing No : LKS SMK_NASIONAL_2022 | | |
| Description : Cavity Mould | | | Rev : - | Page : 1/1 | |

EXAMPLE



| HOLE TABLE | | | |
|------------|--------|--------|-----------------|
| HOLE | XDIM | YDIM | DESCRIPTION |
| A1 | -17,51 | -5,00 | Ø2 THRU |
| A2 | -0,00 | 25,01 | Ø2 THRU |
| B1 | -20,74 | -11,50 | Ø4,8 -18,5 DEEP |
| B2 | 1,45 | -11,50 | Ø4,8 -18,5 DEEP |
| B3 | 20,77 | -11,50 | Ø4,8 -18,5 DEEP |
| B4 | -0,00 | -0,00 | Ø4,8 -18,5 DEEP |
| B5 | -24,01 | 14,30 | Ø4,8 -18,5 DEEP |
| B6 | 7,49 | 17,51 | Ø4,8 -18,5 DEEP |
| B7 | 21,24 | 17,51 | Ø4,8 -18,5 DEEP |
| B8 | -7,50 | 17,84 | Ø4,8 -18,5 DEEP |
| C1 | 16,01 | -2,50 | Ø2 -50 DEEP |
| C2 | 16,01 | 7,50 | Ø2 -50 DEEP |



Note :

- Gambar ini hanya contoh (Kisi-kisi).
- Ukuran, Simbol, Toleransi, dll perlu dilengkapi

- Panjang Ej.Pin :
- Ejector Pin Bawah : mm
 - Ejector Pin atas : mm
 - Ejector Pin Runner : mm
 - Core Pin 1 : mm
 - Core Pin 2 : mm

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Skill : Plastic Die Engineering
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 Description : Core Mould | Rev : - | Page : 1/1

