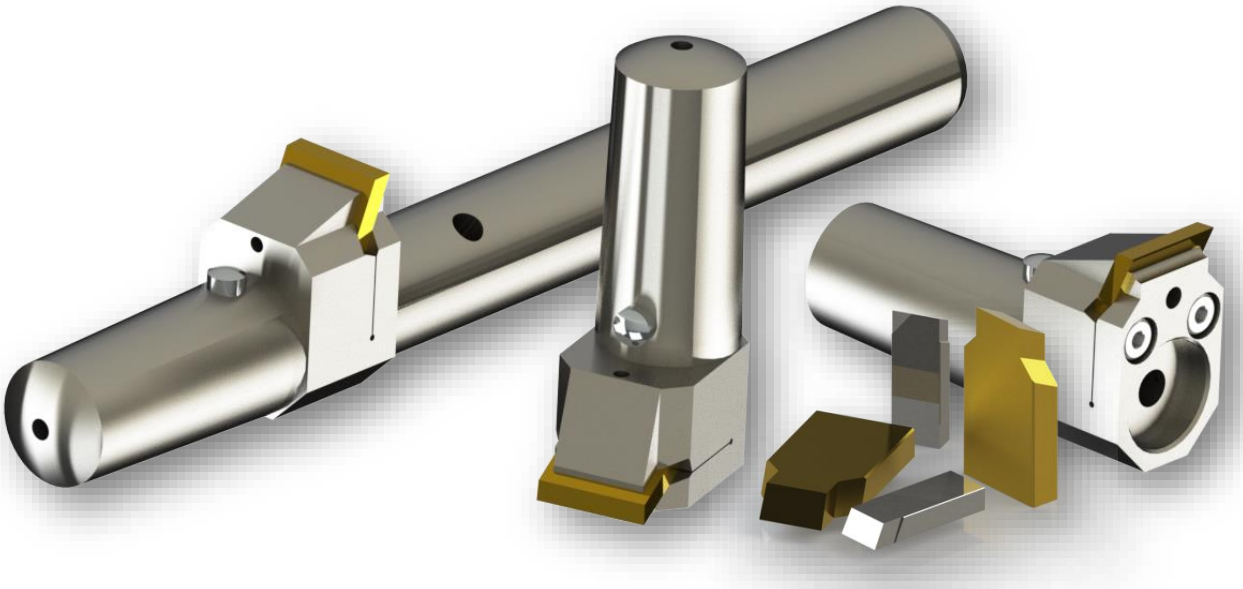
MECO MACHINES

Description of tools and accessories for

MEC-70/MEC-80 Premium CNC V6



Description of the Tool-holders and blades.

All the versions of MEC-70 and MEC-80.

✓ SV TYPE TOOL-HOLDER.

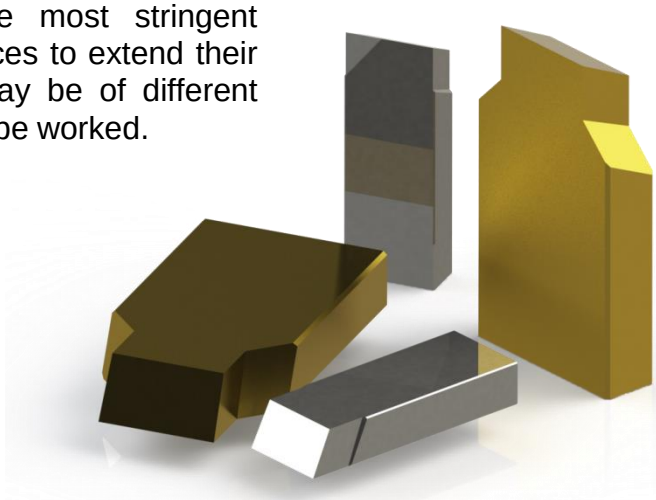
These tools are mounted "on a rod": they are used to carry out work where the diameter of the rod does not fit in the area to be worked.

- Diameter of the MEC-70 rod: 70mm.
- Diameter of the MEC-80 rod: 80mm.

This tool is suitable for making straight or tapered notches. Both types of notches may be through-holes or blind-holes.
This type of tool may incorporate a guide bar to improve the working conditions.

✓ SV TYPE BLADES.

These tools are designed to be fitted inside the tool-holder rod.
Manufactured using HSS material, these blades are streamlined to meet the most stringent tolerances. We coat tool surfaces to extend their service life; these coatings may be of different types based on the material to be worked.



EXPERIENCE AND KNOW-HOW

We have nearly 40 years of accumulated experience designing and manufacturing industrial machinery

INTERNATIONAL STANDING

We have a strong international presence with clients in more than 25 countries around the world.

Description of the Tool-holders and blades.

All the versions of MEC-70 and MEC-80.

✓ PN TYPE TOOL-HOLDER.

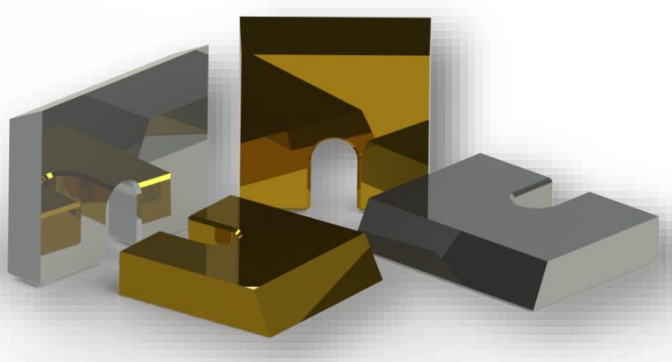
These tools are assembled on the rod itself and are used to carry out work where the diameter of the rod fits in the area to be worked.
This tool is suitable for making straight or tapered notches. Both types of notches may be through-holes or blind-holes.

- Minimum hole diameter in MEC-70: 78mm.
- Minimum hole diameter in MEC-80: 88mm.

This type of tool can use the entire effective stroke of the machine and is the most robust for carrying out cutting type work.

✓ PN TYPE BLADES.

These blades are designed to be inserted in the throat of the tool. The centring is carried out using a pin to position the blade.
Manufactured using HSS material, these blades are streamlined to meet the most stringent tolerances.
We coat tool surfaces to extend their service life; these coatings may be of different types based on the material to be worked.



I&D

MECO's continuous innovation and development allows them to stay at the cutting edge of such a competitive and changing environment as is the machine-tool sector.

STAFF

MECO's multi-disciplinary team is comprised of qualified and committed professionals. Without a doubt, our staff comprises an essential and indispensable pillar, upon which our projects are supported.

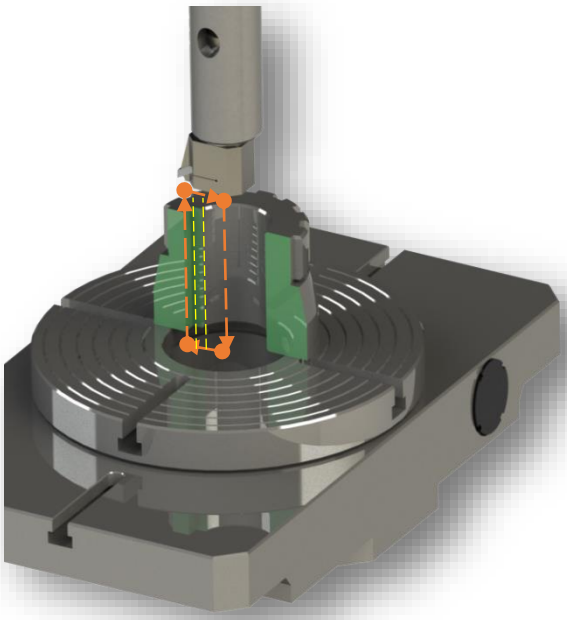
Tools in the work cycle.

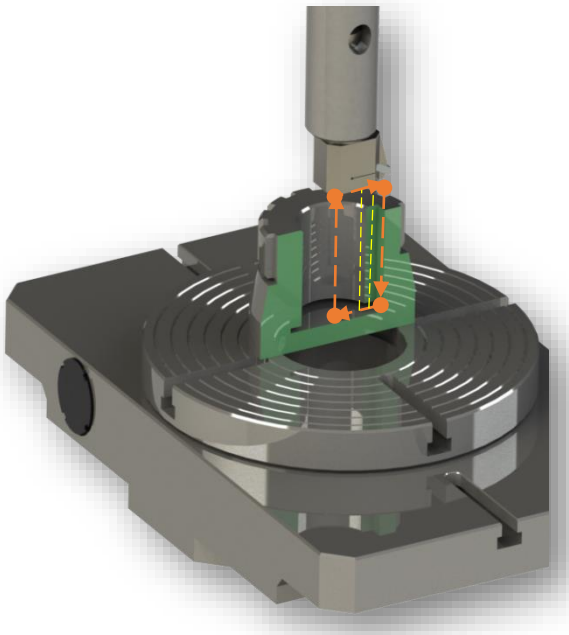
All the versions of MEC-70 and MEC-80.

✓ STRAIGHT NOTCH.

The dashed orange line indicates the movement made by the machine during the cutting process: this movement is repeated until the depth indicated in yellow is reached.

It is important that we pay attention to the cleanliness of the bottom of the key way: the accumulation of shavings in this area can cause the blade or tool to break.



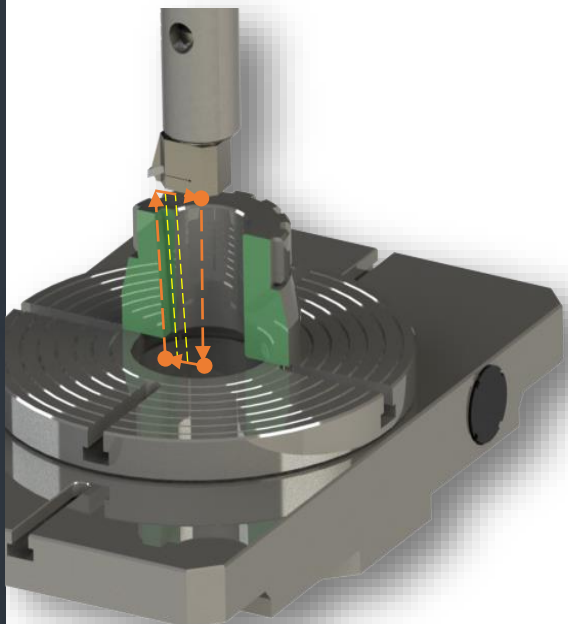


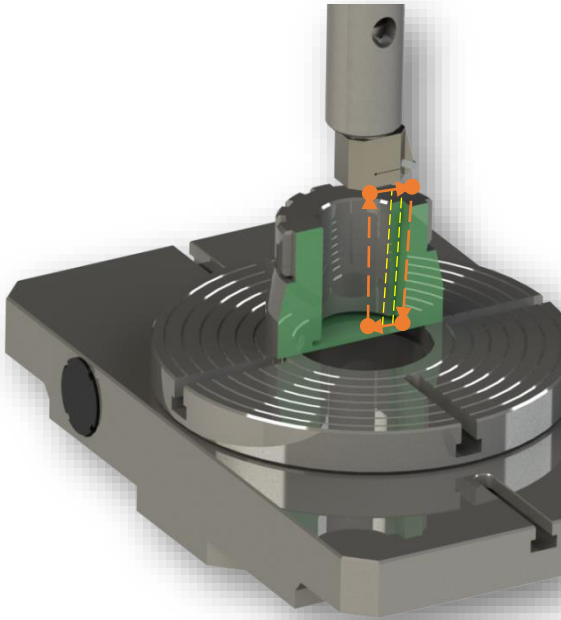
✓ TAPERED NOTCH.

Up to 3º of inclination, this operation can be carried out using standard tools; for notches with a greater angle, Meco has tools where the inclination of the blade has a greater angle of incidence.

The dashed orange line indicates the movement made by the machine: this movement is repeated until the set depth is reached.

It is important that we pay attention to the cleanliness of the bottom of the key way: the accumulation of shavings in this area can cause the blade or tool to break. We recommend using a blower when carrying out work that generates shavings that are hard to remove.





Handling recommendations.

All the versions of MEC-70 and MEC-80.

✓ INSTALLATION OF THE TOOL-HOLDER.

Assemble the blade on the mouth of the tool-holder and lock it in place using the locking system.

In SV type tool-holders, the same screw we use to fasten the guide bar must be tightened to lock the blade in place. Verify that the blade is properly positioned.

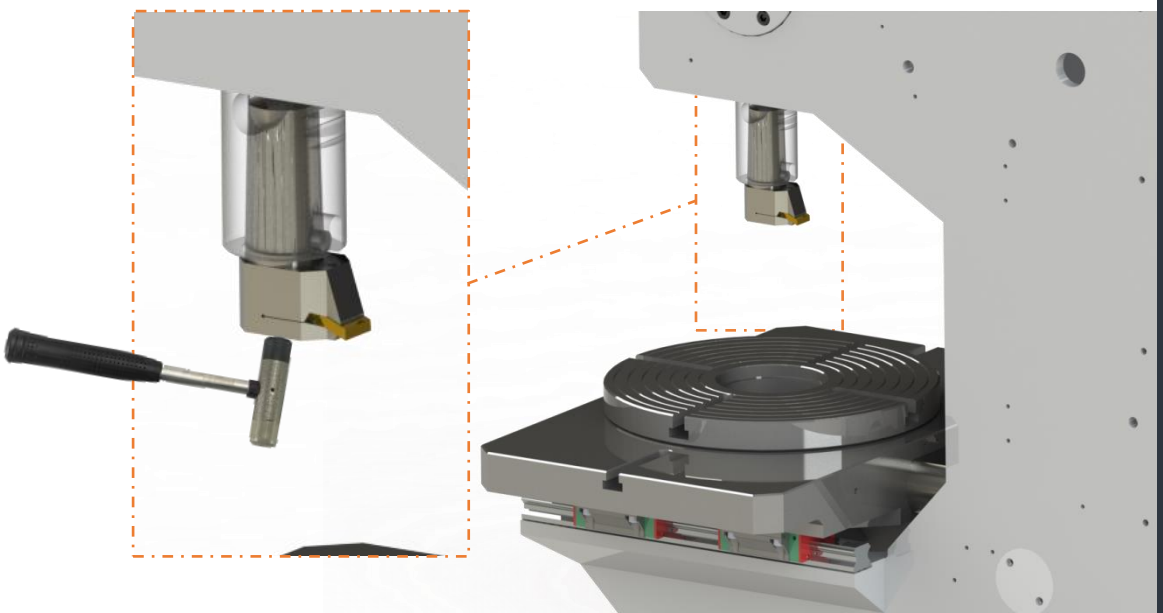
In PN type tool-holders, the 2 screws located on the guide bar must be tightened. Verify that the blade is properly positioned at the bottom and always matching the notch on the blade to the tool-holder pin.

We must ensure the blade and its housing on the tool-holder are kept clean.

✓ INSTALLATION OF THE TOOL-HOLDER ON THE ROD.

Using the machine taper on the tool-holder, lock it to the taper end of the rod. Use a plastic or copper mallet to pound on the bottom section of the tool-holder to ensure it is properly clamped.

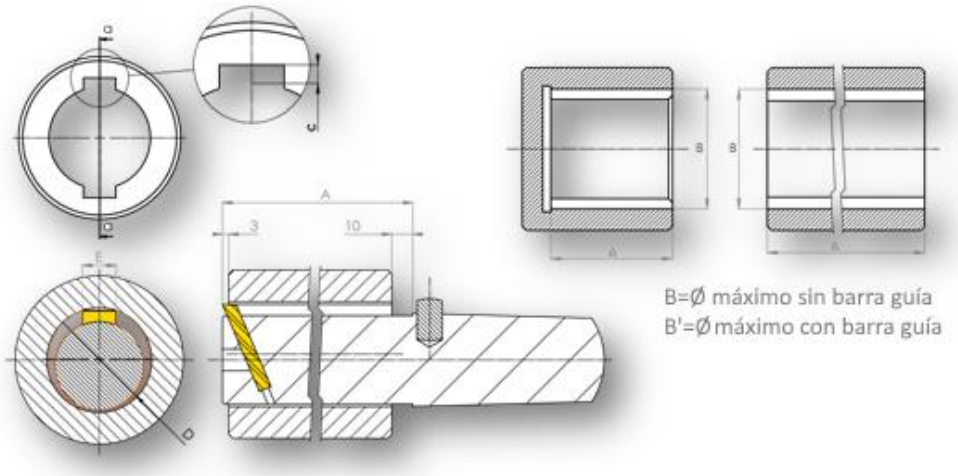
Thoroughly clean the 2 tapers that are in contact with each other; never leave oil residue between the contact surfaces.



DIN-6885 type blades and tool-holders.

For straight, tapered and blind notches.

All the versions of MEC-70 and MEC-80.



*All our blades can be sharpened.

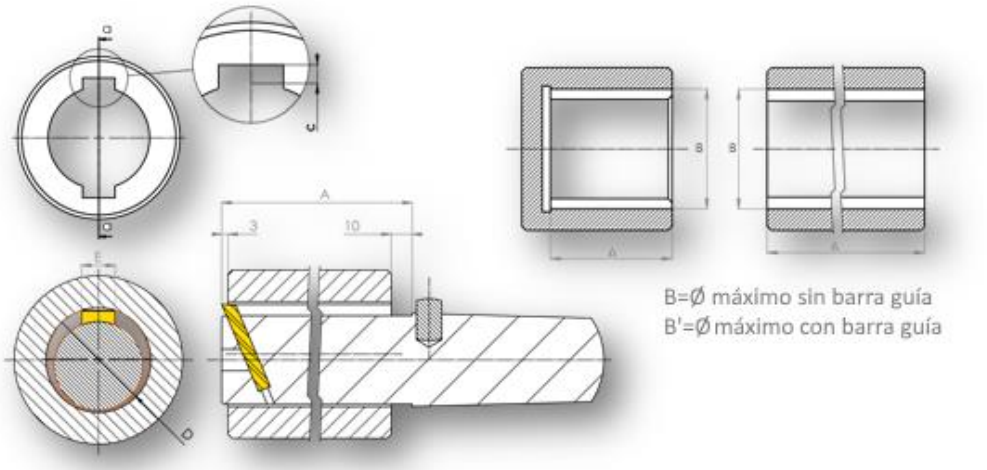
		BLADE OR TOOL		TOOL-HOLDER		DIMENSIONS				
		WIDTH (E)	REFERENCE	DESCRIPTION	REFERENCE	A (mm)	B (mm)	B' (mm)	C (mm)	D (mm)
MEC-70 Premium CNC SV	TOLERANCES OF AVAILABLE BLADES: P9 N7 JS6 JS9 JS8 D10 G7 H7 J6	3 FLG SV	600/0100	3mm SV	601/0002	25	120	100	1.69	8
		4 FLG SV	600/0101	4mm SV	601/0003	35	122	118	2.22	10
		5 FLG SV	600/0102	5mm SV	601/0004	45	122	118	2.85	12
		6 FLG SV	600/0103	6mm SV	601/0005	60	132	118	3.35	17
		8 FLG SV	600/0104	8mm SV	601/0006	90	136	118	4.05	22
		10 FLG SV	600/0105	10mm SV	601/0007	120	139	118	4.15	30
		12 FLG SV	600/0015	12mm SV	601/0008	136	145	116	3.3	36
		14 FLG SV	600/0016	14mm SV	601/0009	196	152	122	4.4	41
		16 FLR SV	600/0017	16-25 mm SV	601/0010	150	160	122	5.1	50
		18 FLR SV	600/0018			150	160	122	7.4	53
		20 FLR SV	600/0019			150	160	122	8.3	54
		22 FLR SV	600/0143			150	160	122	7.4	54
		25 FLR SV	600/0144			150	160	122	7.4	54
		16 FLR SV	600/0017	16-25mm SV	601/0046	200	160	122	5.1	50
		18 FLR SV	600/0018			200	160	122	7.4	53
		20 FLR SV	600/0019			200	160	122	8.3	54
		22 FLR SV	600/0143			200	160	122	7.4	54
		25 FLR SV	600/0144			200	160	122	7.4	54
MEC-70 Premium CNC PN		25 FLG PN	600/0164	25-36mm PN	601/0011	280	208	110	13.4	88
		28 FLG PN	600/0021			280	208	110	13.4	88
		32 FLG PN	600/0022			280	208	110	13.4	90
		36 FLG PN	600/0023			280	208	110	13.4	91
				34-42mm PN	601/0012	280	206	118	13.4	91
		40 FLG PN	600/0024			280	206	118	13.4	91
				40-50mm PN	601/0013	280	206	118	13.4	95
		45 FLG PN	600/0025			280	208	114	13.4	95
		50 FLG PN	600/0145			280	208	114	13.4	95

ORDER EXAMPLE	Product	Reference	Tolerance
	Blades	600/100	H7
	Tools	601/0002	

DIN-6885 type blades and tool-holders.

For straight, tapered and blind notches.

All the versions of MEC-70 and MEC-80.



*All our blades can be sharpened.

		BLADE OR TOOL		TOOL-HOLDER		DIMENSIONS				
		WIDTH (mm)	REFERENCE	DESCRIPTION	REFERENCE	A (mm)	B (mm)	B' (mm)	C (mm)	D (mm)
MEC-80 Premium CNC SV	TOLERANCES OF AVAILABLE BLADES: P9 N7 JS6 JS9 JS8 D10 G7 H7 J6	3 FLG SV	600 / 0100	3mm SV	601 / 0002	25	151	119	1.69	8
		4 FLG SV	600 / 0101	4mm SV	601 / 0003	35	152	119	2.22	10
		5 FLG SV	600 / 0102	5mm SV	601 / 0004	45	154	121	2.85	12
		6 FLG SV	600 / 0103	6mm SV	601 / 0005	60	160	125	3.35	17
		8 FLG SV	600 / 0104	8mm SV	601 / 0006	90	163	125	4.05	22
		10 FLG SV	600 / 0105	10mm SV	601 / 0007	120	169	126	4.15	30
		12 FLG SV	600 / 0015	12mm SV	601 / 0008	140	171	121	3.30	36
		14 FLG SV	600 / 0016	14mm SV	601 / 0009	200	176	127	4.4	41
		16 FLR SV	600 / 0017	16- 25mm SV	601 / 0010	150	184	127	5.1	50
		18 FLR SV	600 / 0018			150	187	131	7.4	53
		20 FLR SV	600 / 0019			150	189	133	8.3	54
		22 FLR SV	600 / 0143			150	187	131	7.4	54
		25 FLR SV	600 / 0144			150	187	131	7.4	54
		16 FLR SV	600 / 0017	16-25mm SV	601 / 0046	200	184	127	5.1	50
		18 FLR SV	600 / 0018			200	187	131	7.4	53
		20 FLR SV	600 / 0019			200	189	133	8.3	54
		22 FLR SV	600 / 0143			200	187	131	7.4	54
		25 FLR SV	600 / 0144			200	187	131	7.4	54
MEC-80 Premium CNC PN		25 FLG PN	600 / 0104	25 – 36 mm PN	601 / 0078	380	229	183	13.4	98
		28 FLG PN	600 / 0021			380	229	183	13.4	98
		32 FLG PN	600 / 0022			380	229	183	13.4	100
		36 FLG PN	600 / 0023			380	229	183	13.4	100
				34 – 42 mm PN	601 / 0079	380	229	183	13.4	100
		40 FLG PN	600 / 0024			380	229	183	13.4	100
				40 – 50 mm PN	601 / 0080	380	229	183	13.4	105
		45 FLG PN	600 / 0025			380	229	183	13.4	105
		50 FLG PN	600 / 0145			380	229	183	13.4	105

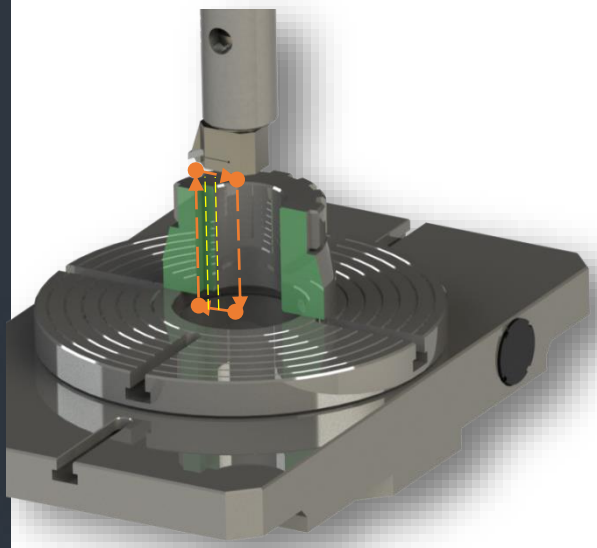
ORDER EXAMPLE	Product	Reference	Tolerance
	Blades	600/100	H7
	Tools	601/0002	

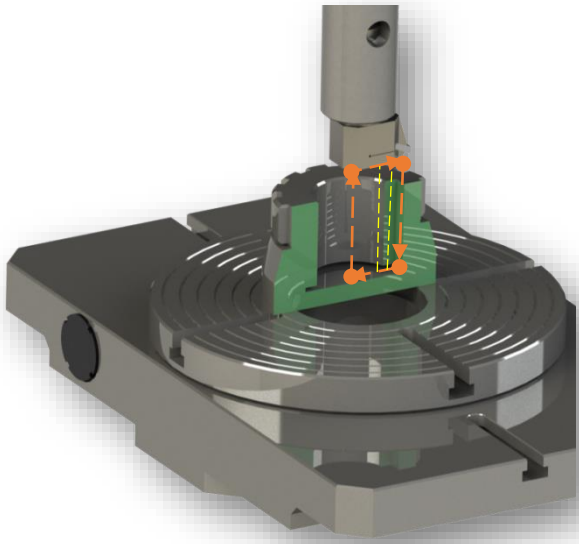
Tools for notch broaching DIN 5463.

All the versions of MEC-70 and MEC-80.

✓ STRAIGHT NOTCH.

The dashed orange line indicates the movement made by the machine during the cutting process: this movement is repeated until the depth indicated in yellow is reached.
Ensure the bottom of the key way is kept clean: the accumulation of shavings in this area can cause the blade or tool to break.





✓ METHOD OF INSTALLING THE TOOL AND THE TOOL-HOLDER TO THE MACHINE.

The standard method is used to install the notch making tool DIN 5463 since the same tool-holders are used to make the notches.

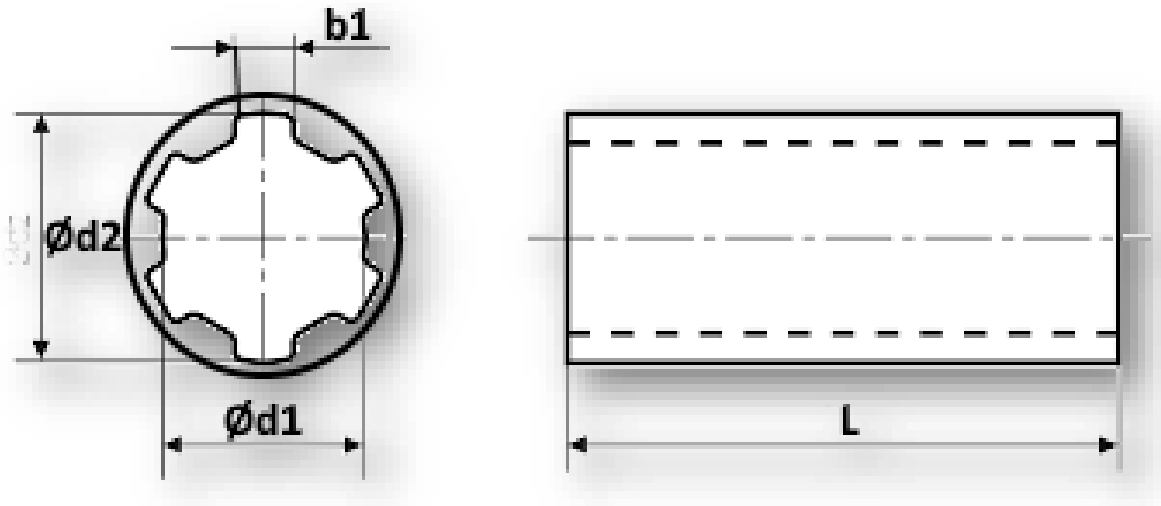
✓ USAGE RECOMMENDATIONS.

- Check that the machine taper is clean and in good material condition
- Check that the edge of the blade is sharp
- Remove any shavings or particles that could damage the notch.

Tools for notch broaching DIN 5463.

All the versions of MEC-70 and MEC-80.

✓ TABLE OF BLADES AND TOOL-HOLDERS.



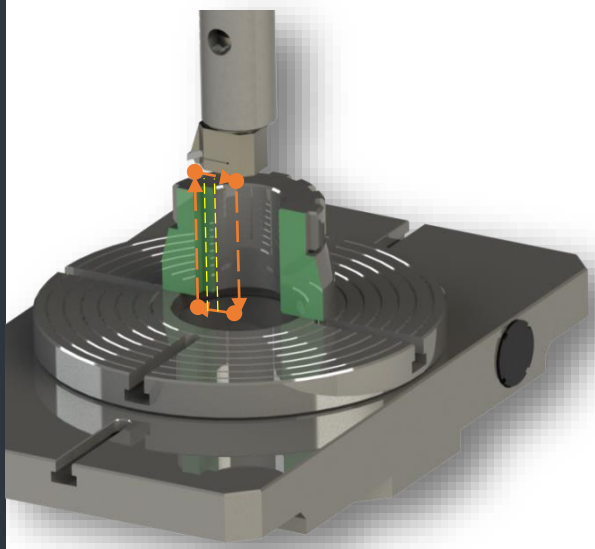
	BLADE OR TOOL		TOOL-HOLDER		DIMENSIONS			
	WIDTH E	REFERENCE	DESCRIPTION	REFERENCE	Ød1 (mm)	Ød2 (mm)	b1 (mm)	L (mm)
MEC-70/80 Premium CNC SV	3 FLR SV	600 / 1222	3mm SV	601 / 0002	11	14	3	40
TOLERANCES OF AVAILABLE BLADES: P9 N7 JS6 JS9 JS8 D10 G7 H7 J6	3.5 FLR SV	600 / 1223	4mm SV	601 / 0003	13	16	3.5	40
	4 FLR SV	600 / 1224			16	20	4	40
	5 FLR SV	600 / 1225	5mm SV	601 / 0004	18	22	5	40
	5 FLR SV	600 / 1226			21	25	5	60
	6 FLR SV	600 / 1227	6mm SV	601 / 0005	23	28	6	60
	6 FLR SV	600 / 1228			26	32	6	60
	6 FLR SV	600 / 1229			32	38	6	60
	7 FLR SV	600 / 1230	8mm SV	601 / 0006	28	34	7	60
	7 FLR SV	600 / 1231			36	42	7	60
	8 FLR SV	600 / 1232			42	48	8	60
	9 FLR SV	600 / 1233	10mm SV	601 / 0007	46	54	9	60

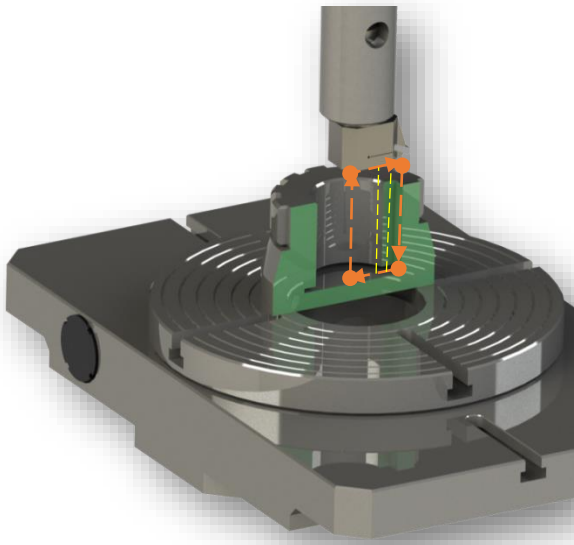
Tools for making polygonal shaped notches.

All the versions of MEC-70 and MEC-80.

✓ DESCRIPTION.

The dashed orange line indicates the movement made by the machine during the cutting process; this movement is repeated until the depth indicated in yellow is reached.
Ensure the bottom of the key way is kept clean; the accumulation of shavings in this area can cause the blade or tool to break.





✓ METHOD OF INSTALLING THE TOOL.

The installation of the tool used for making polygonal shaped notches consists of assembling the blade on the mouth that is located on the bottom of the tool-holder and locking it in place via the two threaded holes that are located on the rear section.
We must be extra careful to ensure the blade and its housing on the tool-holder are kept clean.

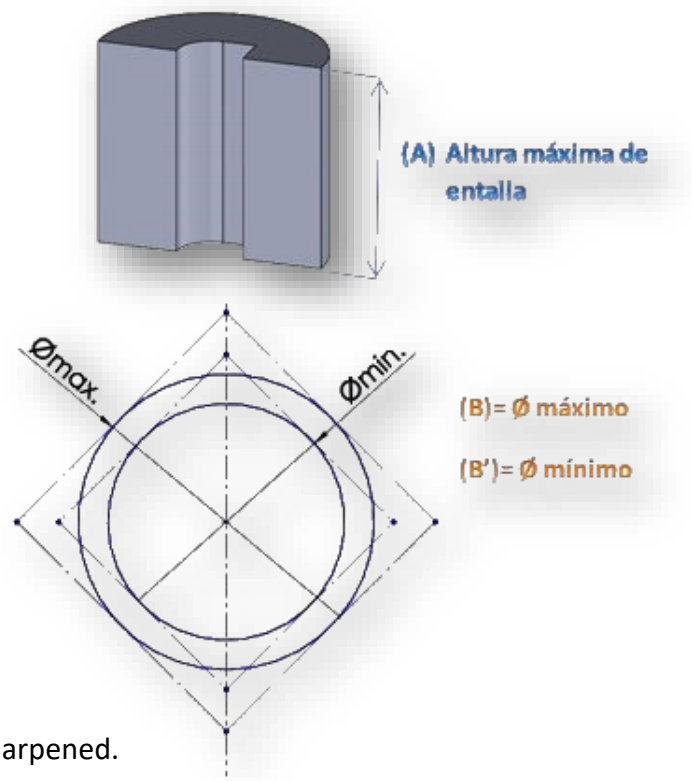
✓ USAGE RECOMMENDATIONS.

- Check that the machine taper is clean and in good material condition.
- Check that the edge of the blade is sharp.
- Remove any shavings or particles that could damage the notch.

Tools for making polygonal shaped notches.

All the versions of MEC-70 and MEC-80.

✓ TABLE OF BLADES AND TOOL-HOLDERS.



*All our blades can be sharpened.

Geometric limits of standard blades and tool-holders used for making square and hexagon shaped notches

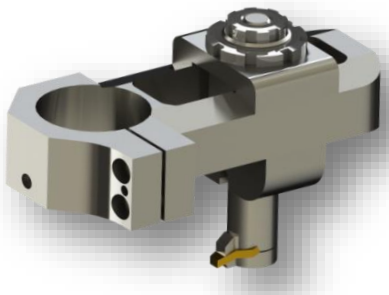
	WIDTH AND TYPE OF BLADE (mm)	NF BLADES REFERENCE	REQUIRED TOOL-HOLDER	NF TOOL-HOLDER REFERENCE	A (mm)	B' (mm)	B (mm)
MEC-70/80 (SQUARE)	4-5 SQUARE	600/0879	4-5mm SV	601/0352	9	4	5
	6-8 SQUARE	600/1220	6-8mm SV	601/0493	20	6	8
	9-12 SQUARE	600/1221	9-12mm SV	601/0494	35	9	12
	13-16 SQUARE	600/0900	13-16mm SV	601/0356	40	13	16
	16-20 SQUARE	600/0899	16-20mm SV	601/0355	40	16	20
	20-25 SQUARE	600/0858	20-25mm SV	601/0340	40	20	25
	25-30 SQUARE	600/0859	25-30mm SV	601/0341	50	25	30
	30-35 SQUARE	600/0860	30-35 mm SV	601/0342	58	30	35
	35-40 SQUARE	600/0861	35-40 mm SV	601/0343	68	35	40
	45-50 SQUARE	600/0968	45-50 mm SV	601/0386	65	45	50
MEC-70/80 (HEX)	15-20 HEX	600/0887	15-20mm SV	601/0353	40	15	20
	20-30 HEX	600/0889	20-30mm SV	601/0354	50	20	30

Exterior notching tool.

All the versions of MEC-70 and MEC-80.

○ DESCRIPTION.

Tool used for making notches of many different shapes on the exterior surfaces of the part to be machined. This tool moves the cutting point to the outer diameter of the part.

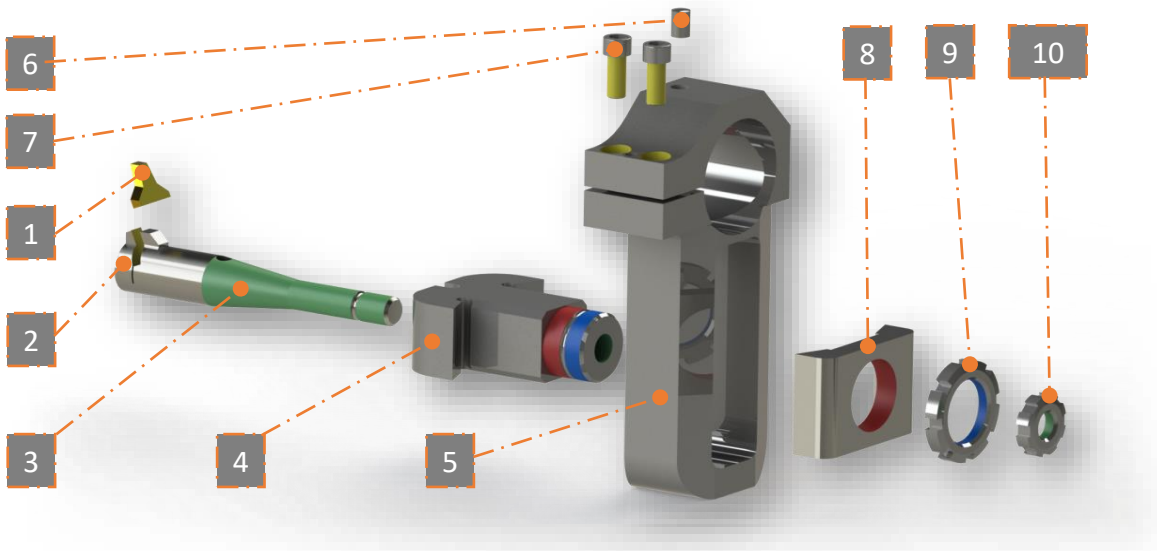


With this configuration we can make straight, tapered or helical shaped work such as through-hole or blind-hole type notches.

○ INSTALLATION OF THE TOOLS.

INSTRUCTIONS:

- Assemble blade 1 to tool 3, positioning the centring tool. Lock using screw 2.
- Assemble rod 3 to runner 4 using the taper. Lock using nut 10.
- Assemble part 4 to the inside of the rectangular window of part 5, on its angular sides and use part 8 as a washer; use nut 9 to lock it.
- Assemble the cylindrical pin 6 to the bracket of part 4; ensure that it protrudes at least 4mm on the inside of the diameter of part 4.



USAGE RECOMMENDATIONS:

- Thoroughly clean the surfaces of the rod and part 5 prior to assembling on the machine.
- Check the locking system by tightening the screws 7.
- Check that the blade is locked and does not slide by tightening nut 9 prior to beginning the work. Keeping the tool clean will help it slide easier.

Exterior notching tool.

All the versions of MEC-70 and MEC-80.

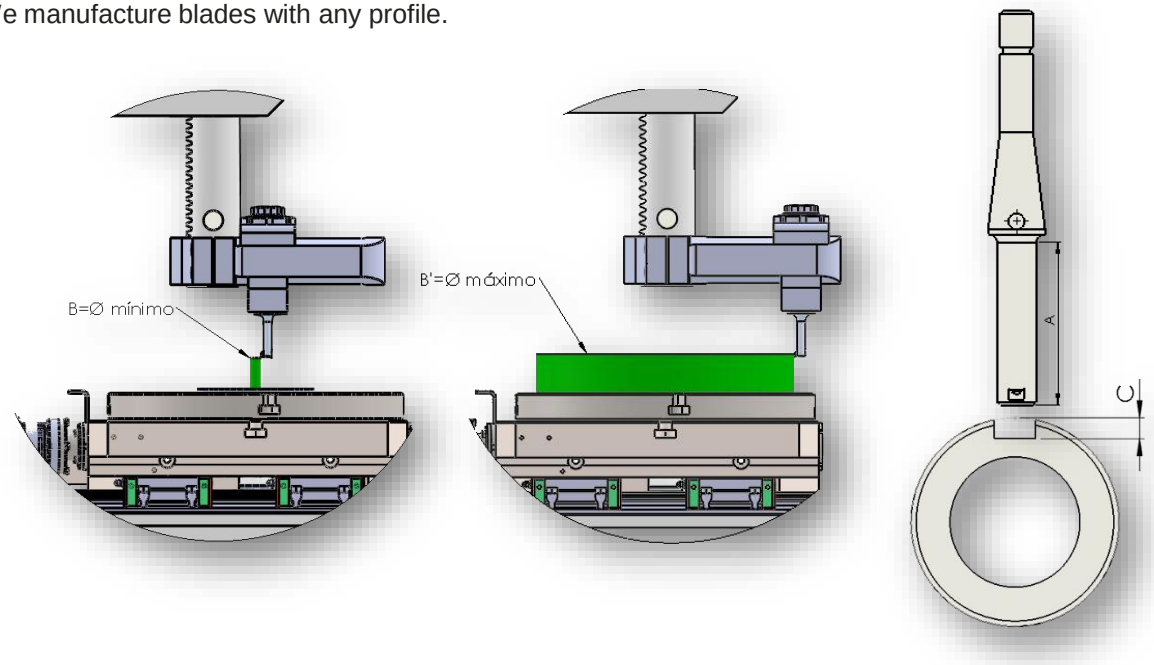
○ TECHNICAL CHARACTERISTICS.

Characteristics	*MEC-70*	*MEC-80*
Dimensions.	275x140x200	275x140x200
Weight of the tool.	10.5 Kg	11 Kg
Clamping diameter.	70 mm	80 mm
Movement of the carriage.	Manual	Manual
Diameter of effective stroke.	45–270 mm	50–270 mm
Notch height using the standard tool.	100 mm	100 mm
Lubrication and cleaning during each use.	Manual	Manual
Recommended oil	Fuchs Renep 2	Fuchs Renep 2
Interchangeable tool.	Yes	Yes

○ AVAILABLE BLADES.

		BLADE OR TOOL		TOOL-HOLDER		DIMENSIONS			
		WIDTH E	REFERENCE	DESCRIPTION	REFERENCE	A (mm)	B (mm)	B' (mm)	C (mm)
MEC-70/80 Premium CNC SV	TOLERANCES OF AVAILABLE BLADES: P9 N7 JS6 JS9 JS8 D10 G7 H7 J6	3 FLG SV	600 / 0100	3mm SVE	601 / 0486	25	22	330	1.69
		4 FLG SV	600 / 0101	4mm SVE	601 / 0487	35	14	328	2.22
		5 FLG SV	600 / 0102	5mm SVE	601 / 0488	45	14	328	2.85
		6 FLG SV	600 / 0103	6mm SVE	601 / 0489	60	0	320	3.35
		8 FLG SVE	600 / 1218	8-10mm SVE	601 / 0490	100	0	308	4.05
		10 FLG SV	600 / 0105			100	0	306	4.15
		12 FLG SVE	600 / 1217	12-14mm SVE	601 / 0491	100	0	298	3.30
		14 FLG SV	600 / 0016			100	0	288	4.4
		16 FLR SV	600 / 0017	16- 25mm SVE	601 / 0492	100	0	278	5.1
		18 FLR SV	600 / 0018			100	0	286	7.4
		20 FLR SV	600 / 0019			100	0	284	8.3
		22 FLR SV	600 / 0143			100	0	266	7.4
		25 FLR SV	600 / 0144			100	0	286	7.4

We manufacture blades with any profile.



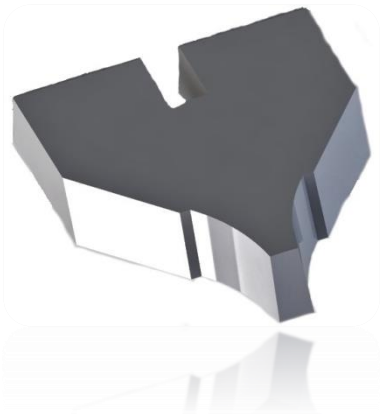
Special blades

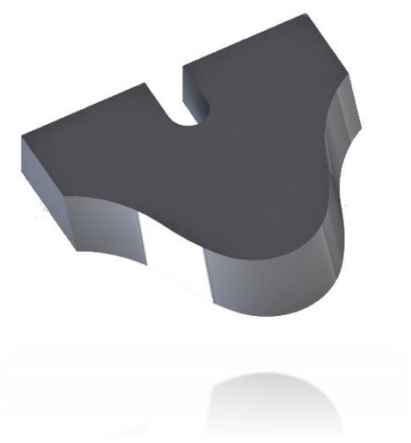
All the versions of MEC-70 and MEC-80.

SPECIAL BLADES

We design and manufacture special blades with any profile requested by the client.
In cases where the client requires a different standard than those provided in the technical sheet, the desired profile must be attached with the order in SolidWorks, STEP or IGS file format.

EXAMPLES OF SPECIAL BLADES





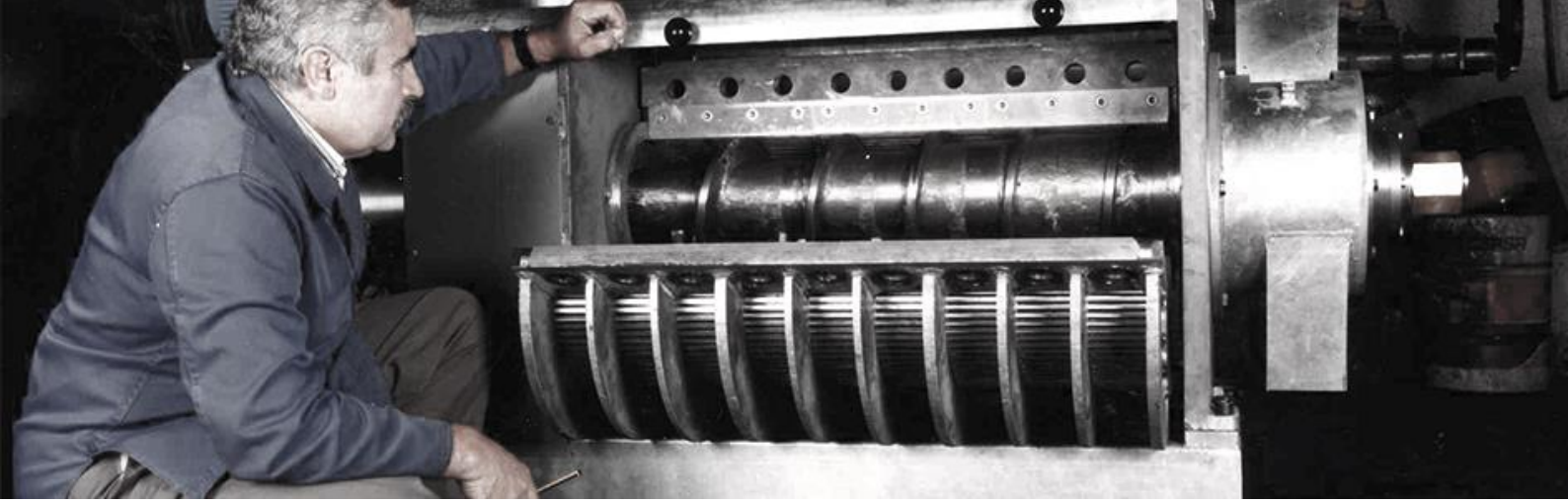
Special tool-holders

All the versions of MEC-70 and MEC-80.

SPECIAL TOOL-HOLDERS

We design and manufacture special tool-holders that meet the client's requirements.
In cases where the client requires a tool-holder for which we do not have a technical sheet, the specifications must be provided in the order:
-Specify the exterior and interior Ø of the part to be machined.
-Width of the notch.
-Length of the notch.

EXAMPLES OF SPECIAL TOOL-HOLDERS



In 1983, Mecánica Comercial MECO was established in Valls (Tarragona) by Juan Antonio Peirón, who founded the company. Since then, the Peirón family has been dedicated to carrying out advanced mechanical engineering and industrial maintenance projects.

- In 1990 we manufactured the first MECO cutting machine prototype prompted by our own production needs. This machine was subjected to a test period at our MECO SERVICES division, carrying out work with the machine to manufacture serrated parts and conducting industrial maintenance.

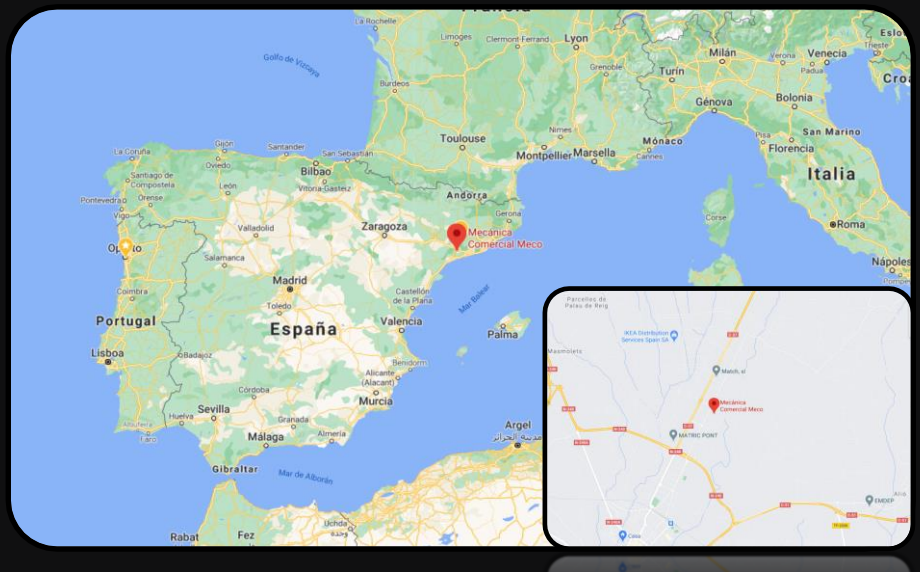
- In 1998 we presented a first design to the Spanish Ministry of Industry.

- In the year 2000 we introduced an innovative machine for making key ways on the Spanish market.

- In 2008 we began to have an international presence with our line of MEC cutting machines. To date we have sold over 400 machine in more than 25 countries.

- In the year 2014, MECO offered a new service to its clients consisting of designing and manufacturing tailor-made machinery, tools and accessories.

After almost 40 years of hard work and experience, Mecánica Comercial MECO has become a benchmark company in Spain and in many other parts of the world in terms of manufacturing cutting / shaping machines and providing industrial maintenance services.



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