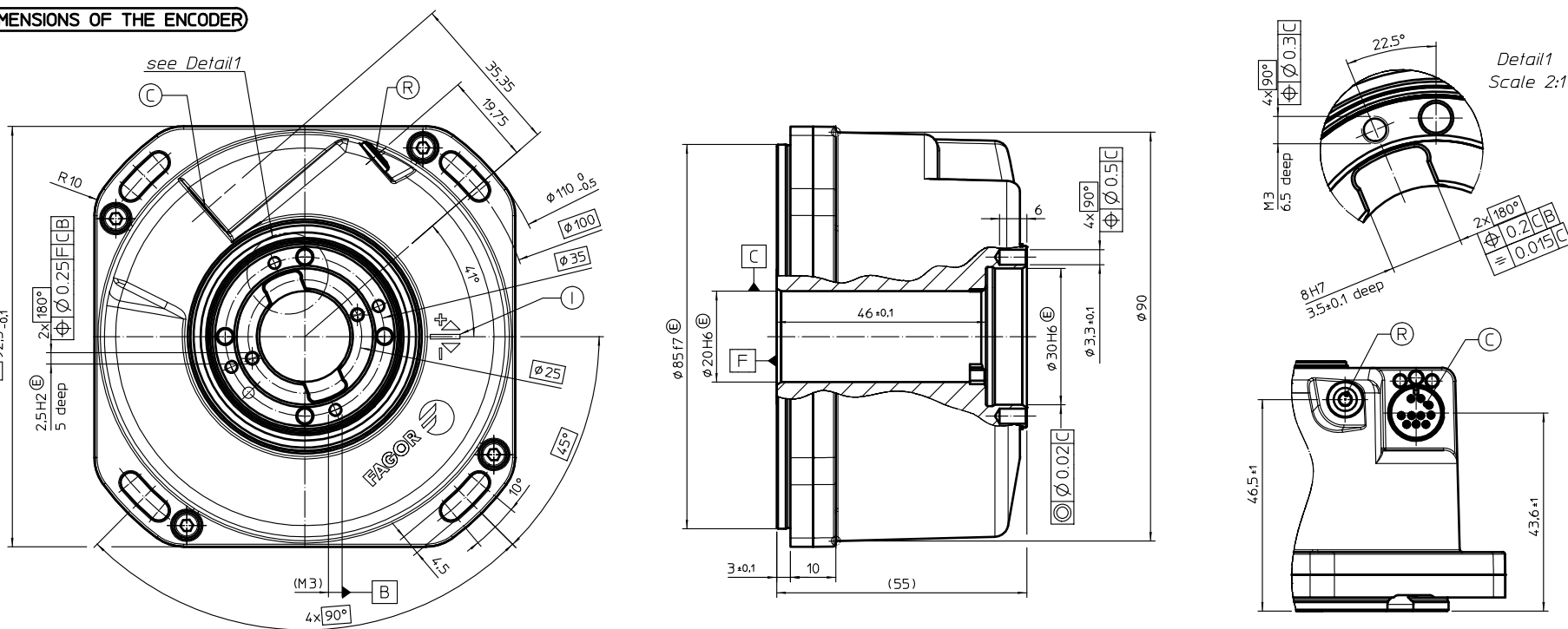
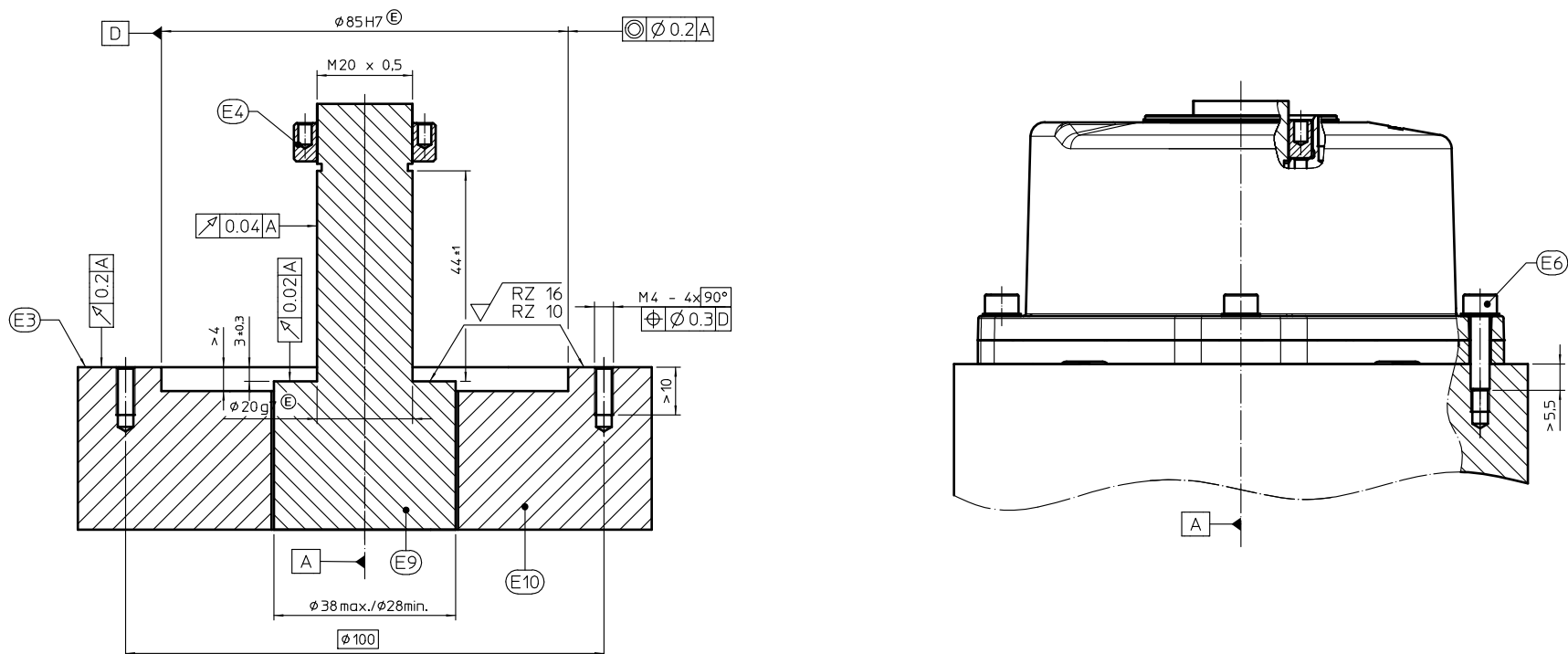


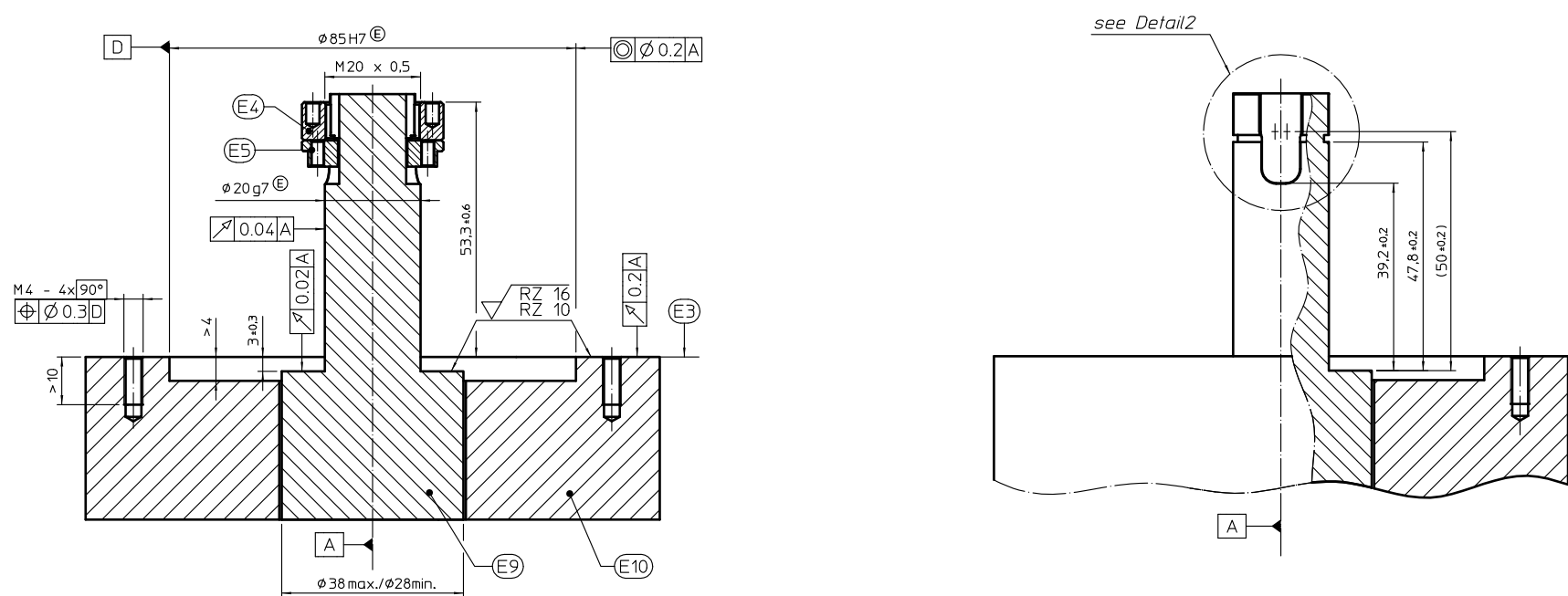
# DIMENSIONS OF THE ENCODER



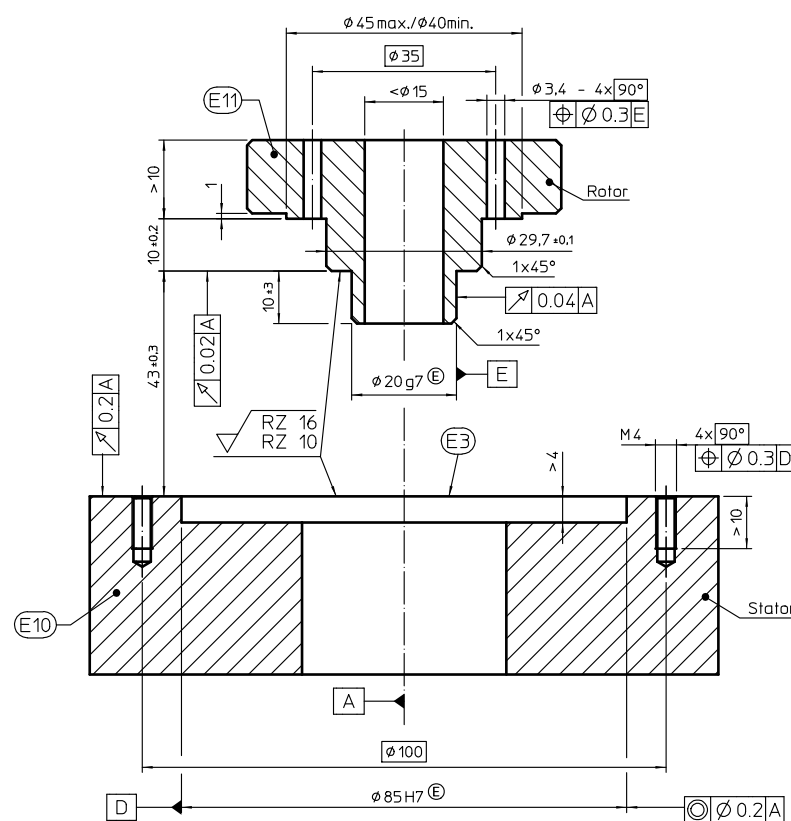
# MOUNTING OPTION: SHAFT COUPLING WITHOUT MECHANICAL FAULT EXCLUSION



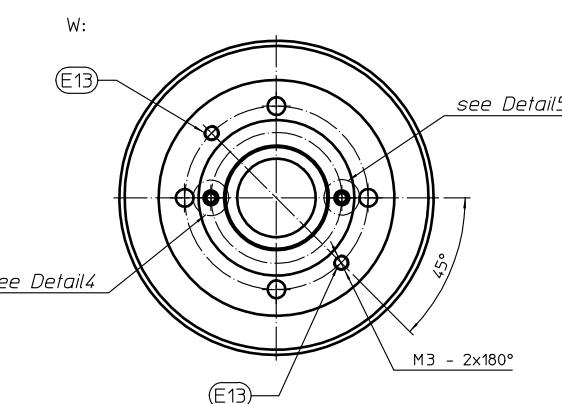
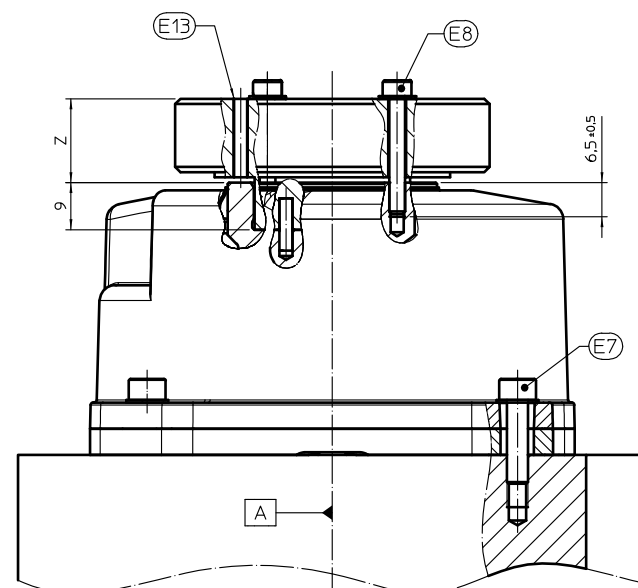
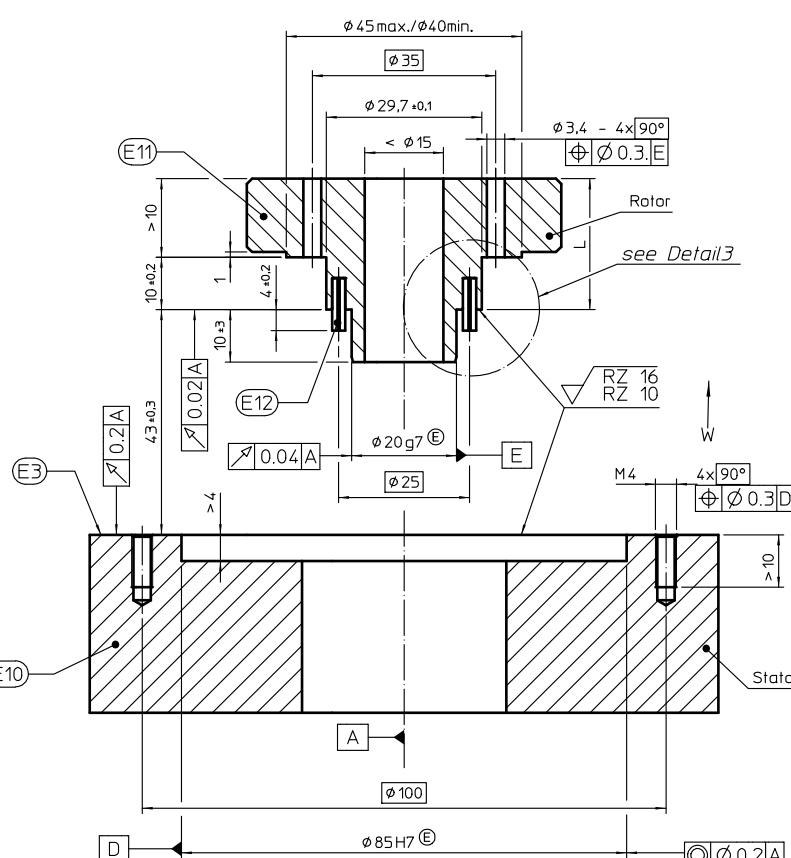
# WITH MECHANICAL FAULT EXCLUSION



# ALTERNATIVE MOUNTING OPTION: FRONT END SHAFT COUPLING WITHOUT MECHANICAL FAULT EXCLUSION



# WITH MECHANICAL FAULT EXCLUSION



# DIFFERENT TYPES OF CONNECTOR CABLES

- E1 = Three different types of cable:
  - Cable Ø6mm.
  - Cable Ø4mm.
  - Cable Ø10.5mm (with protection).

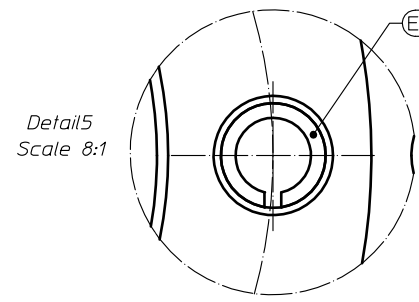
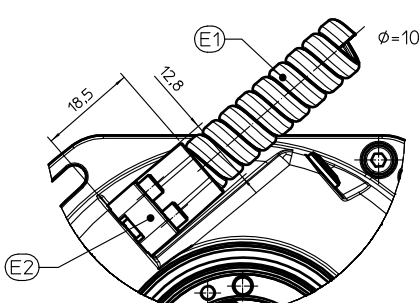
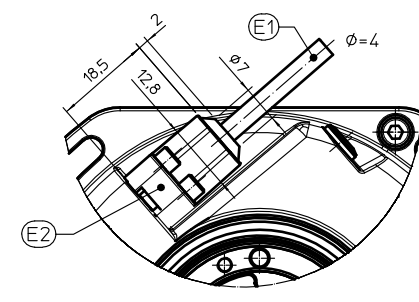
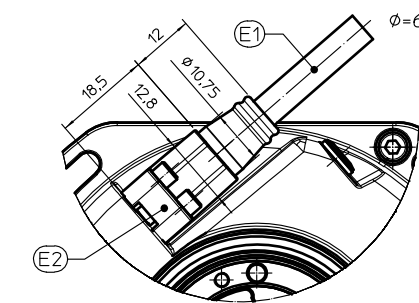
Bend radius for flexible configuration for:

- Cable Ø6mm: R>60mm.
- Cable Ø4mm: R>40mm.
- Cable Ø10.5mm: R>60mm.

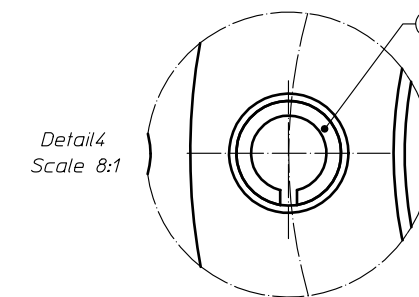
Bend radius for rigid configuration for:

- Cable Ø6mm: R>24mm.
- Cable Ø4mm: R>16mm.
- Cable Ø10.5mm: R>35mm.

E2 = Cable support.



BOTH SPRING-TYPE STRAIGHT PINS:  
Mounting direction as shown or both spring-type straight pins rotated by 180° (mount slot in tangential direction), spring-type straight pin must be inserted burr-free a potential chipping has to be removed.



# ABBREVIATIONS

- A = Bearing of mating shaft.
- H = Assembly sizing set by customer.
- R = Compressed air intake.
- C = Connector.
- I = 0° position index ±5°.
- = Direction of shaft rotating for output signals is described in interface description.
- E3 = Mounting surface.
- E4 = ID: 82620150  
Tightening torque of rig nut: 30Nm±3Nm  
Materially bonding anti-rotation lock necessary fix mating shaft when mounted.
- E5 = ID: 82620155  
(Shaft coupling) Mechanical fault exclusion: washer using with ring nut (E4) necessary.
- E6 = Hexagon socket head cap screws M4: Pa=2.5±0.15Nm  
Screw: DIN912-M4x16  
Whasher: DIN433-4-200HV  
Materially bonding anti-rotation lock necessary.
- E7 = Hexagon socket head cap screws M4: Pa=2.9±0.15Nm  
Screw: DIN912-M4x20  
Screw property class: 8.8  
Whasher: DIN433-4-200HV  
Materially bonding anti-rotation lock necessary.
- E8 = Hexagon socket head cap screws M3: Pa=1.25±0.1Nm  
Screw: DIN912  
Screw property class: 8.8  
Whasher: DIN433-3-200HV  
Materially bonding anti-rotation lock necessary.
- E9 = Material of MATING SHAFT: steel  
Without mechanical fault exclusion: Rp0.2≥370N/mm²  
With mechanical fault exclusion: Rp0.2≥500N/mm²  
Rm≥650N/mm²  
Coefficient of thermal expansion: (10<a<16)×10⁻⁶ K⁻¹
- E10 = Material of MATING HOUSING: steel, Rp0.2≥370N/mm²  
Coefficient of thermal expansion: (10<a<16)×10⁻⁶ K⁻¹
- E11 = Material of ROTOR: steel  
Without mechanical fault exclusion: Rp0.2≥370N/mm²  
With mechanical fault exclusion: Rp0.2≥500N/mm²  
Rm≥650N/mm²  
Coefficient of thermal expansion: (10<a<16)×10⁻⁶ K⁻¹
- E12 = 2x spring type straight pin for mechanical fault exclusion necessary DIN481-2.5x10.  
Mounting sequence:  
1. Mount spring-type straight pins in correct angular position (see detail 4 and 5) in part E11.  
2. Mount part E11 using E8 screws.  
3. Pay attention to reference dimension Z: L-9-Z±0.15
- E13 = Using spring-type straight pins removing threads (M3) necessary, otherwise optional.
- N1 = Mounting surfaces and threads must be clean and free of grease.
- Pa = Tightening torque.

Summary	ANGULAR ENCODER MODEL H2A-D90	1	Propo.	App.	Date	Finish
Rev.	Designation	Quant.	Material			Treatment
Drawing N	PT-2-009-2	Date	06/2020			
Replaces	Design by	AINARA				
	Check by	ZUNZU				
			Fagor Automation			
			S. Coop.			
			20500 Mondragón			

Scale: 1:1

Dimensions in mm  
Tolerancing ISO 8015  
ISO 2768 - m  
< 6 mm: ±0.2 mm

FAGOR