



Fagor Automation S. Coop.

Manual code: 14460058
Manual version: 1405



ENCODER HD-200

MANUAL DE INSTALACIÓN INSTALLATION MANUAL

Modelos Models	Impulsos/vuelta Pulses / rev.	Señal Signal	Impulso de referencia Reference mark
HP-18000-D200	18 000	1 Vpp seno 1 Vpp sine	1
HOP-18000-D200			Codificado/Distance coded
HP-36000-D200	36 000	1 Vpp seno 1 Vpp sine	1
HOP-36000-D200			Codificado/Distance coded
H-90000-D200	90 000	5 V TTL	1
HO-90000-D200			Codificado/Distance coded
H-180000-D200	180 000	5 V TTL	1
HO-180000-D200			Codificado/Distance coded
H-360000-D200	360 000	5 V TTL	1
HO-360000-D200			Codificado/Distance coded



FAGOR AUTOMATION S. COOP.

B^a San Andrés N^o 19

Apdo de correos 144

20500 Arrasate/Mondragón

- Spain -

Web: www.fagorautomation.com

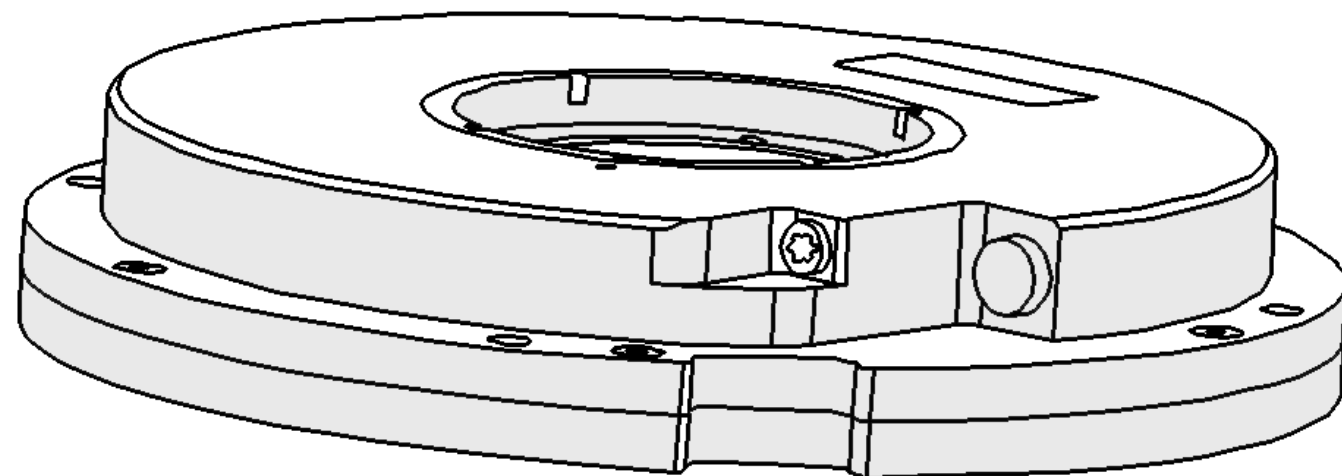
Email: info@fagorautomation.es

Tel.: (34) 943 719200

Fax: (34) 943 791712



Fagor Automation S. Coop.



MANUAL

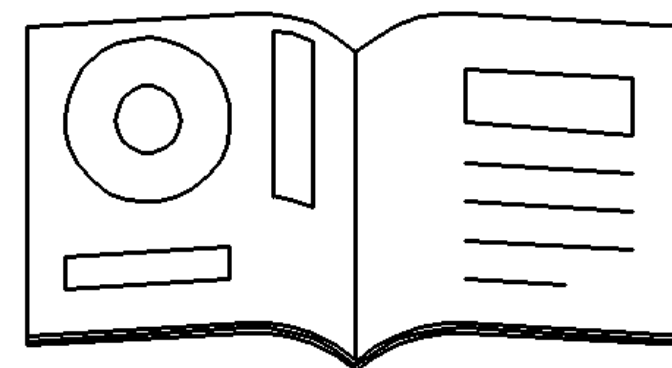
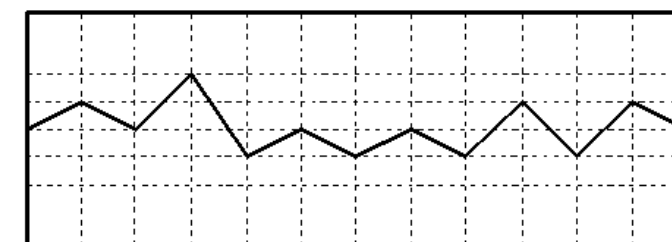
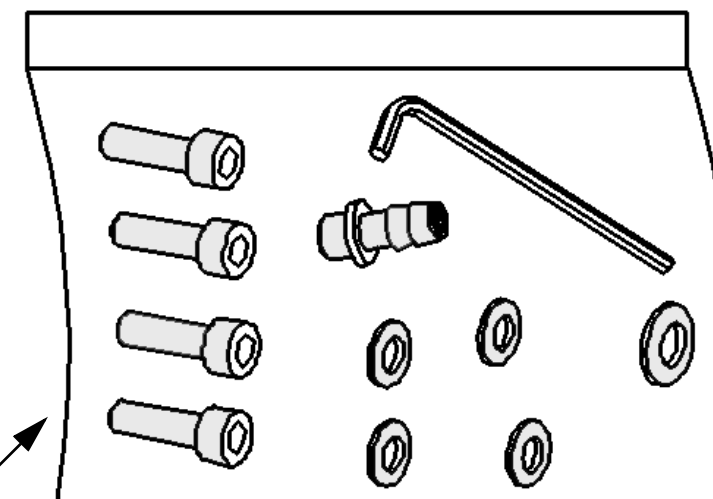


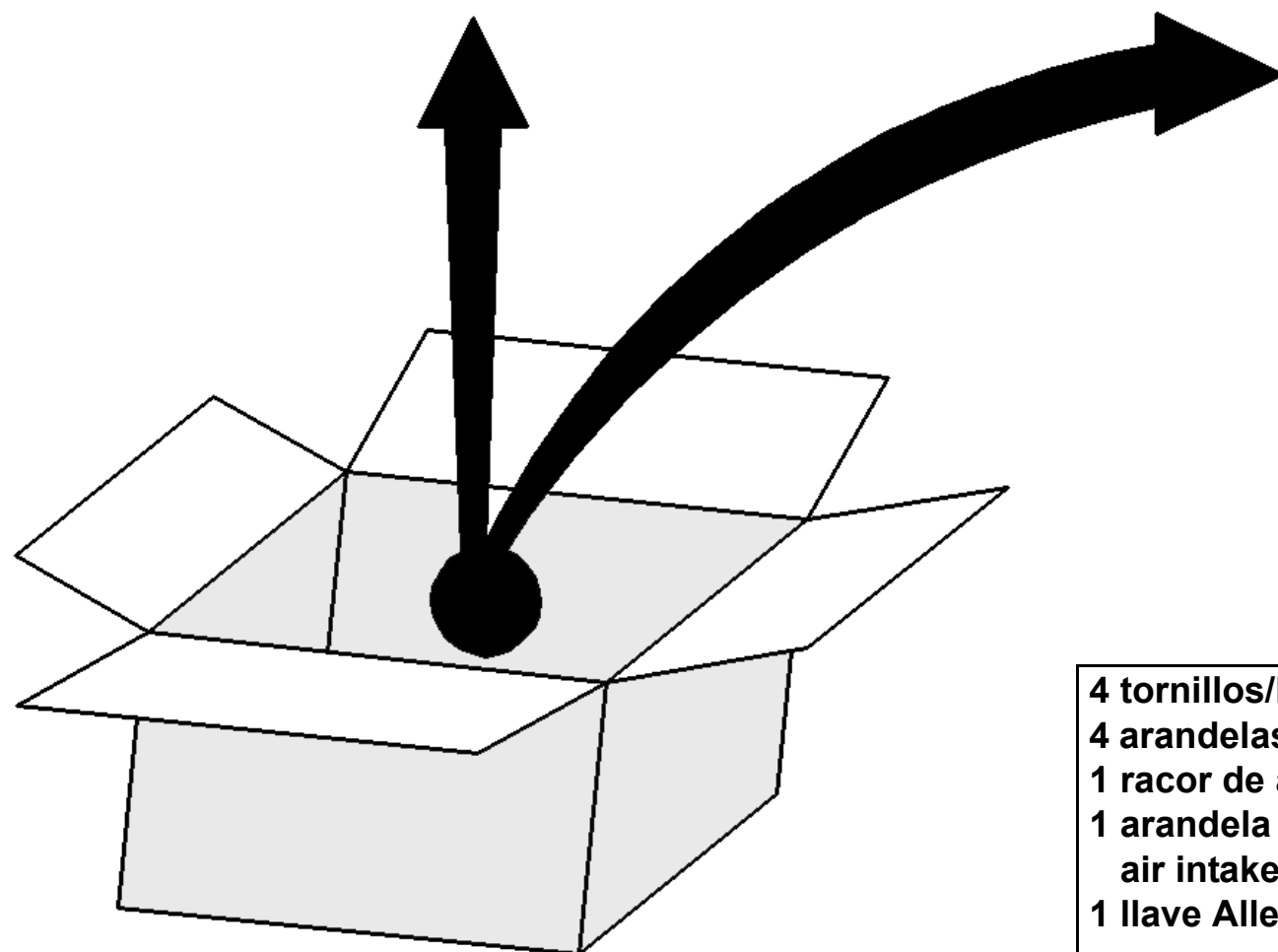
GRÁFICO
GRAPH



ACCESORIOS
ACCESSORIES

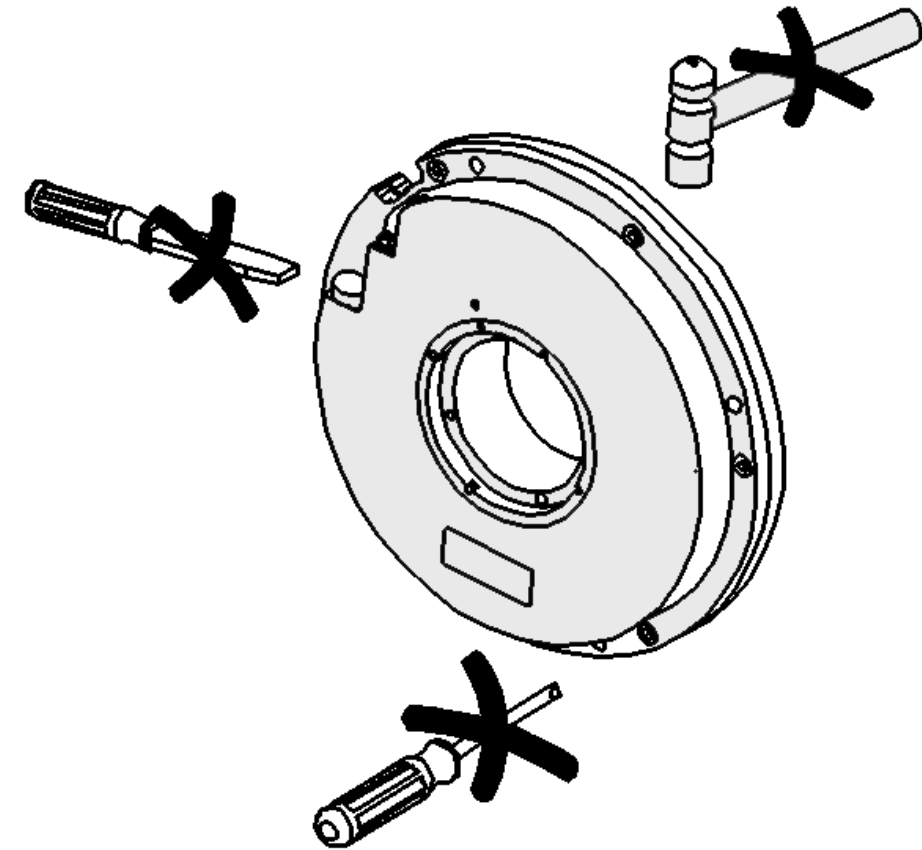
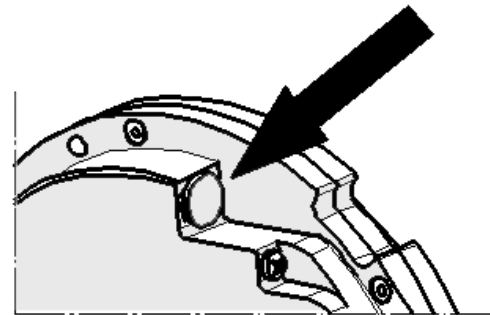
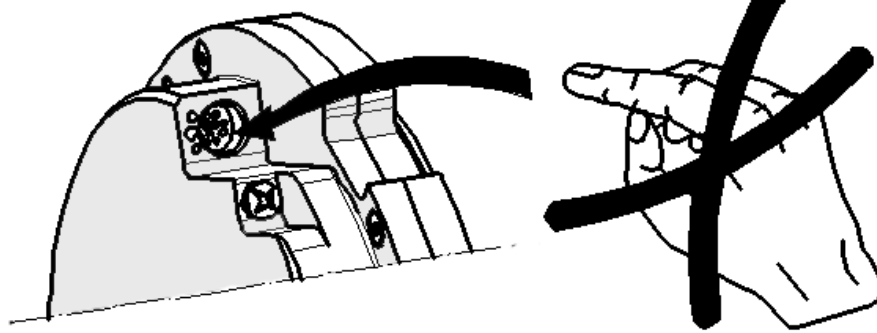
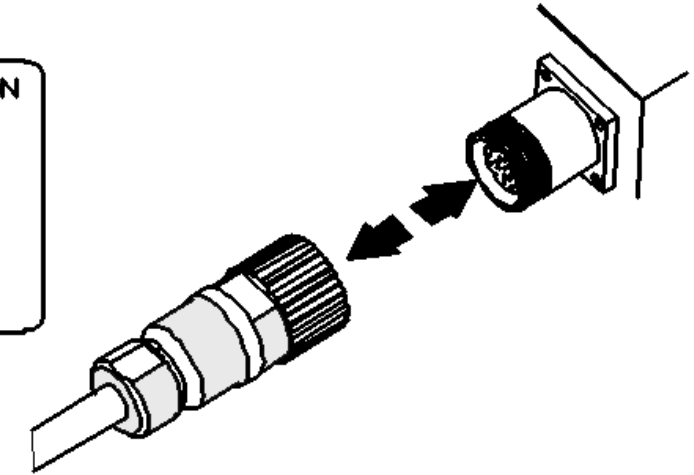
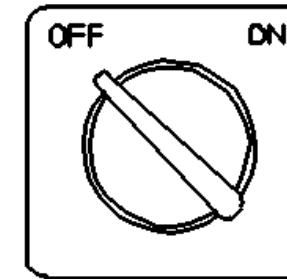
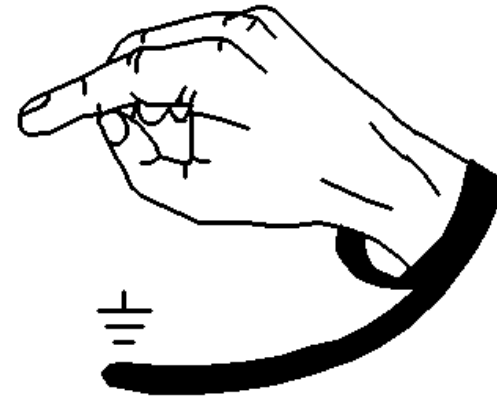


4 tornillos/bolts M5 x 25 DIN 912
4 arandelas/washers M5 DIN 125
1 racor de aire / air intake
1 arandela racor de aire /
air intake washer
1 llave Allen / Allen wrench

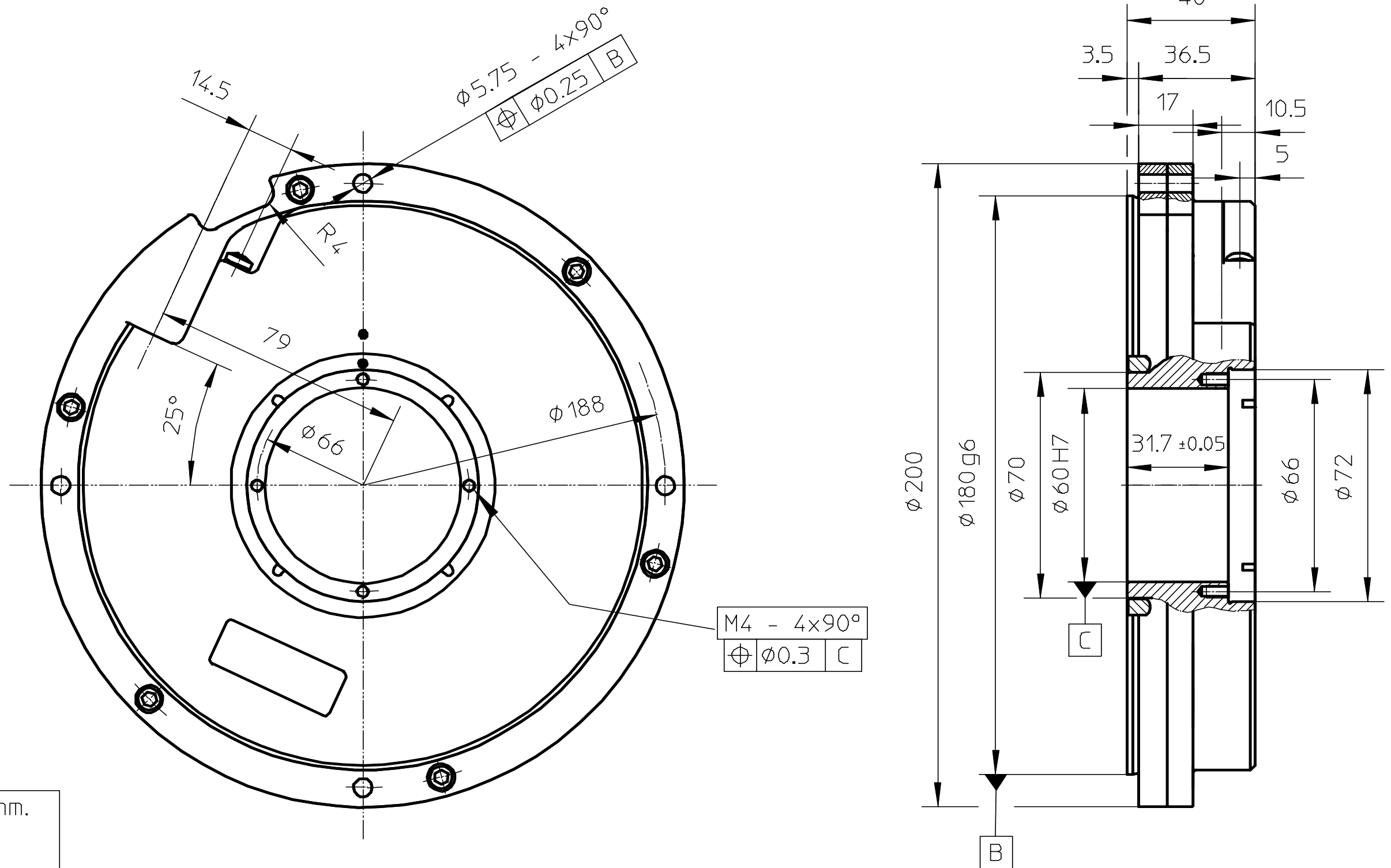




DIN EN 100

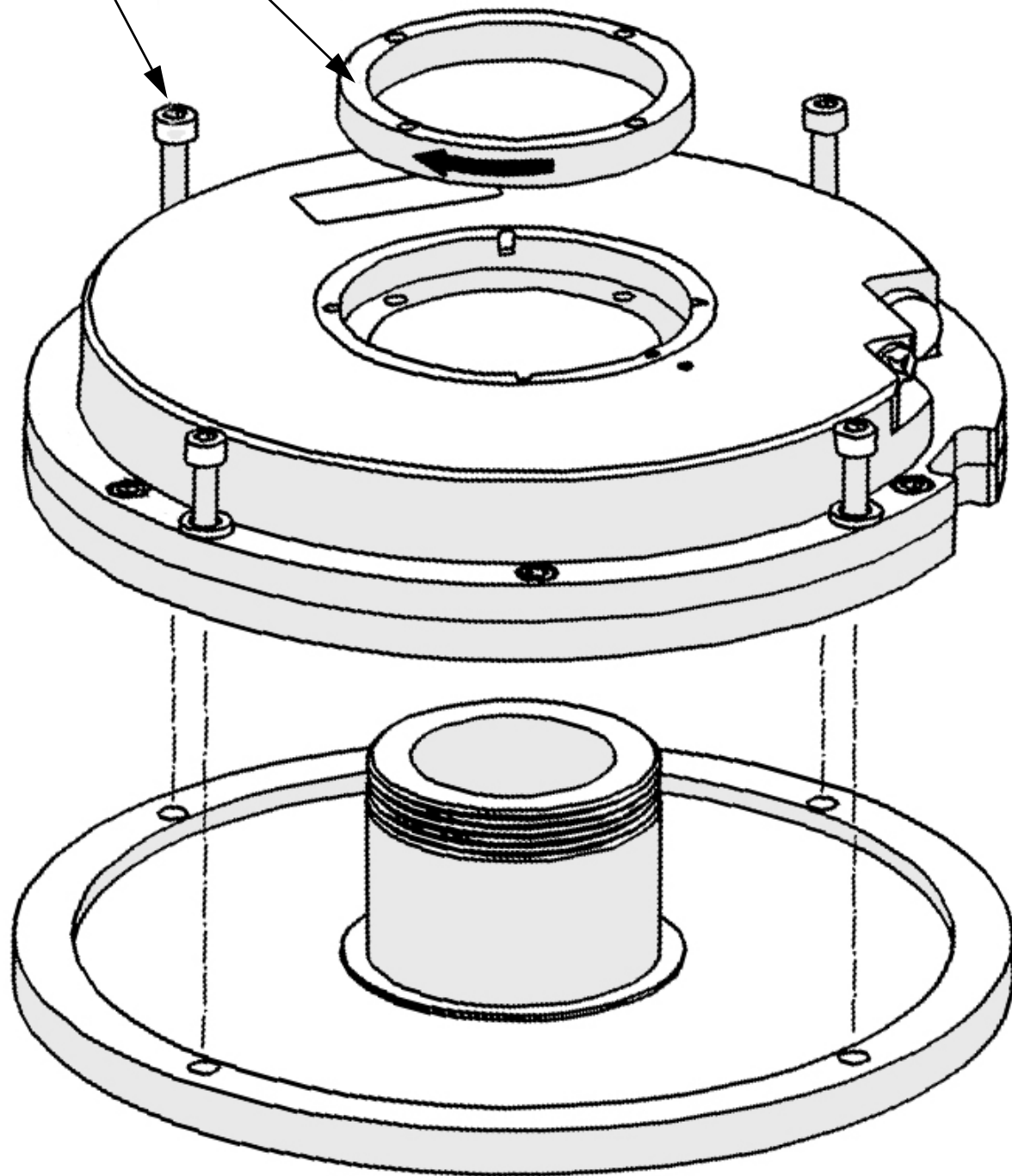


GENERAL DIMENSIONS

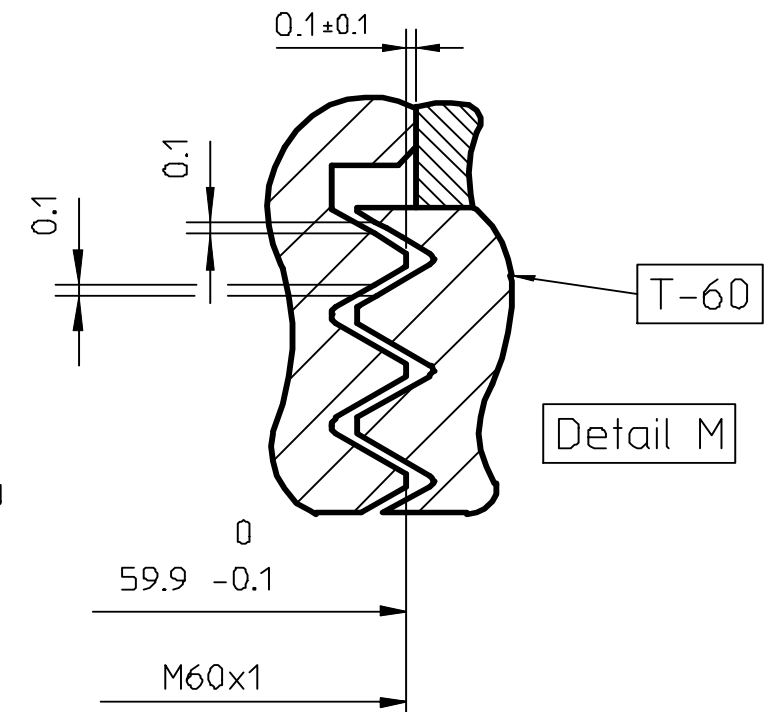
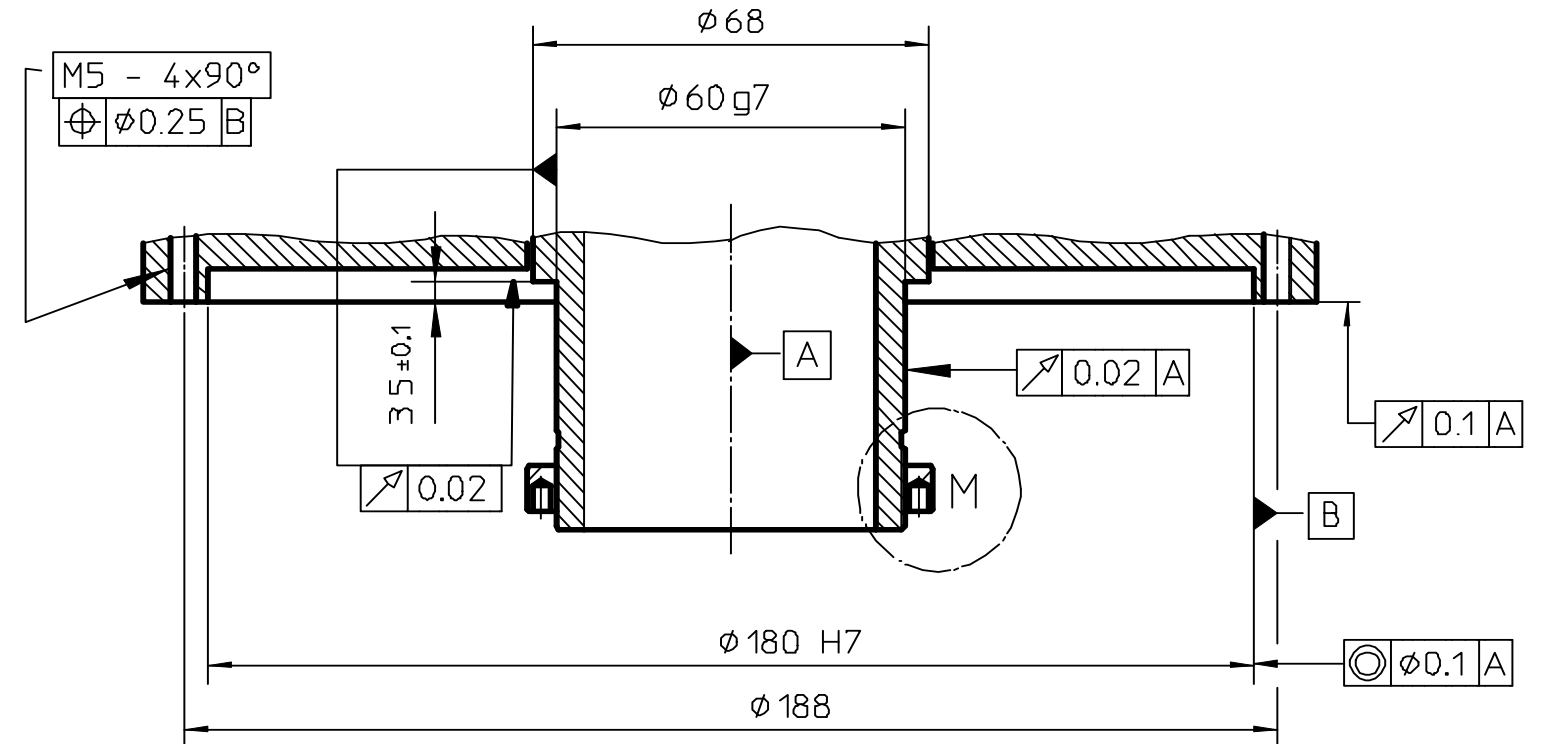


MONTAJE / MOUNTING

4 M5 DIN 125
 4 M5 DIN 912, T = 5 Nm
 T = 20 Nm T-60 (ver página 10 / see page 10)



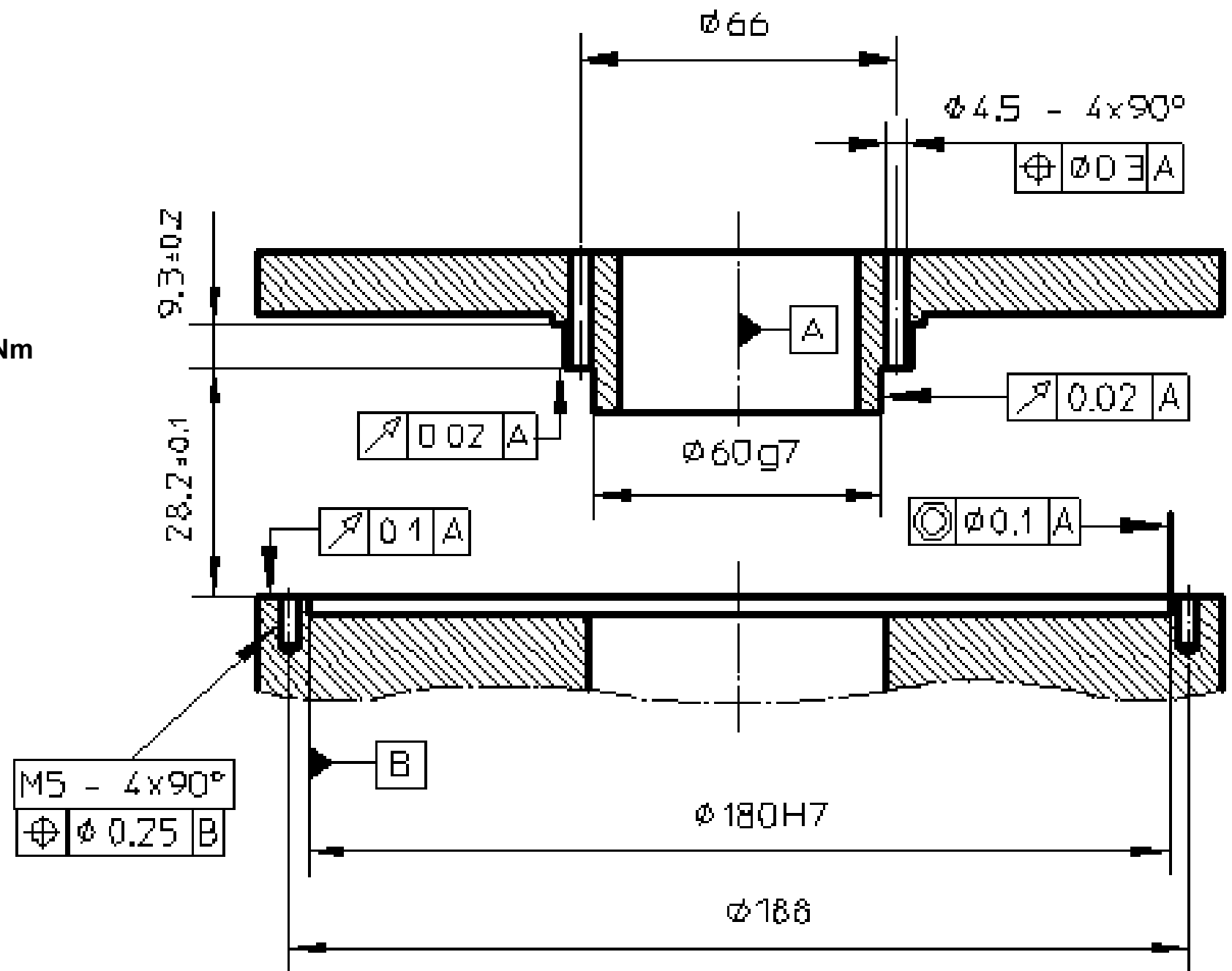
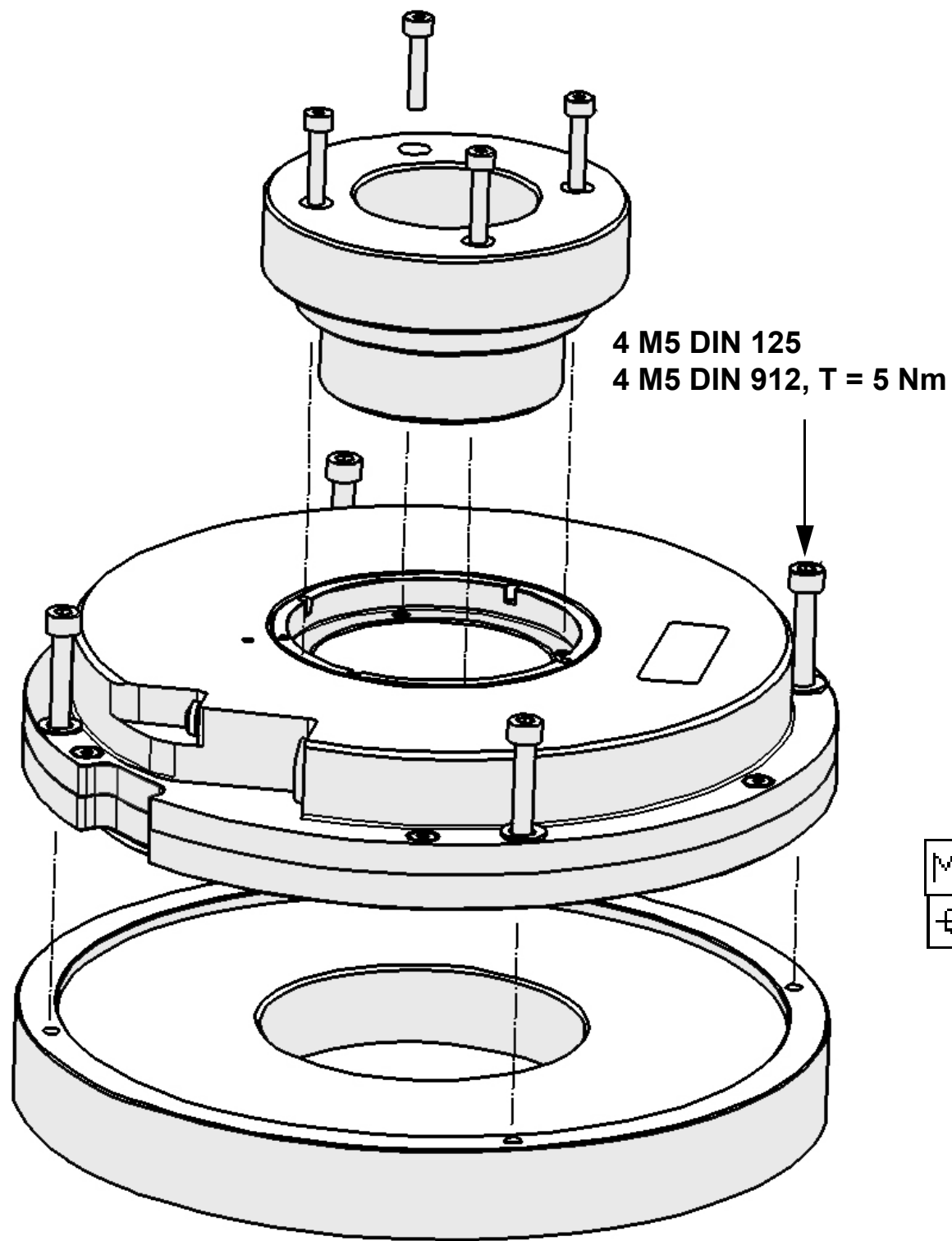
Cotas de montaje / Mounting dimensions



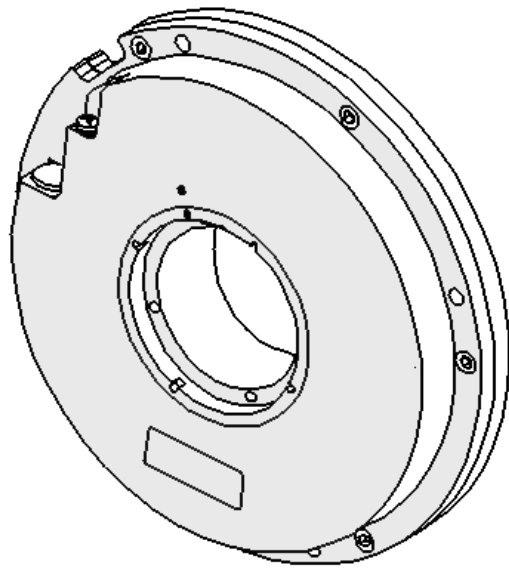
A Rodamiento / Roller bearing

MONTAJE / MOUNTING

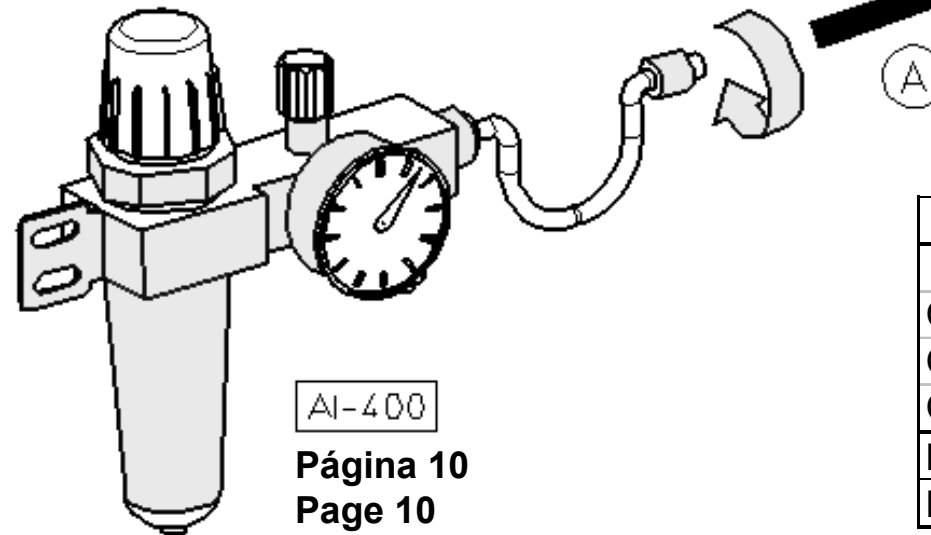
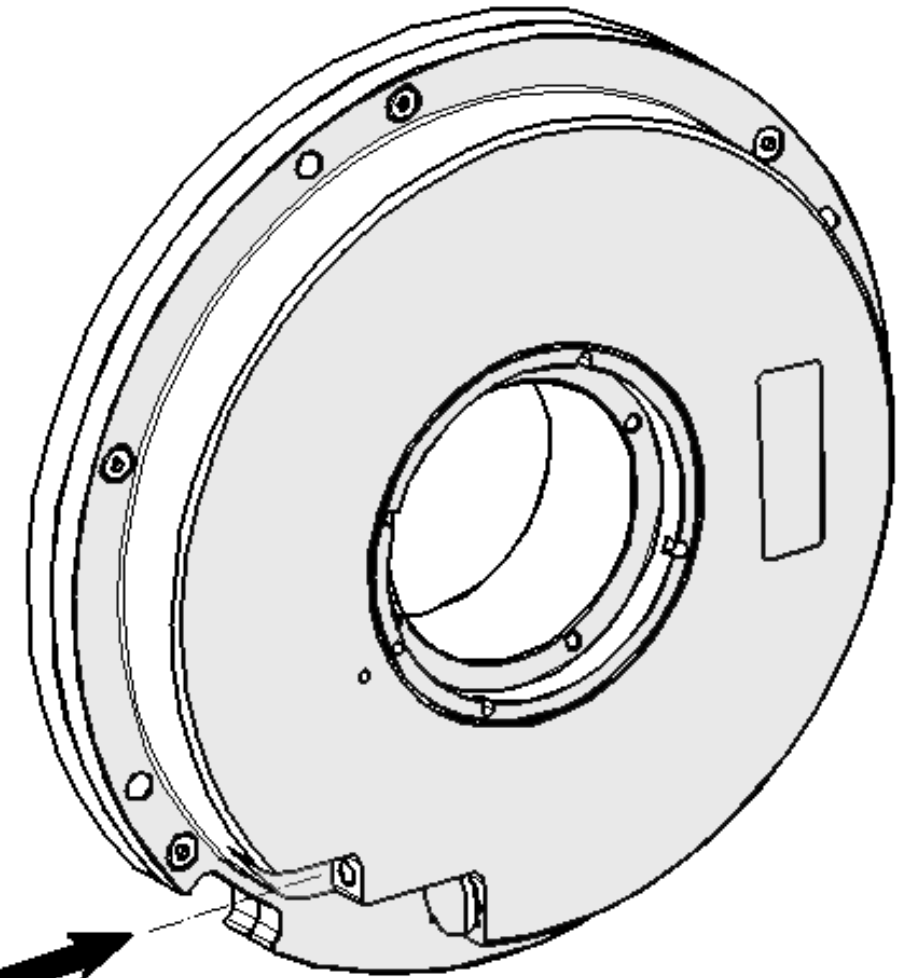
Cotas de montaje / Mounting dimensions



Nivel máximo: IP 64
Maximum level IP 64



> IP 64



AI-400

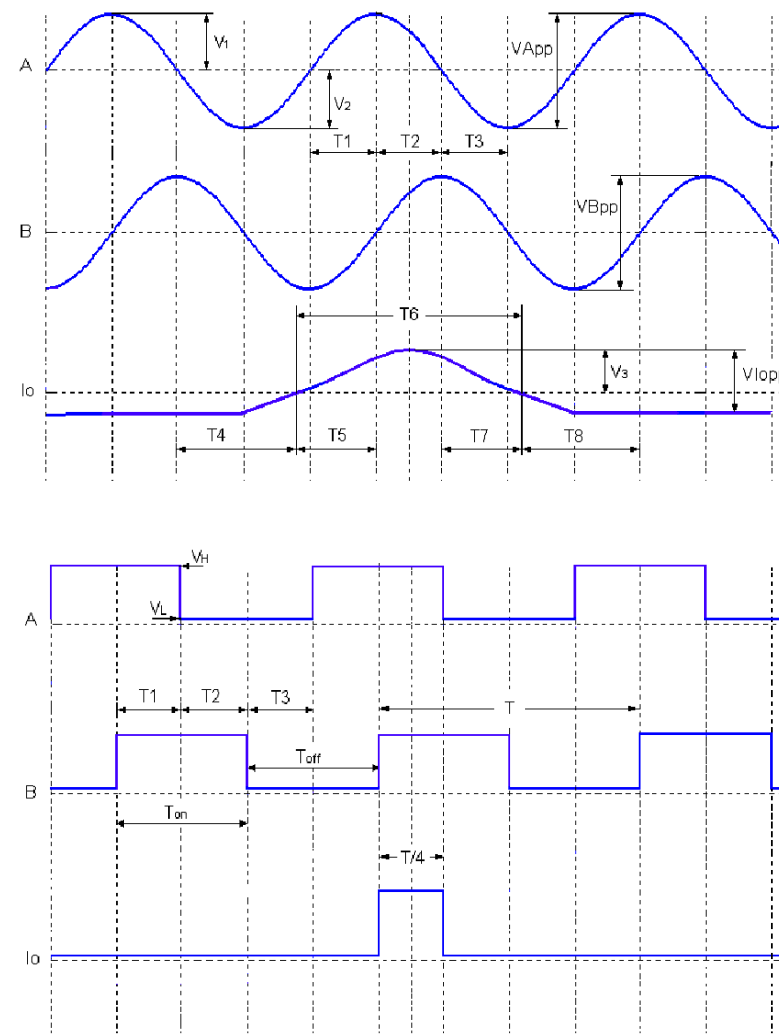
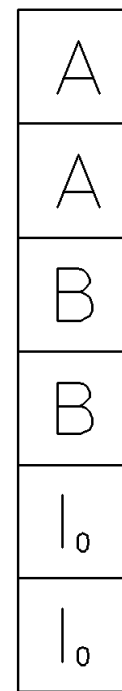
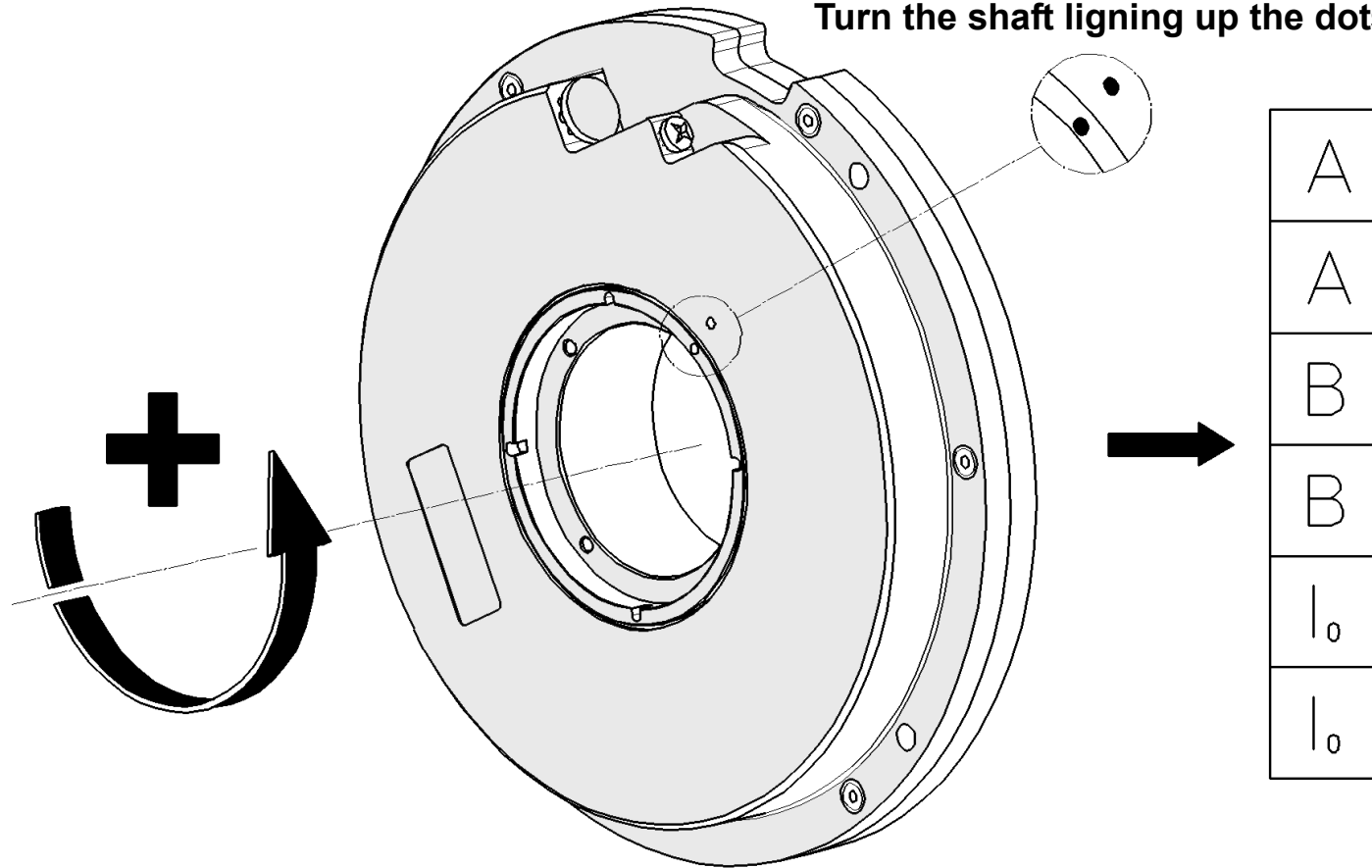
Página 10
 Page 10

(A) AIR CONDITIONS	
DIN ISO 8573 -1	
Class 1 - Particule Max. 0.1 µ	
Class 4 (7 bar) - Punto rocío / dewpoint 3 °C	
Class 1 - Max. Concentration oil 0.01 mg/m3	
Presión / Pressure	1 Kg / cm3
Flujo / Flow	10 l. / min. / encoder

CARACTERÍSTICAS ELÉCTRICAS / ELECTRICAL CHARACTERISTICS

Orientación del impulso de referencia (I_o)
Reference mark (I_o) orientation



Girar eje para alinear puntos
Turn the shaft lining up the dots

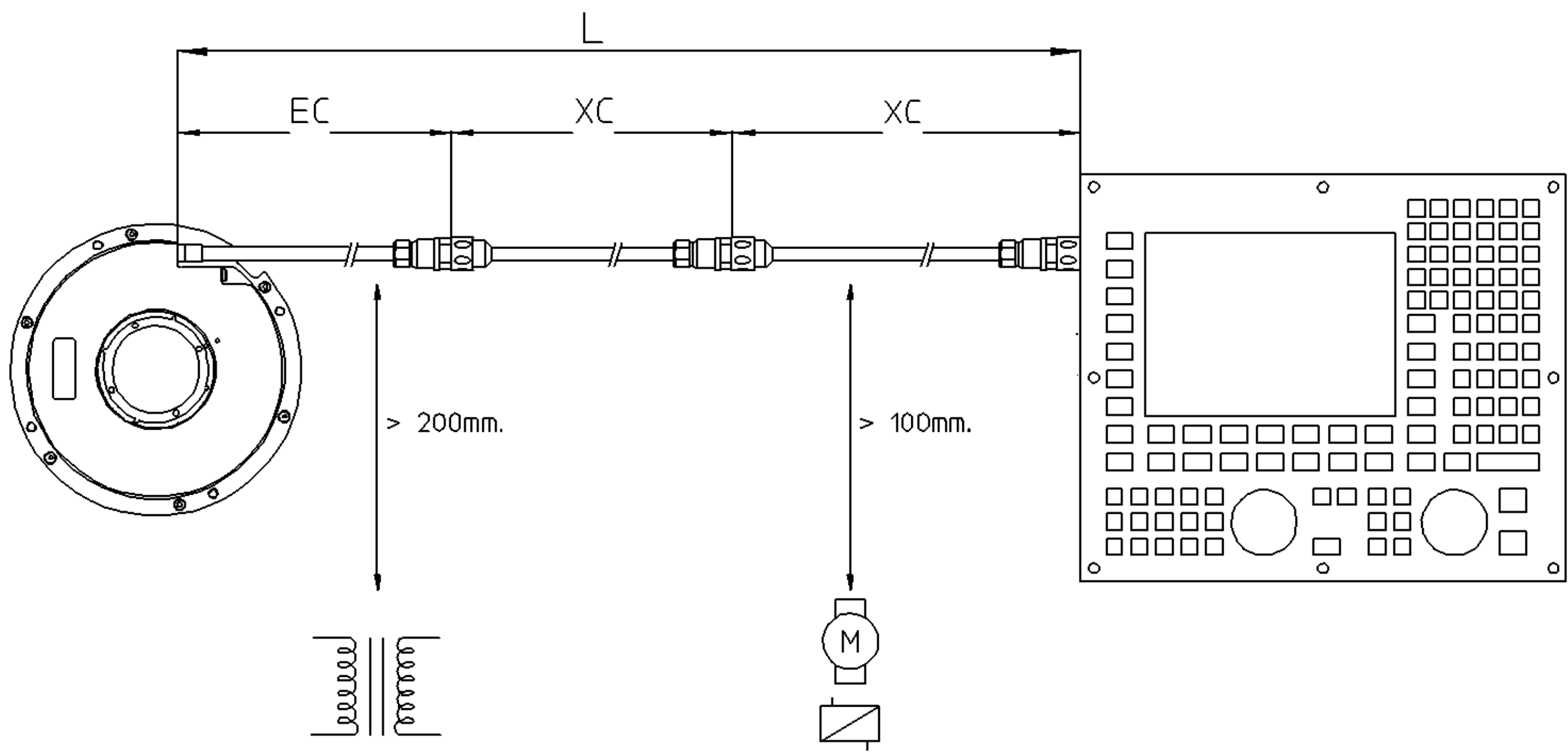


$V_{App} = V_{Bpp} = 1 V_{pp}$
 $V_{I_o}: 0.2 V \div 0.85 V$
 $T_{I_o}: T - 180^\circ \leq I_o \leq T + 180^\circ$
 $f_{max} = 180 kHz$

$V_{0L} \leq 0.5 V, V_{0H} \geq 2.5 V$
 $T_{I_o}: 90^\circ$
 $f_{max} = 1 MHz$

$V_{dc} = 5 V \pm 10\% , I_{max} = 150 mA$

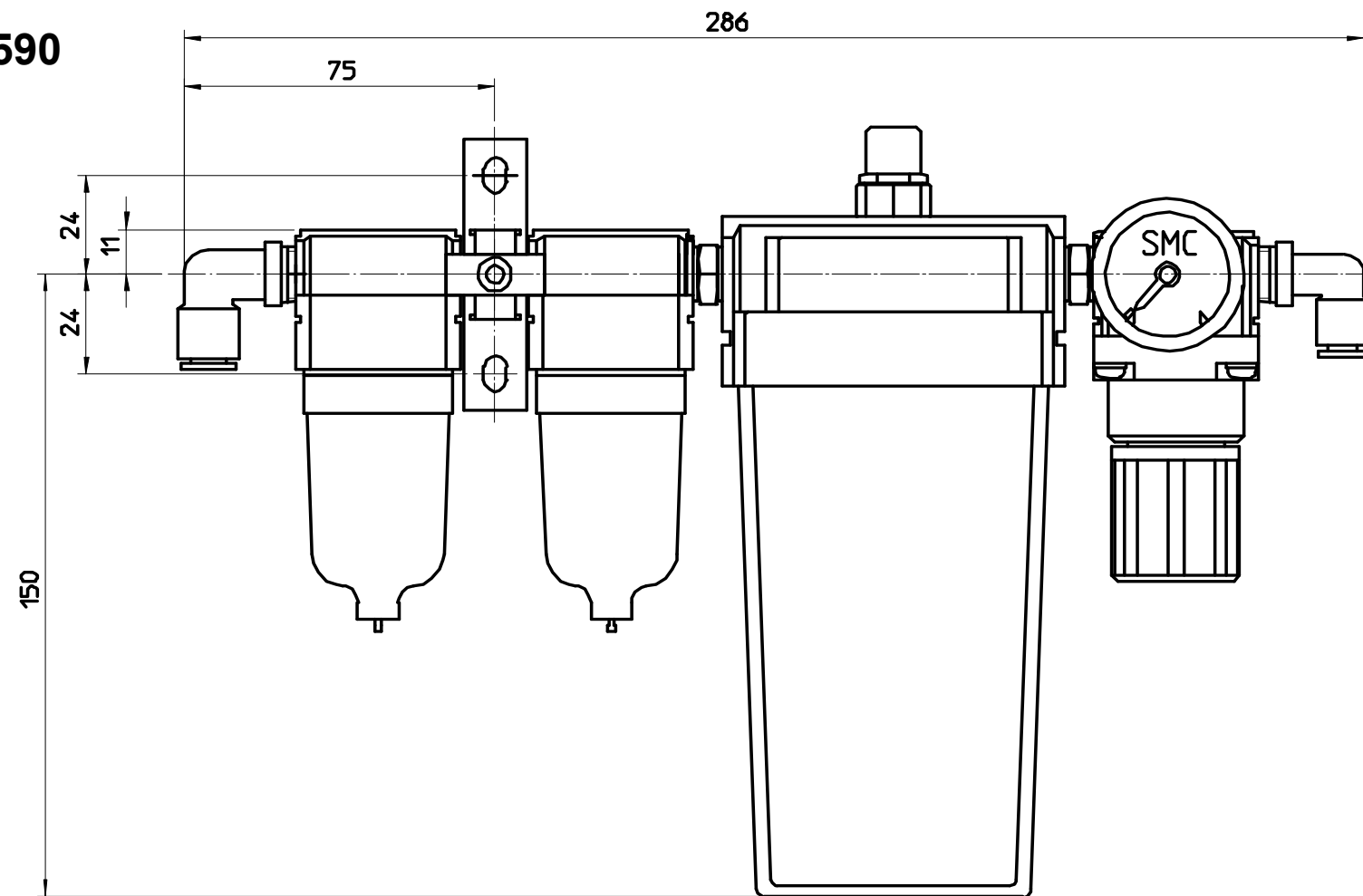
1 V_{pp}  L_{max} = 150 m **Detalle de cables: página 11**
 TTL  L_{max} = 50 m **Cable details: page 11**



CARACTERÍSTICAS MECÁNICAS MECHANICAL CHARACTERISTICS

Precisión	±2" , ±1"	Accuracy
Maxima velocidad de giro	1000 rpm	Max. Turning speed
Momento de inercia del eje	10000 gr.cm ²	Inertia of the rotor
Par (20°C)	≤ 0.05 Nm	Torque
Frecuencia natural	≥ 1000 Hz	Natural frequency
Peso	3.2 Kg	Weight
Estanqueidad	IP-64 (DIN 40050)	Sealing protection
Vibración (55 - 2000 Hz)	100 m/sec ² (IEC 60 068-2-6)	Vibration (50 - 2000 Hz)
Impacto (6ms)	1000 m/sec ² (IEC 60 068-2-27)	Impact (6 ms)
Temperatura de funcionamiento	0 °C ... 50 °C (32 °F ... 122 °F)	Operating temperature
Temperatura de almacenamiento	-30 °C ... 80 °C (-22 °F ... 176 °F)	Storage temperature

AI 590

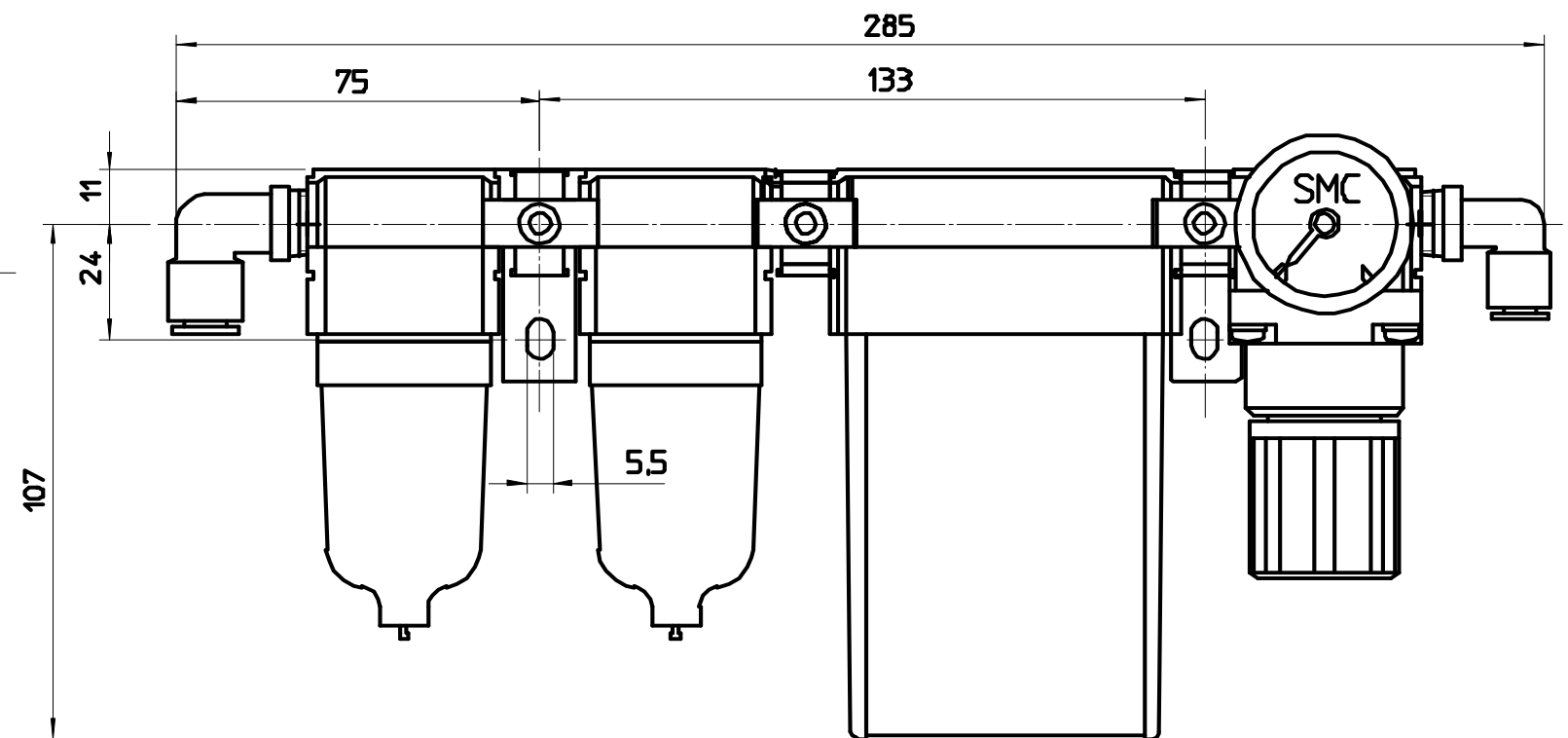
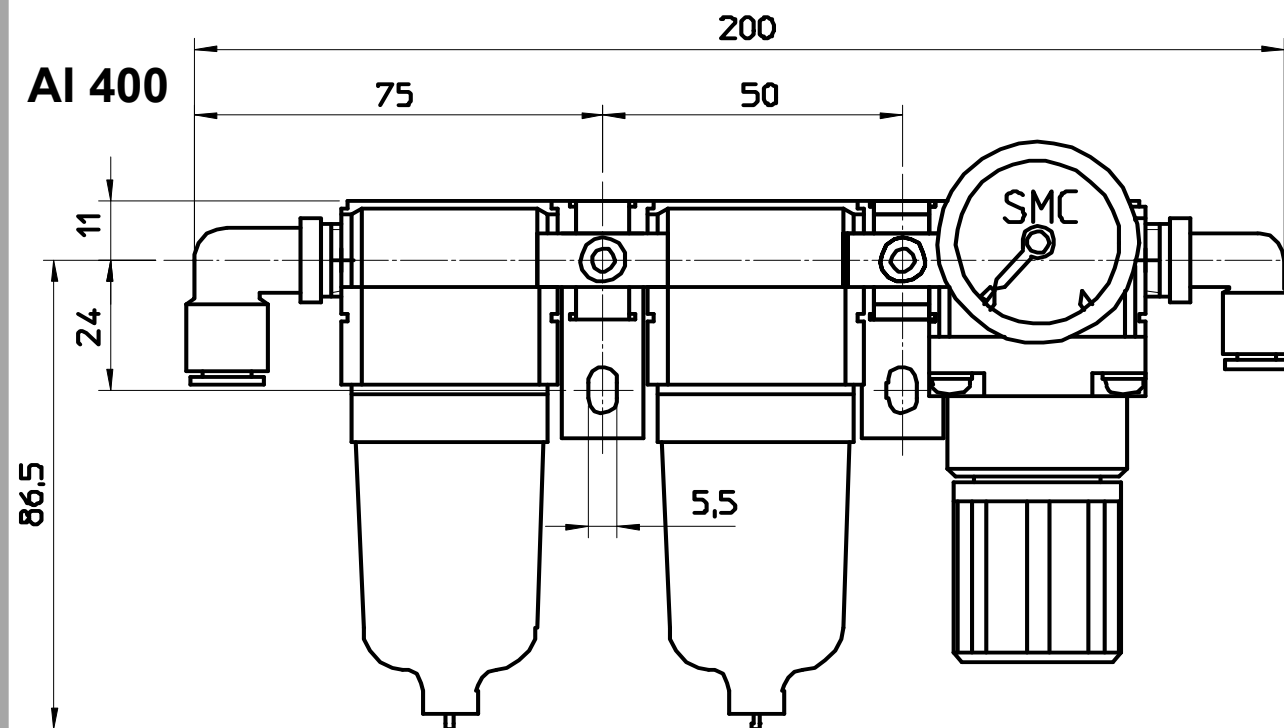


FILTROS DE AIRE / AIR FILTERS

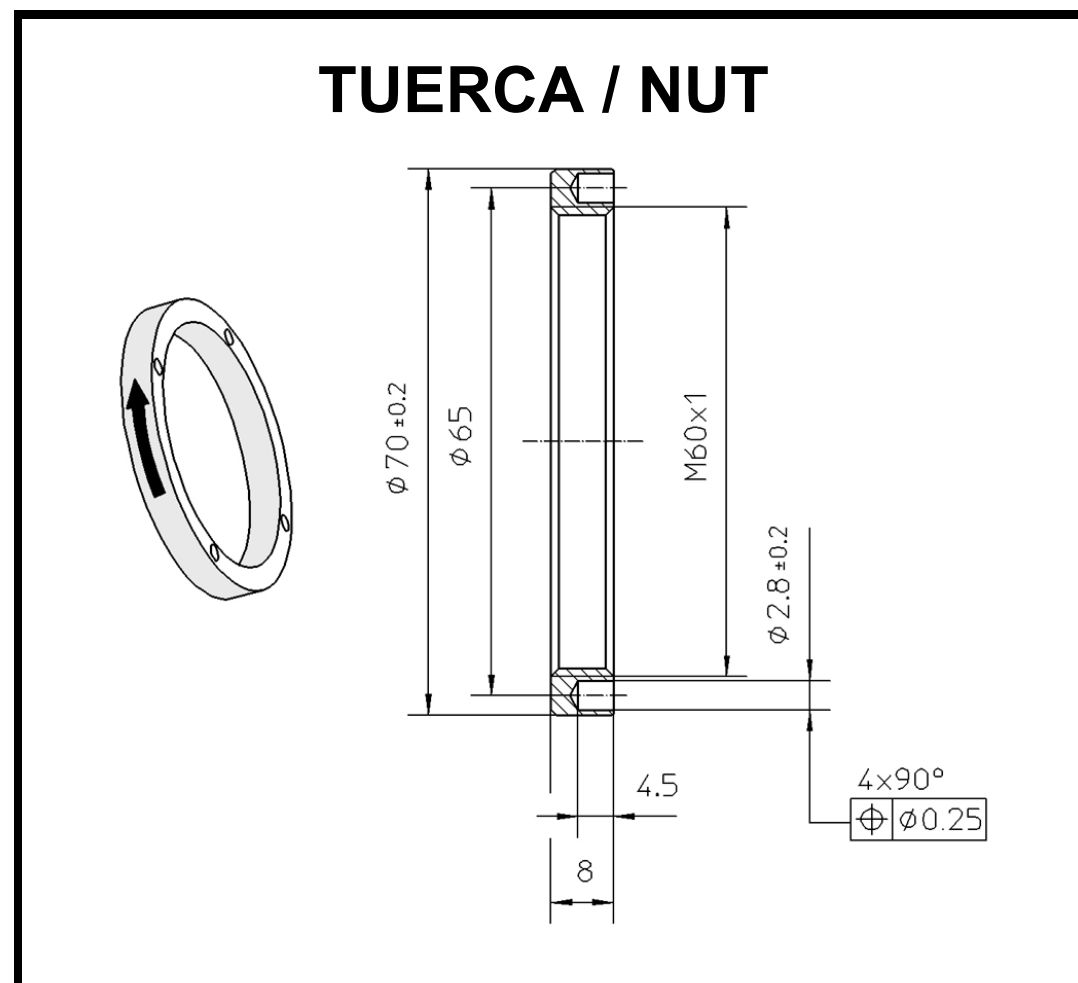
2200000	AI 400	25 l/min
2200001	AI 525	(25l/min)
2200002	AI 550	(50 l/min)
2200003	AI 590	(90 l/min)

AI 525 / AI 550

AI 400



TUERCA / NUT



CABLES

	< 12 m	< 26 m	26 - 150 m	SA
Application	Cable EC*	Cable EC + XC**	Cable EC + XC + XC	
8070, 8040, 8055i, AXD, SPD, MCP	EC-...-P-D	EC-1A-C1+ XC-C2-...-D	EC-1A-C1+ XC-C1 + XC-C2-...-D	
8055, 8050, 8030, 8025	EC-...-P-D	EC-1A-C1+ XC-C2-...-D	EC-1A-C1+ XC-C1 + XC-C2-...-D	+ SA-P-FS
11 μ A applications using CONNEI 9	EC-...-P-D	EC-1A-C1+ XC-C2-...-D	EC-1A-C1+ XC-C1 + XC-C2-...-D	+ SA-P-C
1 Vpp applications using CONNEI 12	EC-...A-C1	EC-1A-C1+ XC-C2-...-C1	EC-1A-C1+ XC-C1 + XC-C2-...-C1	
TNC 1 Vpp	EC-...AS-H	EC-1A-C1+ XC-C2-...-H	EC-1A-C1+ XC-C1 + XC-C2-...-H	
Aplicaciones de terceros (conector indefinido) 3rd party applications (undefined connector)	EC-...P-O	EC-1A-C1+ XC-C2-...-D***	EC-1A-C1+ XC--C2-C1 + XC-C2-...-D***	

* Cables EC: 1, 3, 6, 9, 12 m

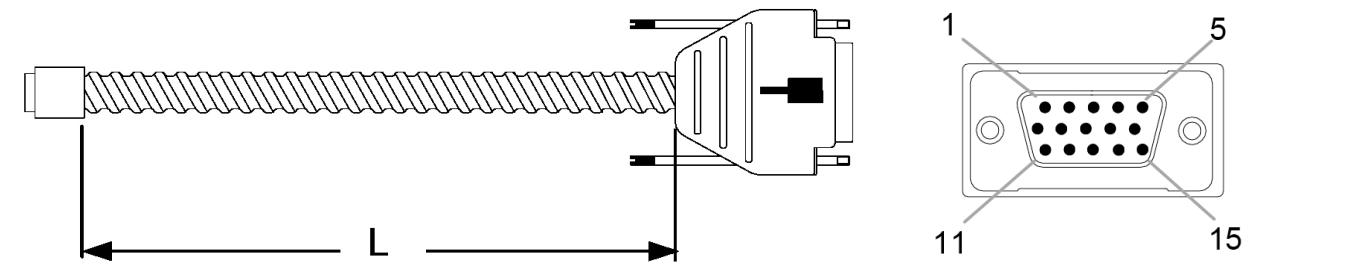
** Cables XC: 5, 10, 15, 20, 25 m

*** Quitar conector / Remove connector

CONEXIONES / CONNECTIONS

EC-P-D

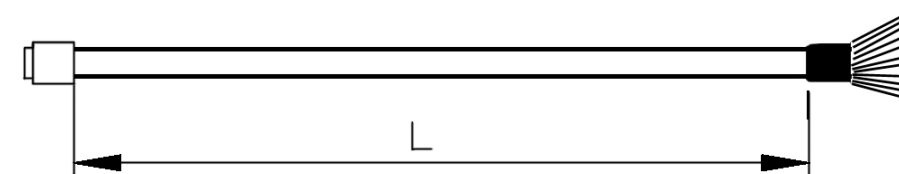
A	/A	B	/B	Io	/Io	+5 V	0 V	Malla / Shield
1	2	3	4	5	6	9	11	15 / Caperuza 15 / Housing
Verde Green	Amarillo Yellow	Azul Blue	Rojo Red	Gris Grey	Rosa Pink	Marrón Brown	Blanco White	Rosa / Malla Pink / Shield



L = 1, 3, 6, 9 & 12 m con o sin tubo metálico / with or without armor

EC-P-O

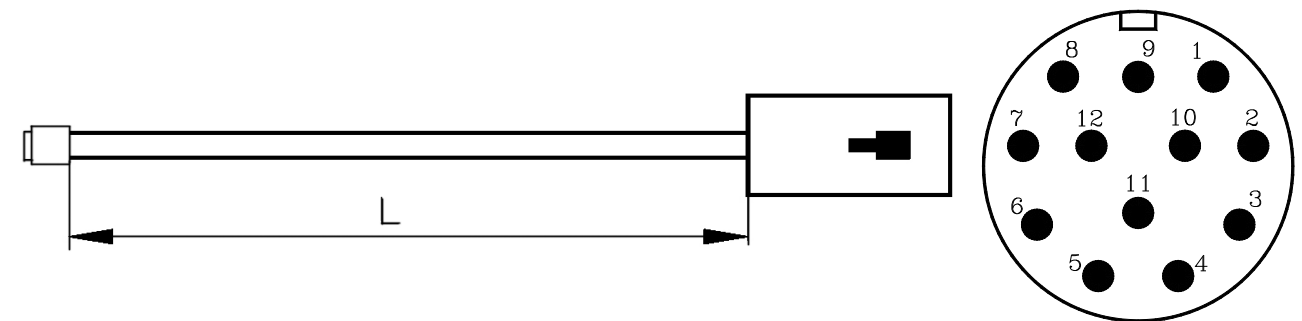
A	/A	B	/B	Io	/Io	+ 5 V	0 V
4	5	6	7	8	9	1	2
Verde Green	Amarillo Yellow	Azul Blue	Rojo Red	Gris Grey	Rosa Pink	Marrón Brown	Blanco White



L = 1, 3, 6, 9 & 12 m con o sin tubo metálico / with or without armor

EC-...A-C1

A	/A	B	/B	Io	/Io	/Alarm	+ 5 V	0 V	
5	6	8	1	3	4	7	2, 12	10, 11	Caperuza Housing
Verde Green	Amarillo Yellow	Azul Blue	Rojo Red	Gris Grey	Rosa Pink	Violeta Purple	Marrón Brown	Blanco White	Malla Shield



L = 1, 3 & 6 m con o sin tubo metálico / with or without armor

GARANTIA

- *Plazo: 12 meses a partir de la fecha de expedición de fábrica.
- *Cubre gastos de Materiales y Mano de Obra de reparación en FAGOR AUTOMATION.
- *Los gastos de desplazamiento son a cargo del cliente.
- *No cubre averías por causas ajenas a FAGOR AUTOMATION, como: golpes, manipulación por personal no autorizado, etc.

DECLARACION DE CONFORMIDAD

Fabricante: Fagor Automation, S. Coop.
Barrio de San Andrés 19, C.P. 20500, Mondragón -Guipúzcoa- (ESPAÑA)

Declaramos bajo nuestra exclusiva responsabilidad la conformidad del producto al que hace referencia este manual

Nota. Algunos caracteres adicionales pueden seguir a las referencias de los modelos indicados en este manual. Todos ellos cumplen con las siguientes normas:


COMPATIBILIDAD ELECTROMAGNÉTICA:

EN 61000-6-2:2005 Norma de Inmunidad en entornos industriales
EN 61000-6-4:2007 Norma de Emisión en entornos industriales

De acuerdo con las disposiciones de la Directiva Comunitaria: 2004/108/CE de Compatibilidad Electromagnética.

Mondragón a 1 de Septiembre de 2009

Fagor Automation, S. Coop.


Director Gerente
Pedro Ruiz de Aguirre

WARRANTY

- *Term: 12 months from factory invoice date.
- *It covers parts and labor at FAGOR AUTOMATION.
- *Travel expenses are payable by the customer.
- *Damages due to causes external to FAGOR AUTOMATION, such as unauthorized handling, blows, etc. are not covered.

DECLARATION OF CONFORMITY

Manufacturer: Fagor Automation, S. Coop.
Barrio de San Andrés 19, C.P. 20500, Mondragón -Guipúzcoa- (SPAIN)

We declare under our exclusive responsibility the conformity of the product referred to in this manual.

Note. Some additional characters may follow the model references indicated in this manual. They all comply with the following regulations:

ELECTROMAGNETIC COMPATIBILITY:

EN 61000-6-2:2005 Standard on immunity in industrial environments
EN 61000-6-4:2007 Standard on emission in industrial environments

According to the European Directive: 2004/108/CE on electromagnetic compatibility.

Mondragón September 1st 2009

NOTAS DE USUARIO / USER NOTES

NOTAS DE USUARIO / USER NOTES
