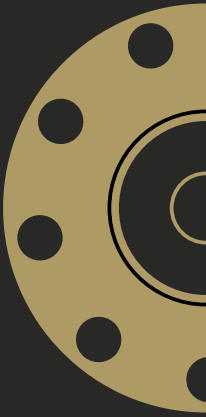
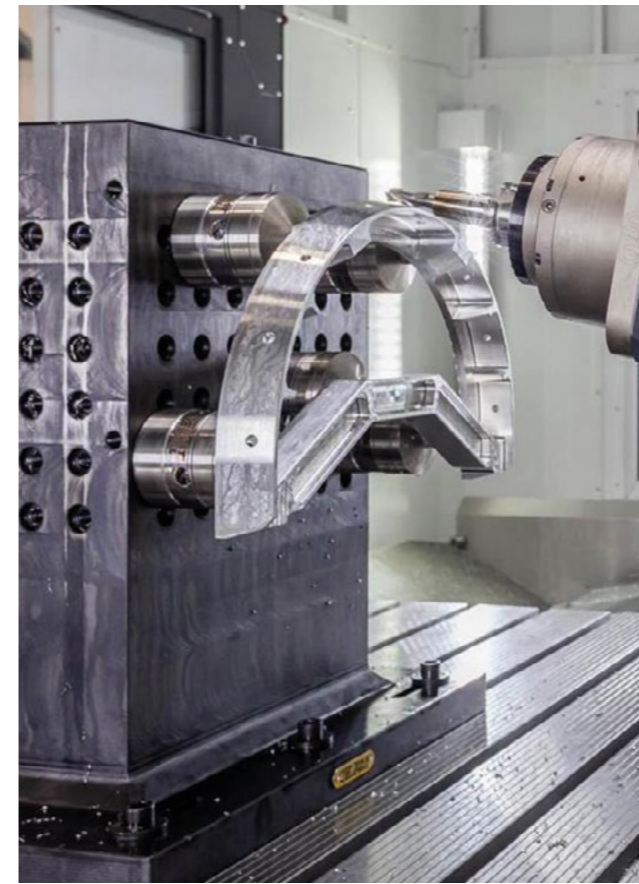


INNOVATIVE CLAMPING SYSTEMS



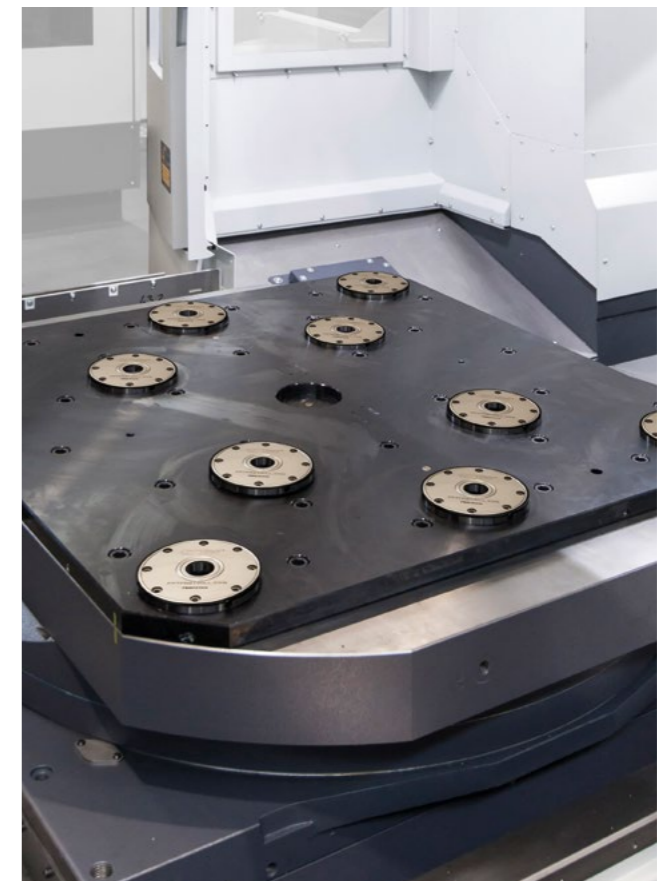
FASTMILL WORKS IN A VARIETY OF INDUSTRIAL SEGMENTS PROVIDING **QUALITY, VERSATILY AND TECHNOLOGY.** DESIGNED TO MEET THE NEEDS OF EVERY CUSTOMERS, FASTMILL PROVIDES MODULAR AND SMART **CLAMPING IDEAS WORLDWIDE.**

INTRODUCTION	4
PLATES AND BUSHES	7
MODULES AND PINS D90	17
MODULES AND PINS D49	47
SPACERS	59
RISERS	63
THIRD CLAMPING POINT	67
MAGNETIC	73
VERTICAL CLAMPING	77
MINI RANGE	83
FASTMILL ZERO	91
CLAMPS	99



FASTMILL: AN INNOVATIVE CLAMPING SYSTEM

SAVE TIME AND INCREASE PRODUCTIVITY



ADVANTAGES

Increased productivity, decreased production costs and flexibility in operations are concrete purposes, directly measurable by adopting a system which is able to exceed industry expectations in a short time. Thanks to its easy-to-use products, FASTMILL® ensures a rapid return on investments by standardizing machining processes of complex elements too.

SAFETY

FASTMILL® drastically reduces risk. The entire process from handling the workpiece to start of machining is managed at a safe distance and the operator approaches the work area only to tighten the locking screws.

CLAMPING TIME REDUCTION

During CAD or CAM programming, it is possible to choose where to mount FASTMILL® elements on the workpieces, and eventually on the machine table; this allows to arrange everything without interrupting machining processes.

HIGH CLAMPING FORCE

FASTMILL® modules are designed to tolerate extremely high axial and radial loads. Permissible loads depending on the type of application are mentioned in the user manual.

MAXIMUM ACCURACY IN REPOSITIONING

FASTMILL® is developed and manufactured in stringent temperature and humidity controlled environments to guarantee system accuracy both in dimensions and positioning repeatability.

PRECISE POSITIONING REPEATABILITY

Tolerances of all FASTMILL® parts have been defined to ensure a positioning accuracy that avoids any waste of time in moving the workpiece after clamping.

SYSTEM FOR WORKPIECE REPOSITIONING WITHOUT TENSIONING

FASTMILL® offers a patented solution to work pieces after they have been thermally processed, and ensures the repositioning and clamping without applying stress on even finer, smaller work pieces.

SETUP TIME REDUCTION

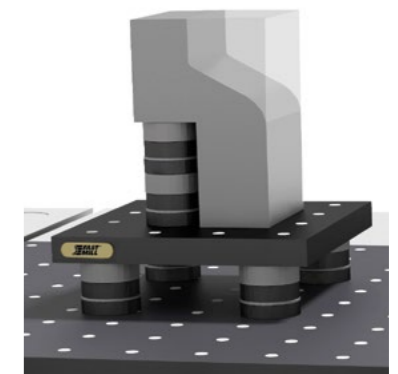
PLANNING - CAD/CAM

Planning and finalize the best clamping solution during your CAD/CAM process. 3D Model of the whole range available.



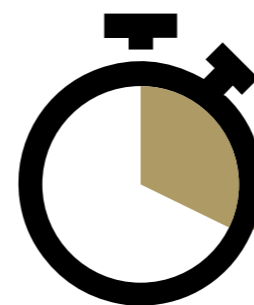
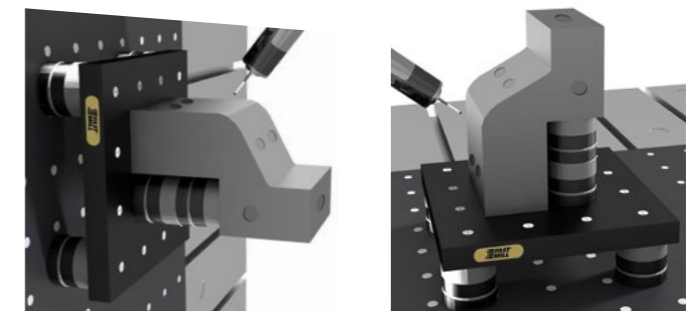
ROUGHING DEEP HOLES DRILLING FINISHING / EDM - CMM

Five free faces of the work piece can be machined without interference. Less set up needed. Easy to coupling and easy to rise up.



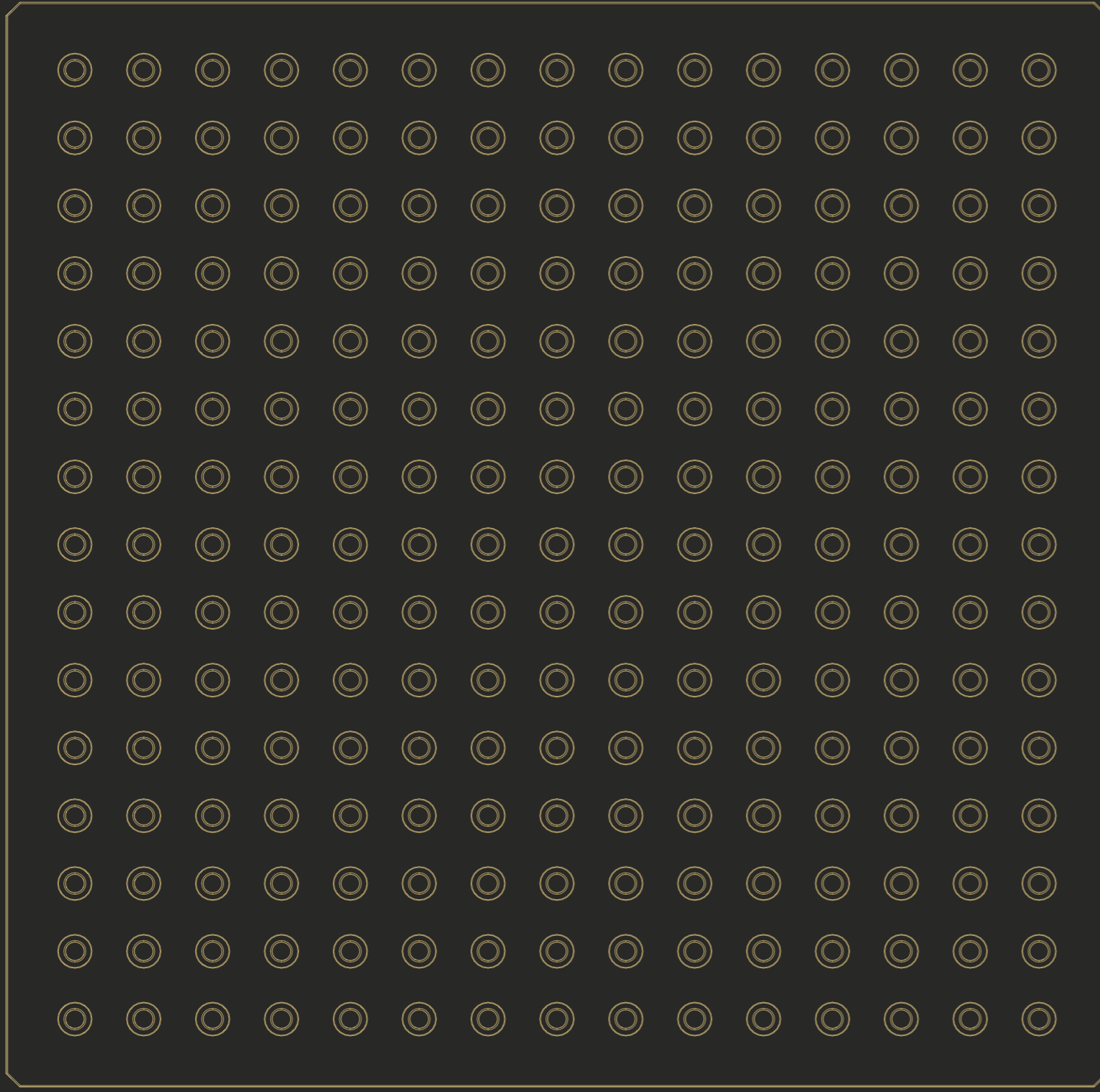
NO CLAMPING LIMITS

Workpieces free positioning from vertical to horizontal (0°-180°).

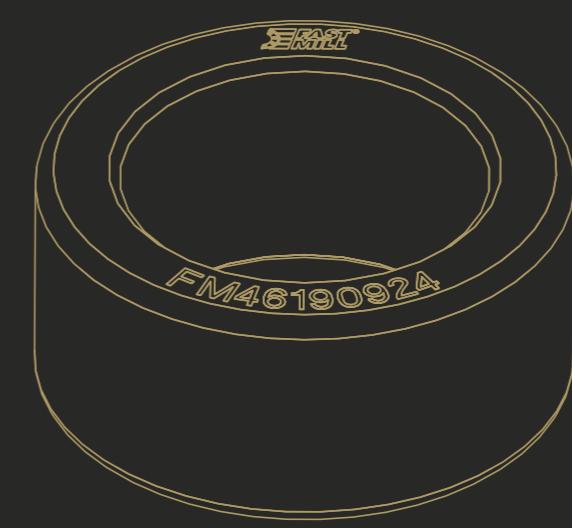


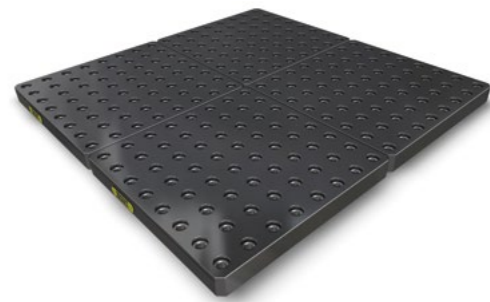
PRODUCTIVITY INCREASE





PLATES AND BUSHES





FINISHED MODULAR PLATE

Modular plate, is the first step in equipping a machine with FastMill technology, it allows the user to obtain a grid drilled plate in tolerance directly on the machine table. Made with the utmost precision, it ensures known points where to fix the FastMill systems.

AVAILABLE WITH:

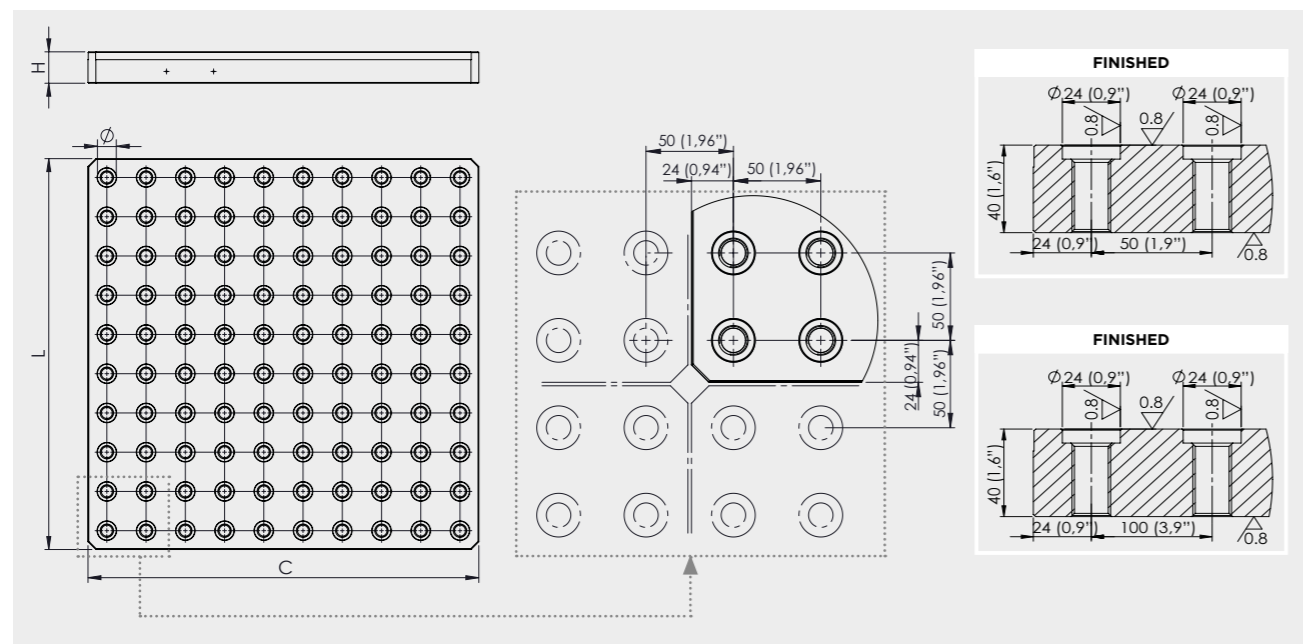
- fixing hole
- pin reference
- centrale hole
- alphanumeric marking
- special size

AVAILABLE ON STOCK

CODE	DESCRIPTION	L x C	H	GRID	Ø	M
FM46195202	Finished modular plate	500X500 (19,6"X19,6")	40 (1,57")	50 (1,96")	24H	16
FM46195210	Finished modular plate	800X800 (31,4"X31,4")	40 (1,57")	50 (1,96")	24H	16
FM46195205	Finished modular plate	1000X500 (39,3"X19,6")	40 (1,57")	50 (1,96")	24H	16
FM46195206	Finished modular plate	1000X600 (39,3"X23,6")	40 (1,57")	50 (1,96")	24H	16
FM46195207	Finished modular plate	1000X800 (39,3"X31,4")	40 (1,57")	50 (1,96")	24H	16
FM46195208	Finished modular plate	1000X1000 (39,3"X39,3")	40 (1,57")	50 (1,96")	24H	16

ON DEMAND

CODE	DESCRIPTION	L x C	H	GRID	Ø	M
FM_PLATE	Finished modular plate	STEP 100X100	40 (1,57")	50 (1,96")	24H / ...	16 / ...
FM_PLATE	Finished modular plate	STEP 100X100	40 (1,57")	100 (3,94")	24H / ...	16 / ...

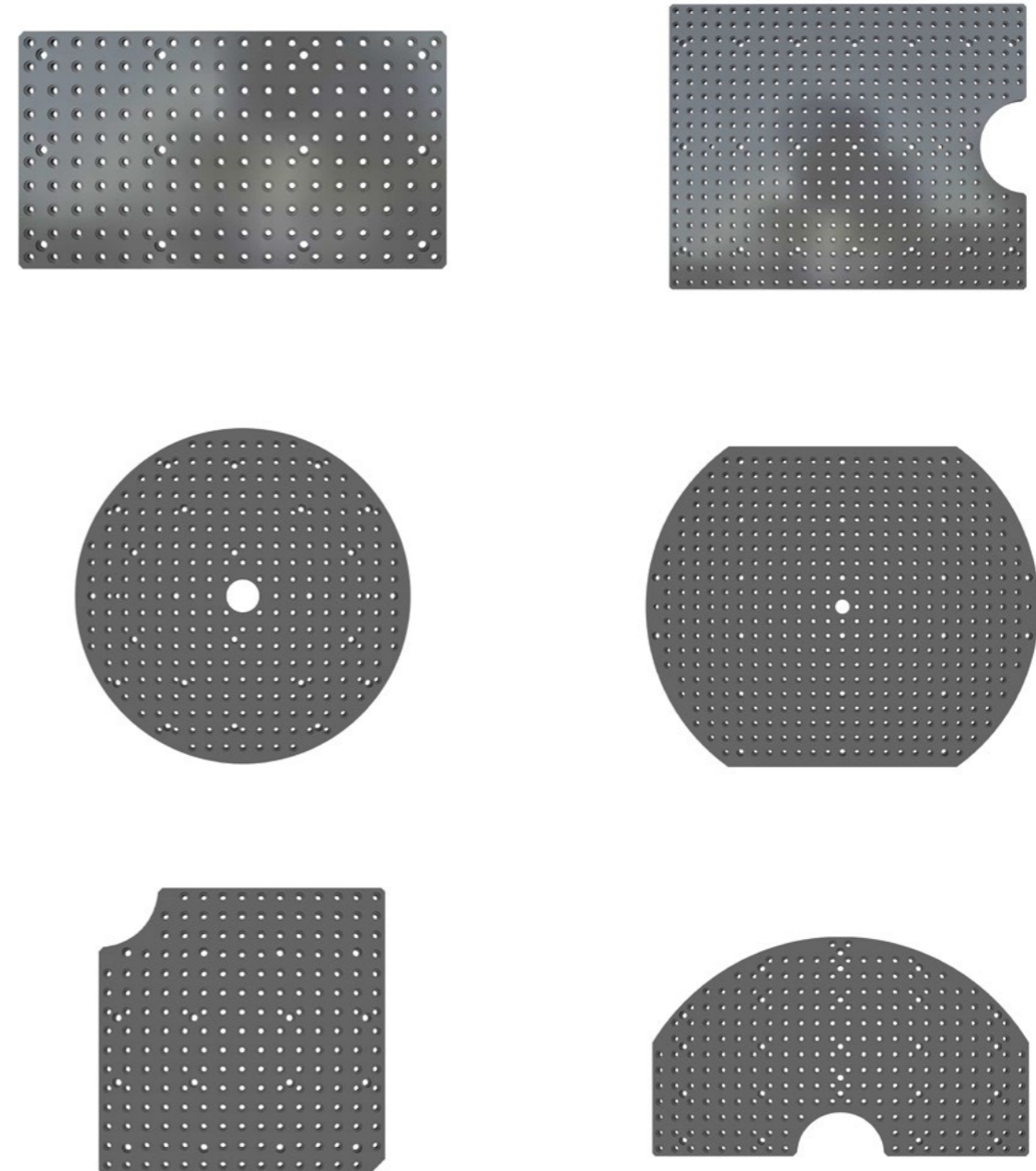


CAP FOR PLATE

Threaded plug to cover the plate holes when not in use. They prevent chips and dirt from entering the tolerance counterbore.

CODE	DESCRIPTION	Ø	M
FM46191016	Cap for plate	24 (0,94")	M16
FM46191012	Cap for plate	20 (0,78")	M12
FM46191011	Cap for plate	18 (0,70")	M12

FINISHED MODULAR PLATE EXAMPLE ON DEMAND



T-NUT

CODE	DESCRIPTION	T	M	CODE	DESCRIPTION	T	M
FM36008012	T-Nut	T12	M8	FM36016022	T-Nut	T22	M16
FM36008014	T-Nut	T14	M8	FM36016024	T-Nut	T24	M16
FM36012014	T-Nut	T14	M12	FM36016028	T-Nut	T28	M16
FM36012018	T-Nut	T18	M12	FM36316028 *	T-Nut	T28	M16
FM36016018	T-Nut	T18	M16				

* Rhomboidal version.

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
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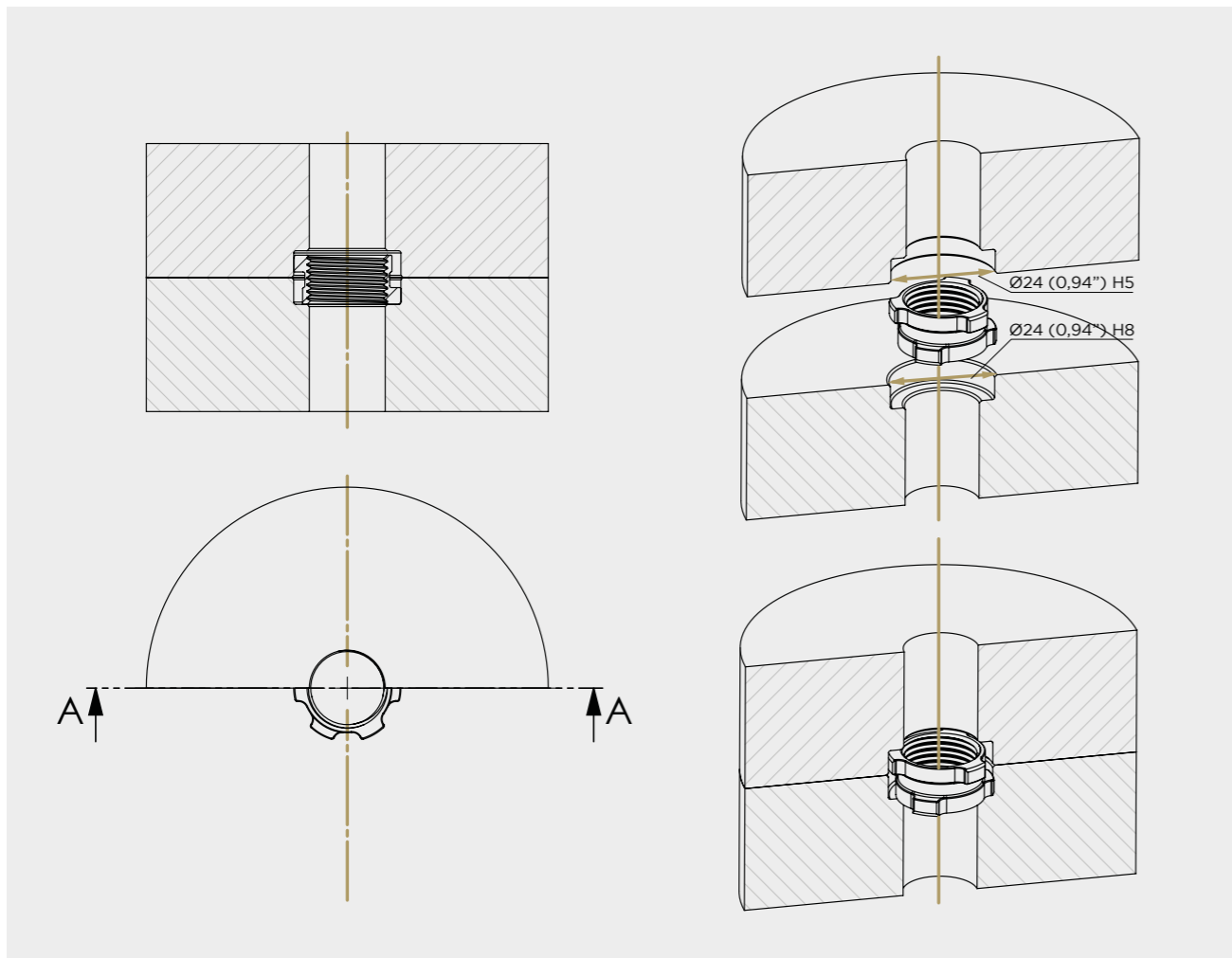
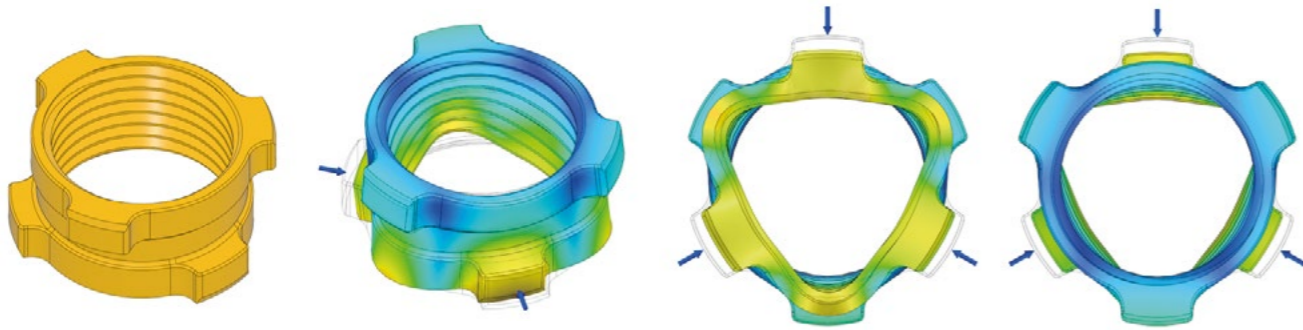
PATENTED



TRILOB

The innovative patented Trilob bush, designed to adapt to varying geometric tolerances, provides reliable centering in any situation. This ensures maximum rigidity and stability during machining, enhancing precision and performance in all your projects.

CODE	DESCRIPTION	HEIGHT	Ø	WEIGHT
FM46190900	Trilob bush	11 (0,43")	20 - 24 (0,78" - 0,94")	0,01 Kg (0,02 lbs)



BUSH

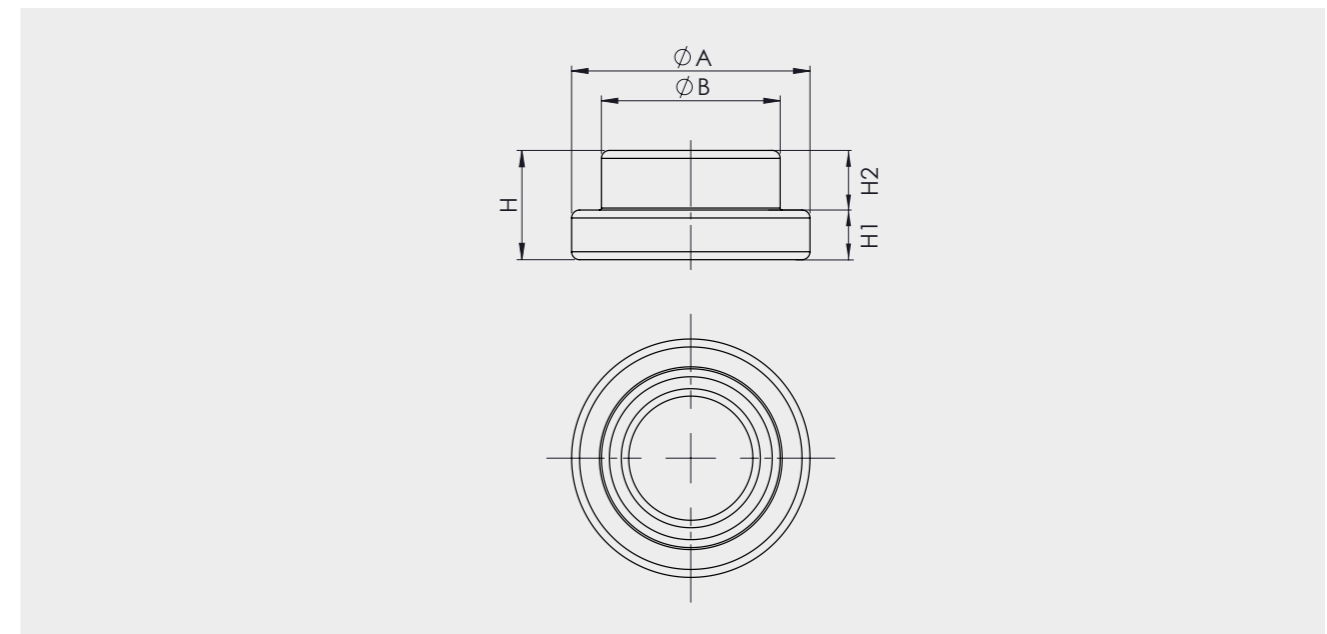


The new PATENTED floating module is designed and created based on specific production needs. It allows you to lock any component, even non-planar or deformed ones, without applying any external force to it, thus guaranteeing its free orientation in space and then allowing it to be solidly locked in the resulting position. It is also possible to accommodate deformations developed during the manufacturing process due to internal tensions of the component or its thermal expansion.

CODE	DESCRIPTION	ØA	ØB	HEIGHT
FM46190924	Standard Bush	24 (0,94")	24 (0,94")	11 (0,43")

CODE	DESCRIPTION	ØA	ØB	H
FM46190925	Bush	24 (0,94")	25 (0,98")	11 (0,43")
FM93000042 *	Bush	24 (0,94")	24 (0,94")	16 (0,23")
FM93000003 *	Bush	24 (0,94")	24 (0,94")	13 (0,51")
FM46190922	Bush	24 (0,94")	22 (0,86")	11 (0,43")
FM46190920	Bush	24 (0,94")	20 (0,78")	11 (0,43")
FM46190918	Bush	24 (0,94")	18 (0,70")	11 (0,43")
FM46190916	Bush	24 (0,94")	16 (0,23")	11 (0,43")
FM46190914	Bush	24 (0,94")	14 (0,55")	11 (0,43")
FM46190912	Bush	24 (0,94")	12 (0,47")	11 (0,43")
FM93000040 **	Bush	36 (1,41")	24 (0,94")	15 (0,59")
FM93000041 **	Bush	36 (1,41")	36 (1,41")	20 (0,78")

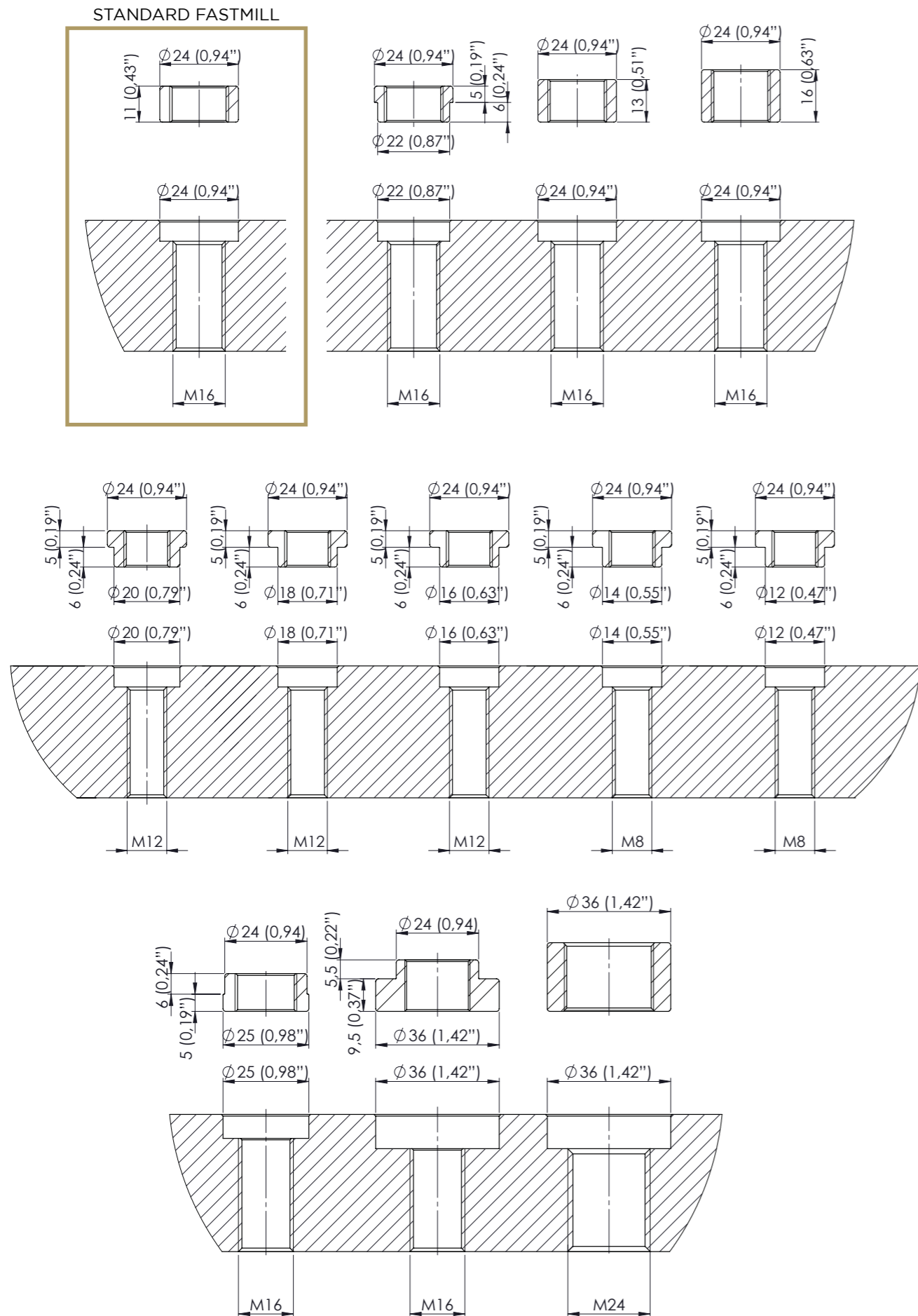
* For special applications.
** For vertical clamping.



PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

EXAMPLES OF BUSHES

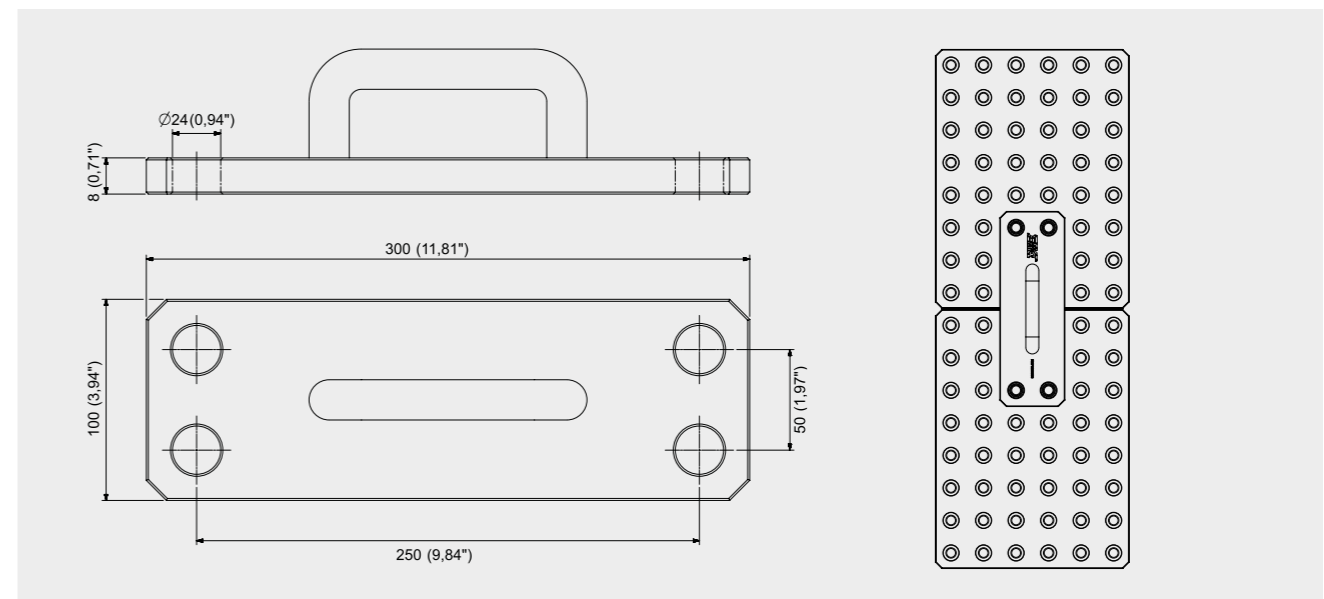


SET FOR MODULAR PLATE ALIGNMENT

Alignment tool with tapered bushings. Allows you to maintain the exact pitch between 2 modular FastMill plates at a pitch between 50mm and 450mm.

CODE	DESCRIPTION	DIMENSION	GRID
FM71290178	Set for modular plate alignment	500x100 (19,6"x3,93")	50 (1,96") / 450 (17,71")

SET CONFIGURATION	N°
Plate for alignment	1 piece
Cones bushes	4 pieces



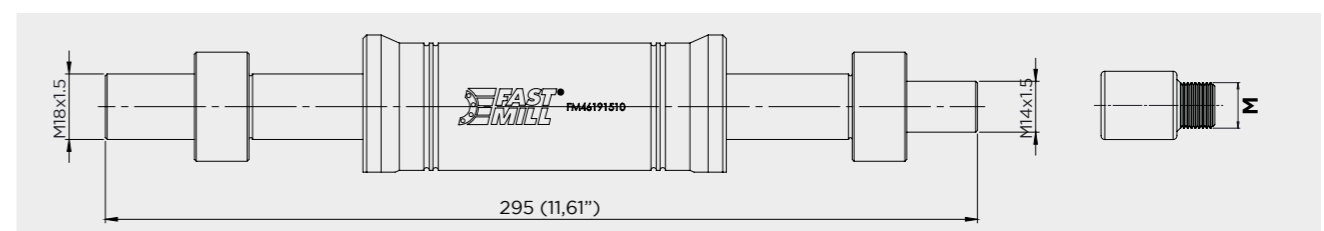
EXTRACTOR ADAPTER PIN AND BUSH EXTRACTOR

Extractor pin used for the removal of FastMill components.

- * Usable with FMZ range.
- ** For vertical clamping.

CODE	DESCRIPTION	DIMENSION
FM46191510	Pin and bush extractor	295 (11,61")

CODE	DESCRIPTION	M
FM46191520	Extractor adapter	M6
FM46191521	Extractor adapter	M8
FM46191522	Extractor adapter	M10
FM46191523 *	Extractor adapter	M14
FM46191525 **	Extractor adapter	M26



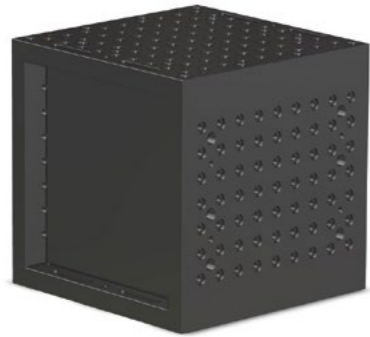
PLATES AND BUSHES
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MODULES AND PINS D49
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FASTMILL ZERO
CLAMPS

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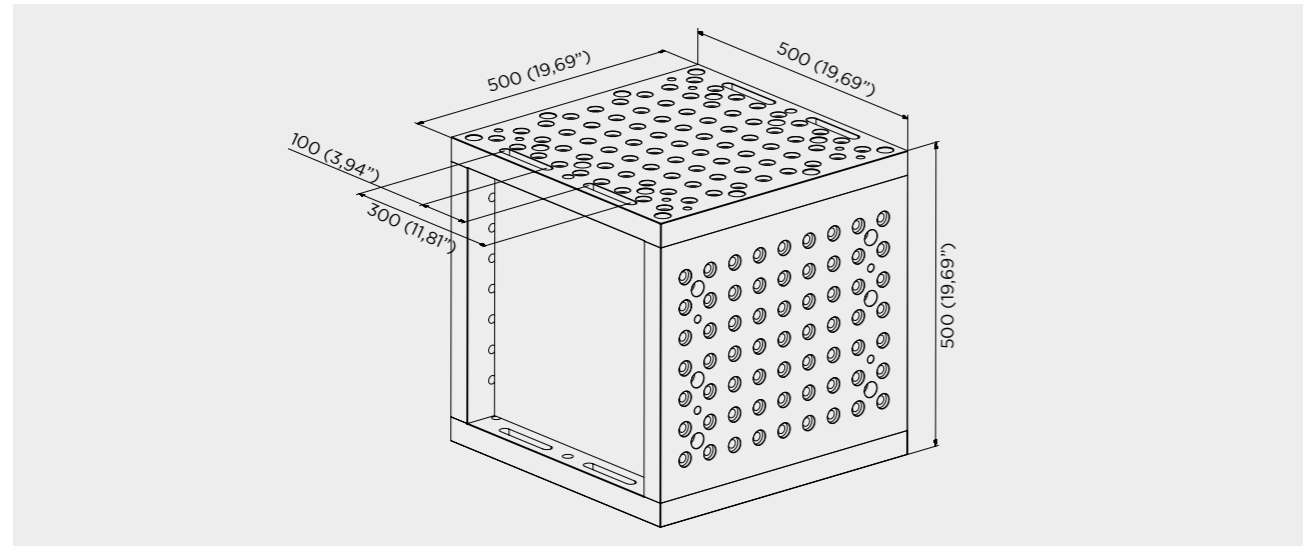
PLATES AND BUSHES
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MODULAR SMART CUBE 500X500

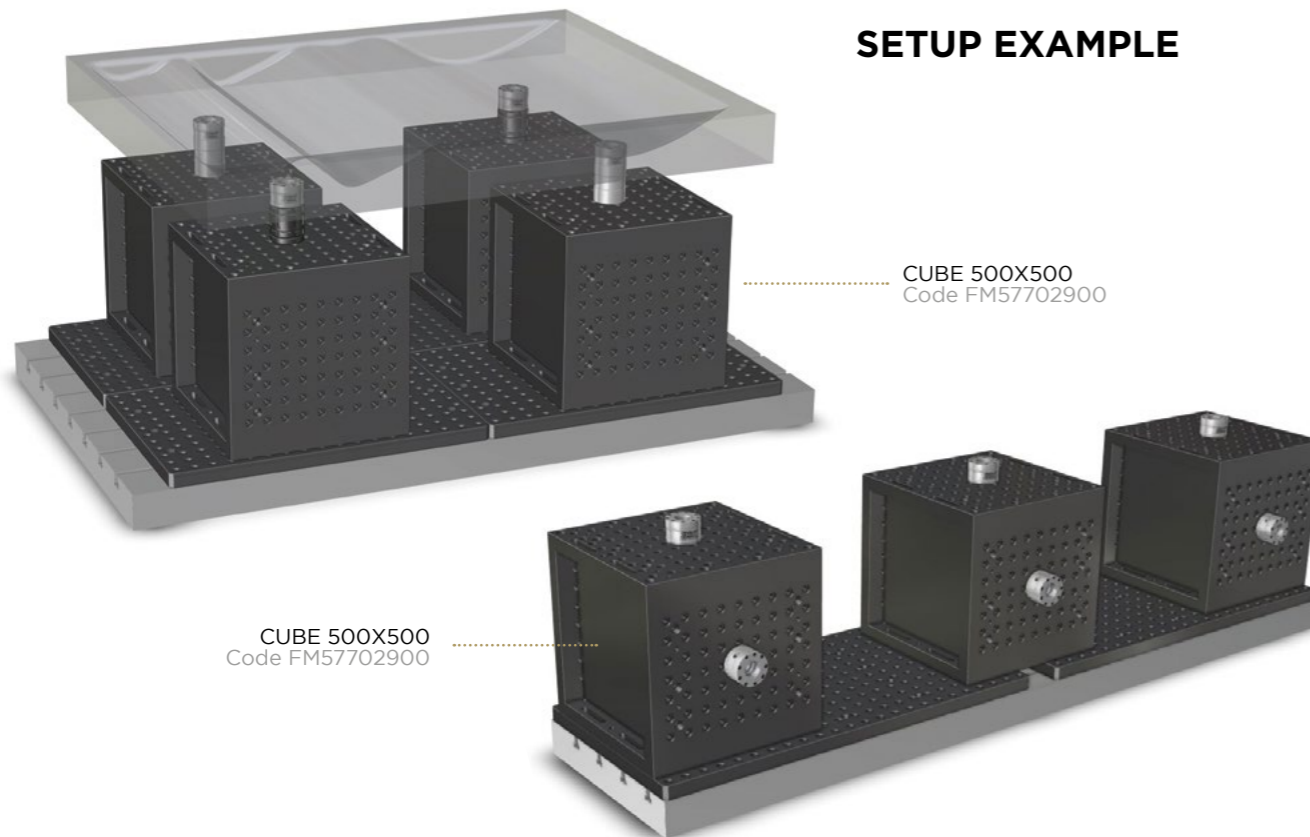


The new 500x500 cube is engineered with versatility in mind, offering a wide range of fixing solutions to meet diverse needs. Its perfectly modular design seamlessly integrates with your workbench, providing a customizable and adaptable workspace. This cube creates a precise reference area for your fixtures, ensuring accuracy and consistency in your projects. Whether for assembly, alignment, or measurement tasks, this cube enhances efficiency by offering a stable and reliable platform that adjusts to your specific requirements.

CODE	DESCRIPTION	DIMENSION	H	WEIGHT
FM57702900	Cube	500x500 (19,6"x19,6")	500 (19,6")	340 kg (749,57 lbs)



SETUP EXAMPLE



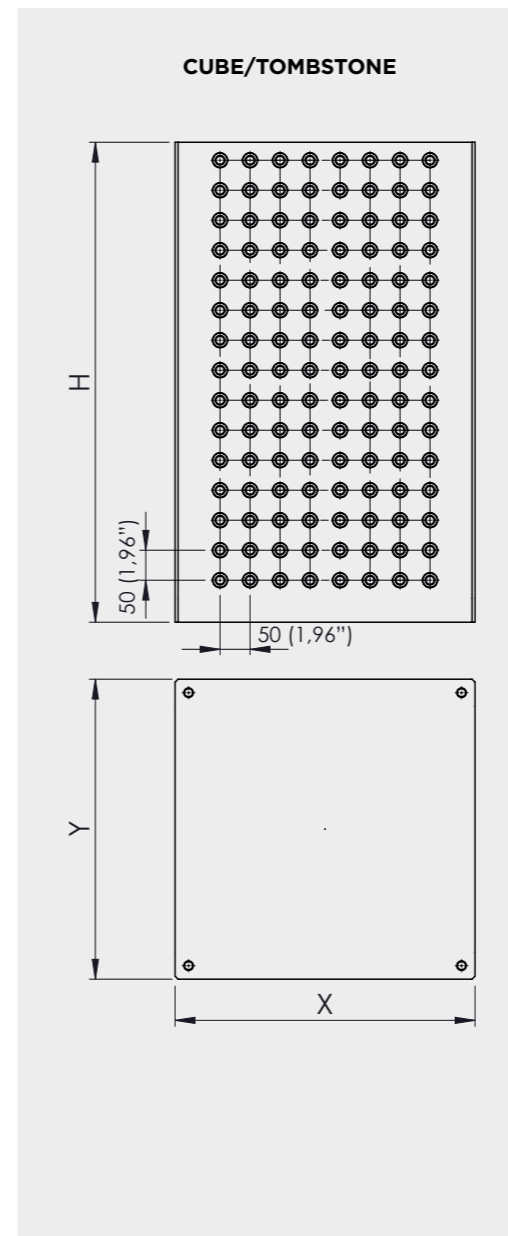
CUBE/TOMBSTONE

FastMill cubes are made to customer specifications and can have one to five faces with a FastMill grid. Can be fixed on T-slots or by modules.

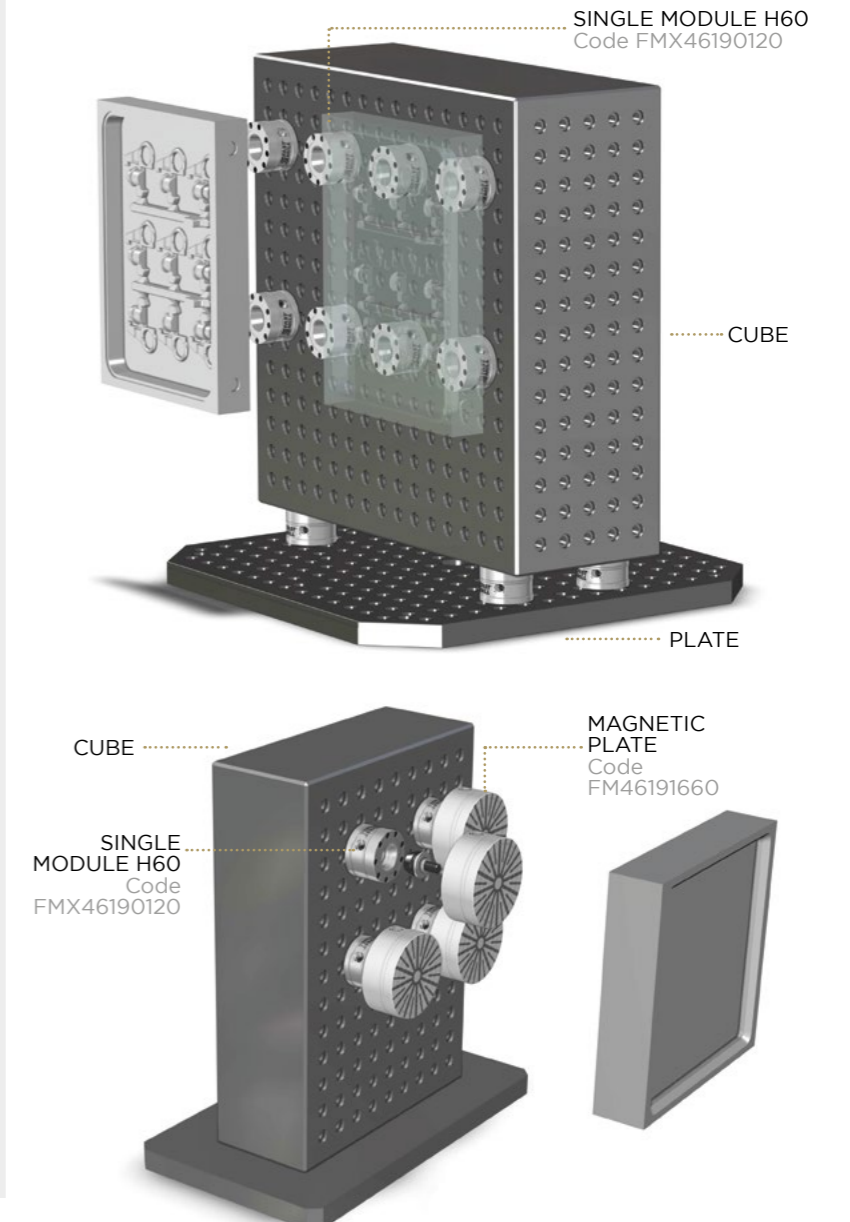
ON DEMAND

Alternative dimensions or custom solutions on demand.

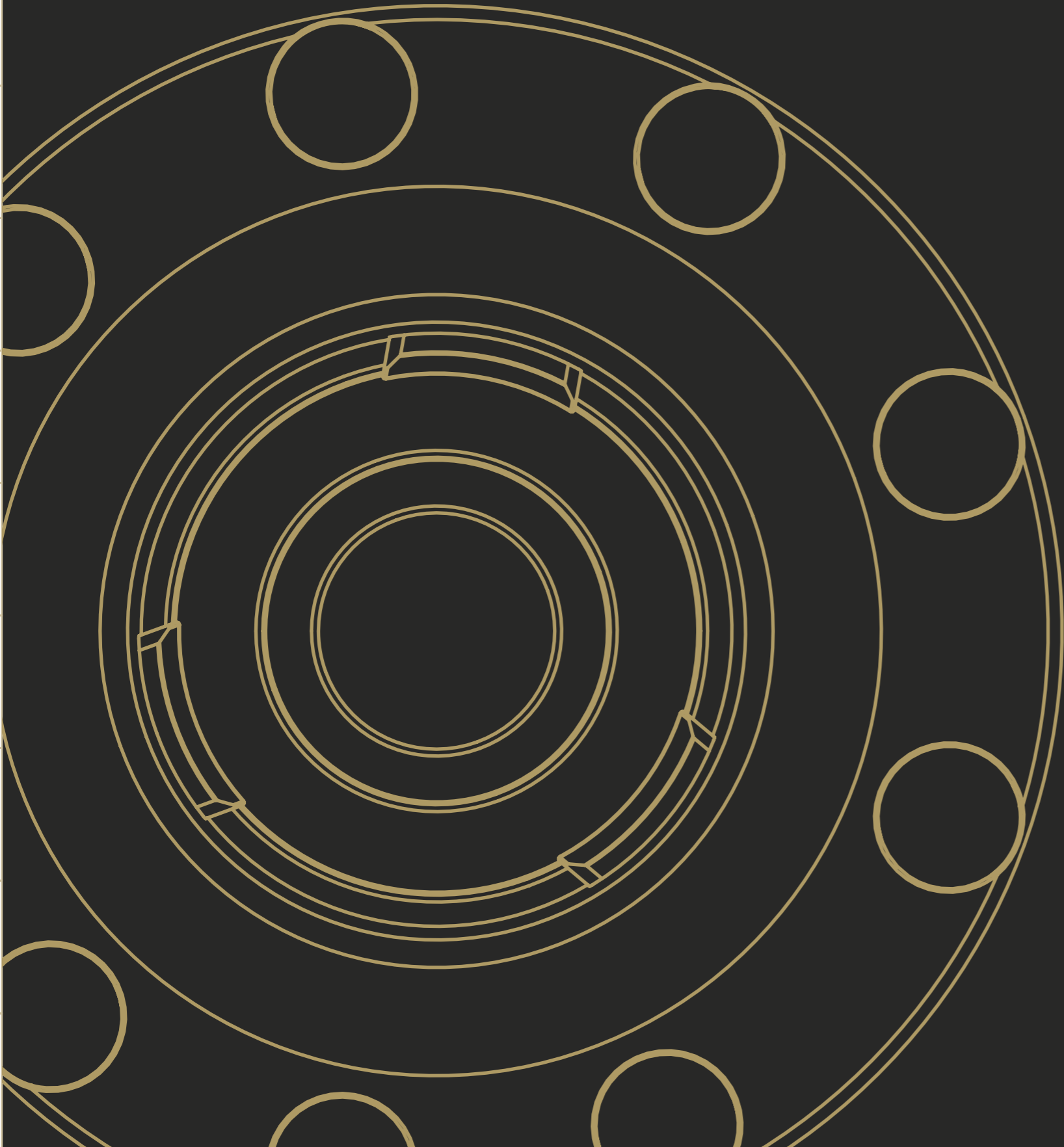
CODE	DESCRIPTION	DIMENSION	H	WEIGHT
FM57700700	Cube/Tombstone	500x500 (19,6"x19,6")	800 (31,4")	597 (1316 lbs)



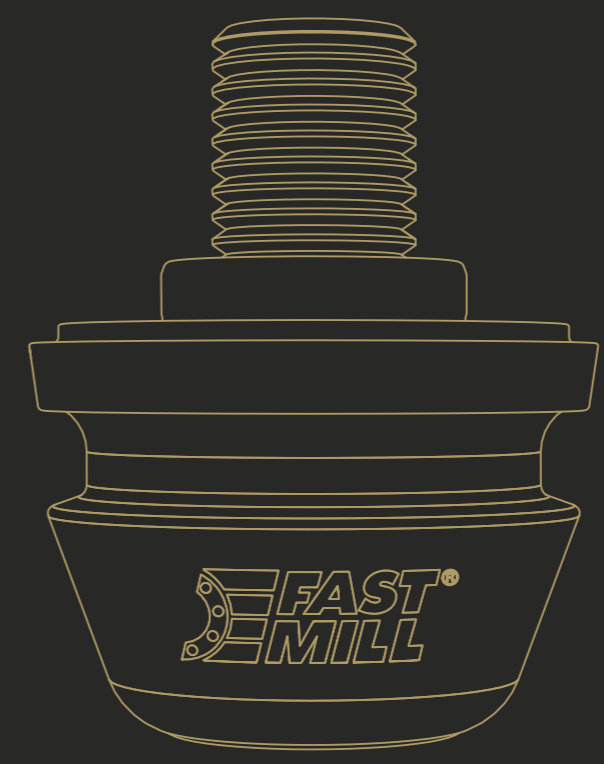
SETUP EXAMPLE



- CLAMPS
- FASTMILL ZERO
- MINI RANGE
- VERTICAL CLAMPING
- MAGNETIC
- THIRD POINT
- RISERS
- SPACERS
- MODULES AND PINS D49
- MODULES AND PINS D90
- PLATES AND BUSHES



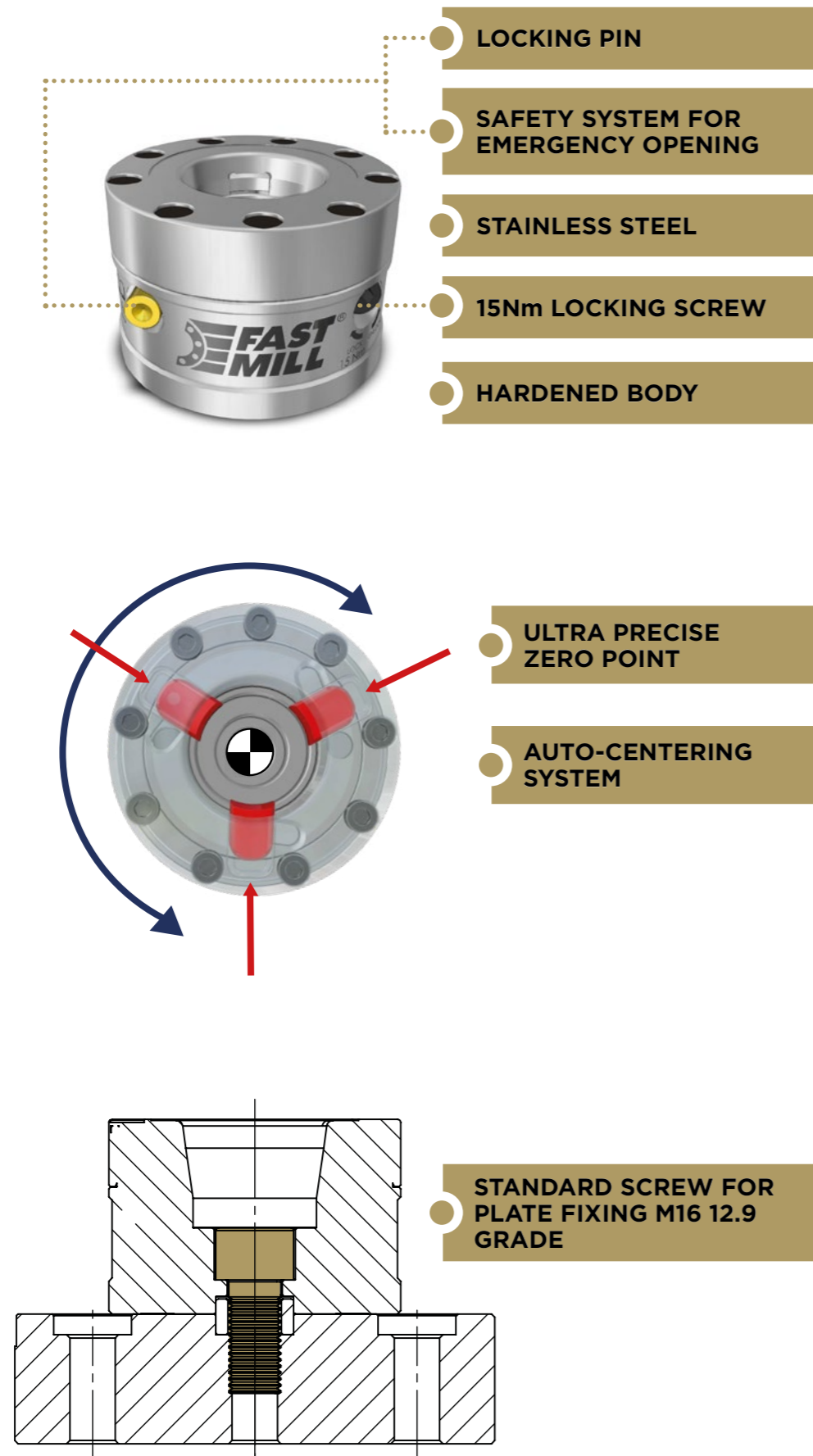
MODULES AND PINS D90



- CLAMPS
- FASTMILL ZERO
- MINI RANGE
- VERTICAL CLAMPING
- MAGNETIC
- THIRD POINT
- RISERS
- SPACERS
- MODULES AND PINS D49
- MODULES AND PINS D90
- PLATES AND BUSHES

MAIN FEATURES

360° POSITIONING / NO NEED TO ORIENT THE SYSTEM



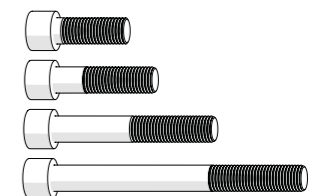
MAIN FEATURES

360° POSITIONING / NO NEED TO ORIENT THE SYSTEM



TECHNICAL TIPS

The whole range of FASTMILL® modules use standard 12.9 (DIN912) screws from M6 to M10 or higher of different heights for the connection of the pieces, to the pallets and to the spacers.



PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

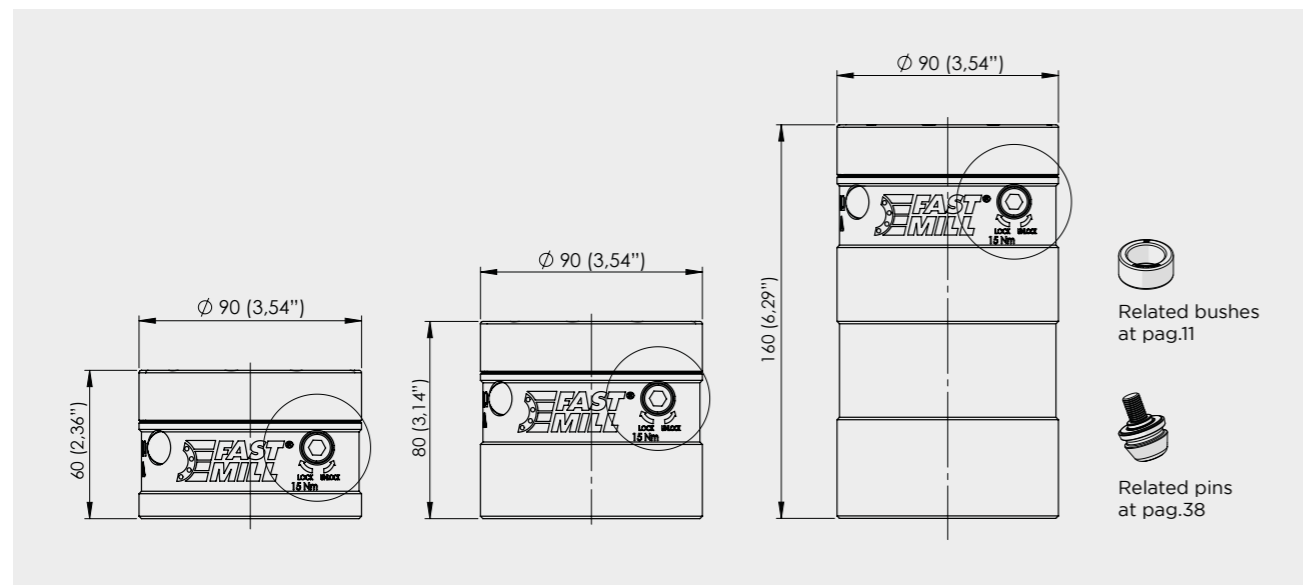
PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
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SINGLE MODULE Ø90

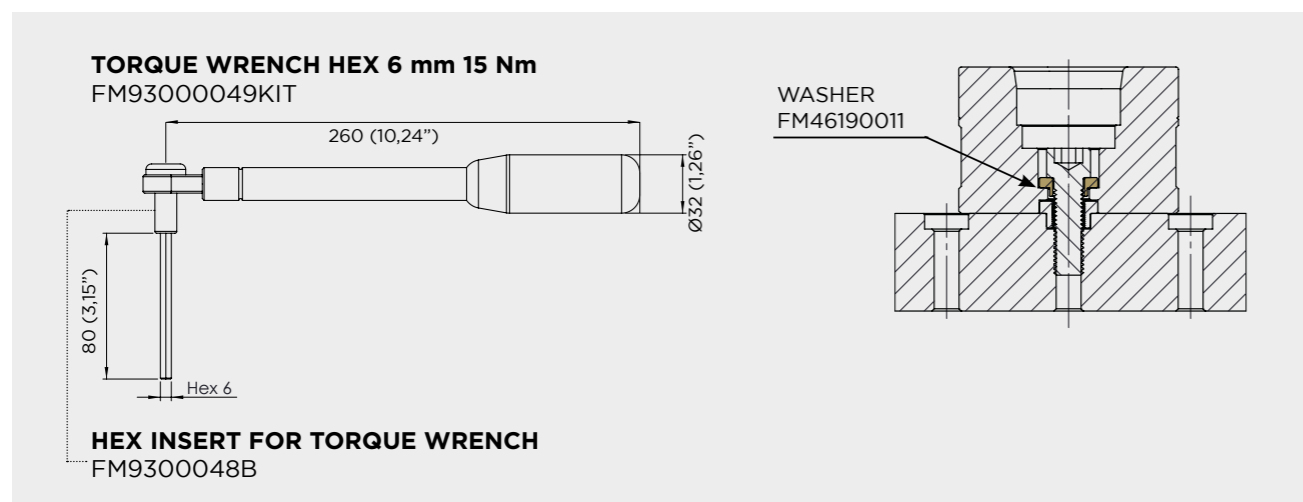
The FastMill module is the heart of the system. Developed over the years based from extensive R&D, this module is the connection point between the workpiece and the FastMill plate. Extreme resistance and precision at the highest levels. The workpiece becomes a single body with the machine table. Set up the machine and start working in a snap.

CODE	DESCRIPTION	HEIGHT	Ø	FIXING SCREW	WEIGHT
FMX46190120	Single module H60	60 (2,36")	90 (3,54")	M16 - M12 *	2 (4,41 lbs)
FMX46190130	Single module H80	80 (2,36")	90 (3,54")	M16 - M12 *	3 (6,61 lbs)
FMX46190140	Single module H160	160 (2,36")	90 (3,54")	M16 - M12 *	7 (15,43 lbs)

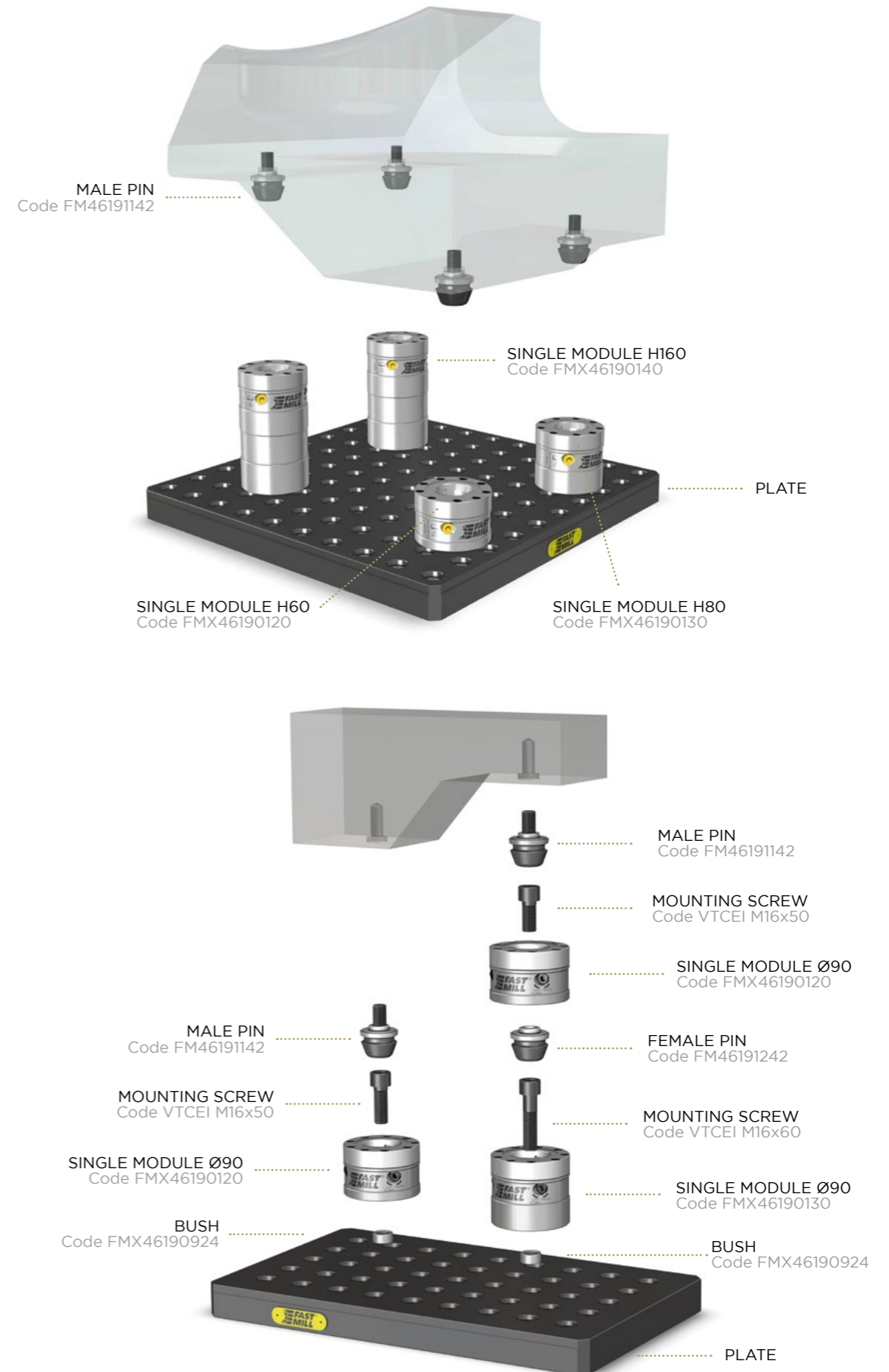


CODE	DESCRIPTION	DIMENSION	TORQUE	WEIGHT
FM93000049KIT	Preset torque wrench hex 6 mm 15 Nm	260 (10,23")	15 Nm	0,5 (11 lbs)
FM9300048B	Hex insert for torque wrench			

CODE	DESCRIPTION	Ø	M
FM46190011	Reducer washer for pin	M16	M10-M12

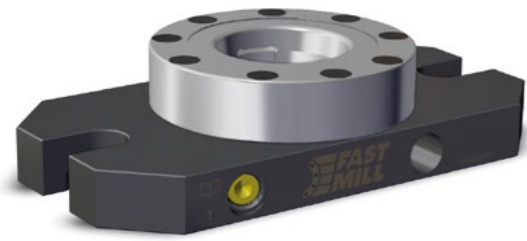


SINGLE MODULES COMBINATION EXAMPLE



PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
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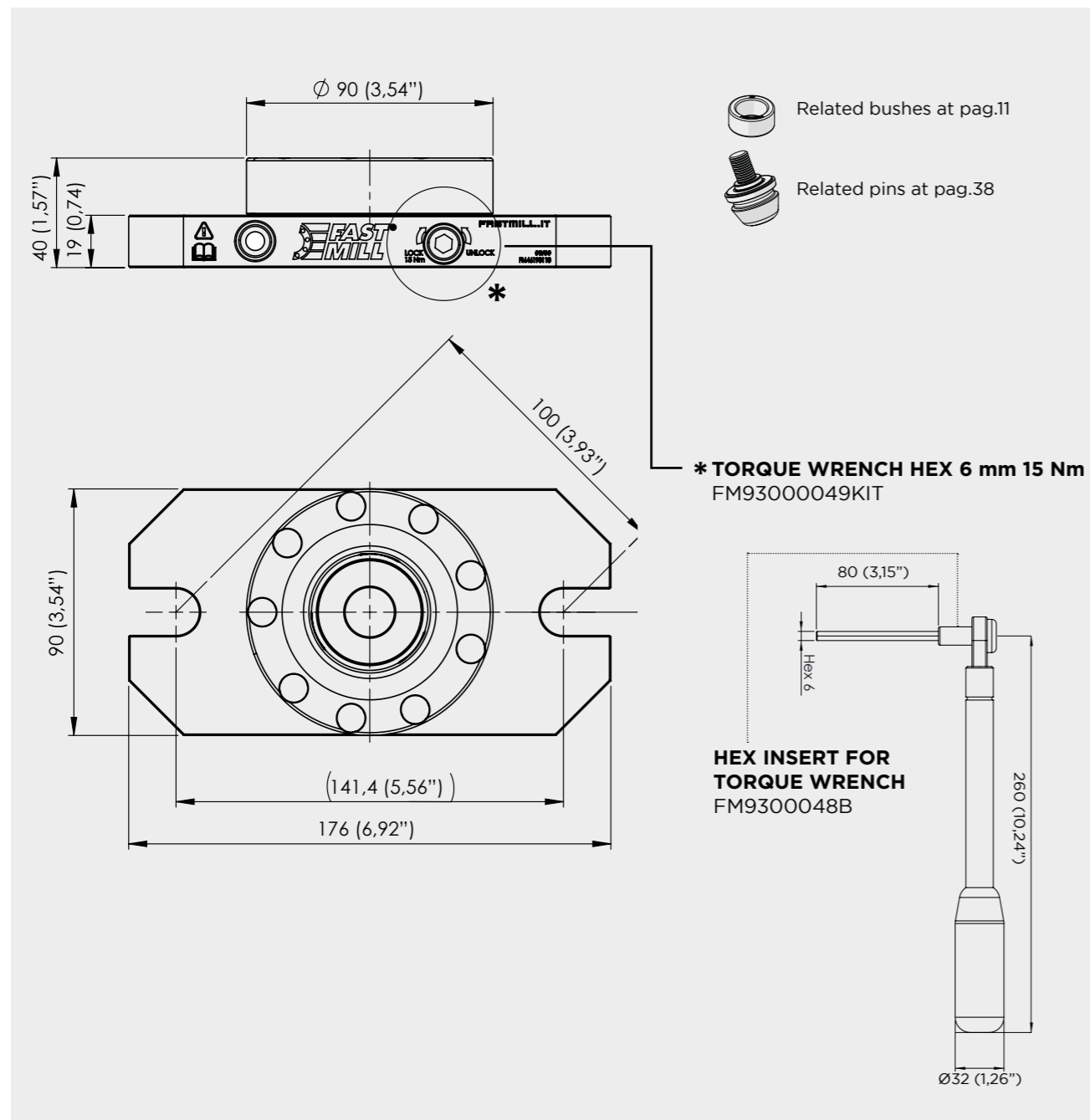


SINGLE MODULE H40

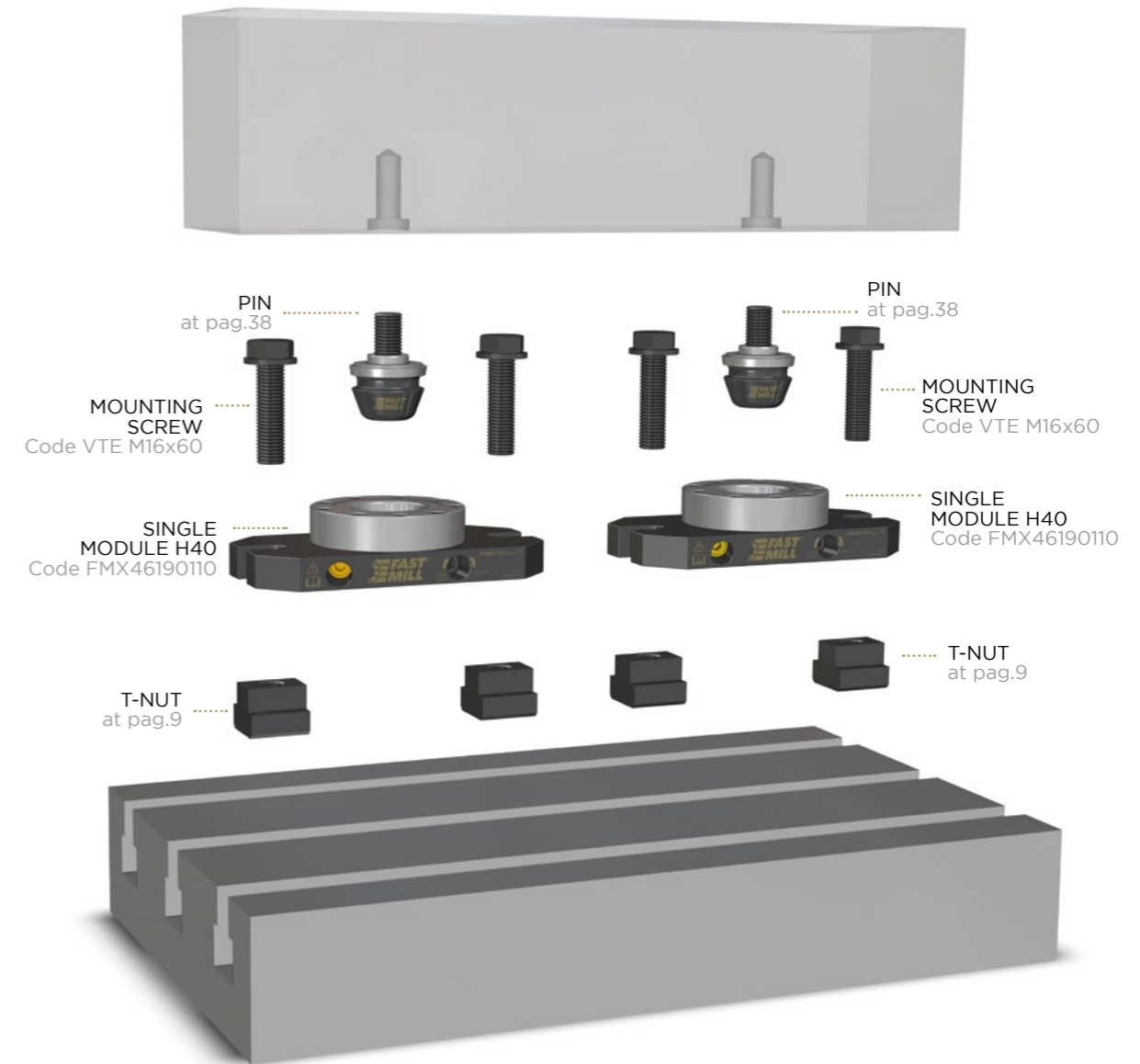
The FastMill H40 module is designed for mixed use in a T-slot as a clamping system or on a plate as a clamping and positioning system. The H40 allows customers to utilize the FastMill system with or without plate.

CODE	DESCRIPTION	DIMENSIONS	Ø	WEIGHT
FMX46190110	Single module H40	40x176 (1,57"x6,92")	90 (3,54")	2,7 (5,95 lbs)

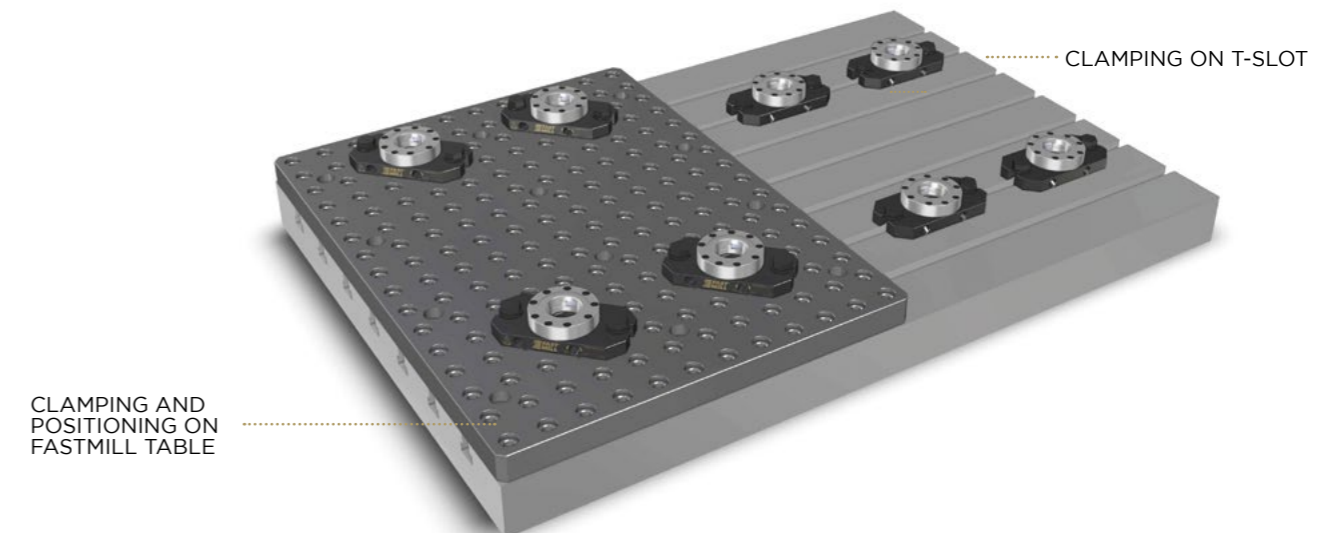
CODE	DESCRIPTION	DIMENSION	TORQUE	WEIGHT
FM93000049KIT	Preset torque wrench hex 6 mm 15 Nm	260 (10,23")	15 Nm	0,5 (11 lbs)
FM9300048B	Hex insert for torque wrench			



SINGLE MODULES H40 COMBINATION EXAMPLE



SINGLE MODULES H40 COMBINATION EXAMPLE



PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
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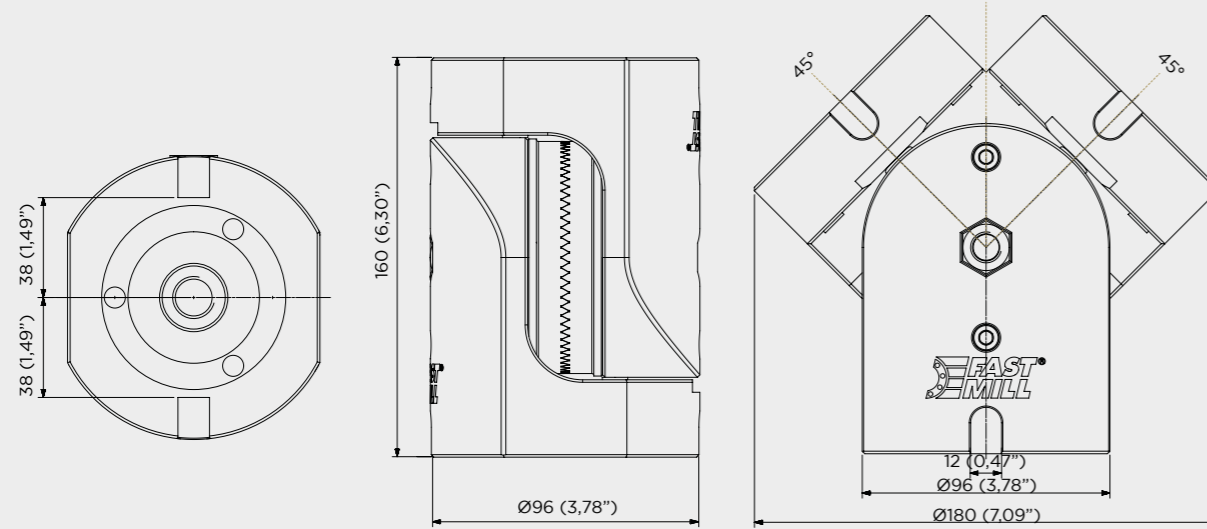
TILTING MODULE WITH 5° HIRTH
TILTING MODULE WITH 10° HIRTH

The tilting module with incremental 5° or 10° pitch hirth allows you to convert the set up from 3 to multiple axes without repositioning the workpiece. Compact and extremely rigid, it guarantees maximum clamping dynamics.

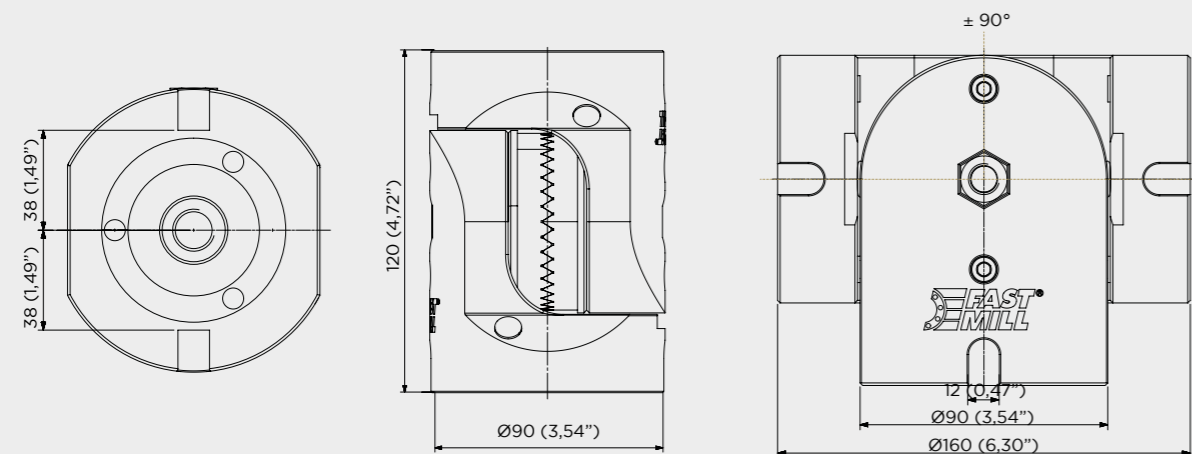
CODE	DESCRIPTION	HEIGHT	Ø	ANGLE	WEIGHT
FMTMSS0590160	Tilting module with 5° hirth	160 (6,29")	96 (3,77")	5°	9,5 kg
FMTMSS1090120	Tilting module with 10° hirth	120 (4,72")	90 (3,54")	10°	4,8 (10,58 lbs)

CODE	DESCRIPTION	DIMENSION	HEIGHT	WEIGHT	PAG.
FMSLIDE030D90	Slide plate for Ø90 module	300x90 (11,81"x3,54")	30 (1,18")	5,1 (11,24 lbs)	44

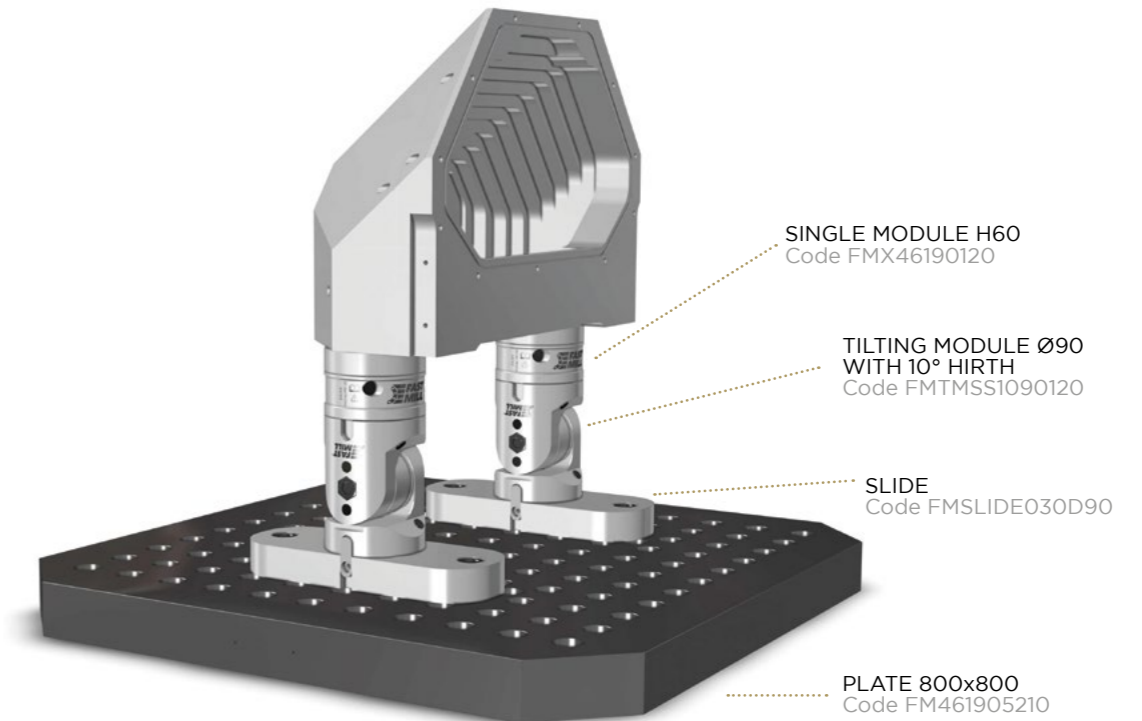
TILTING MODULE WITH 5° HIRTH



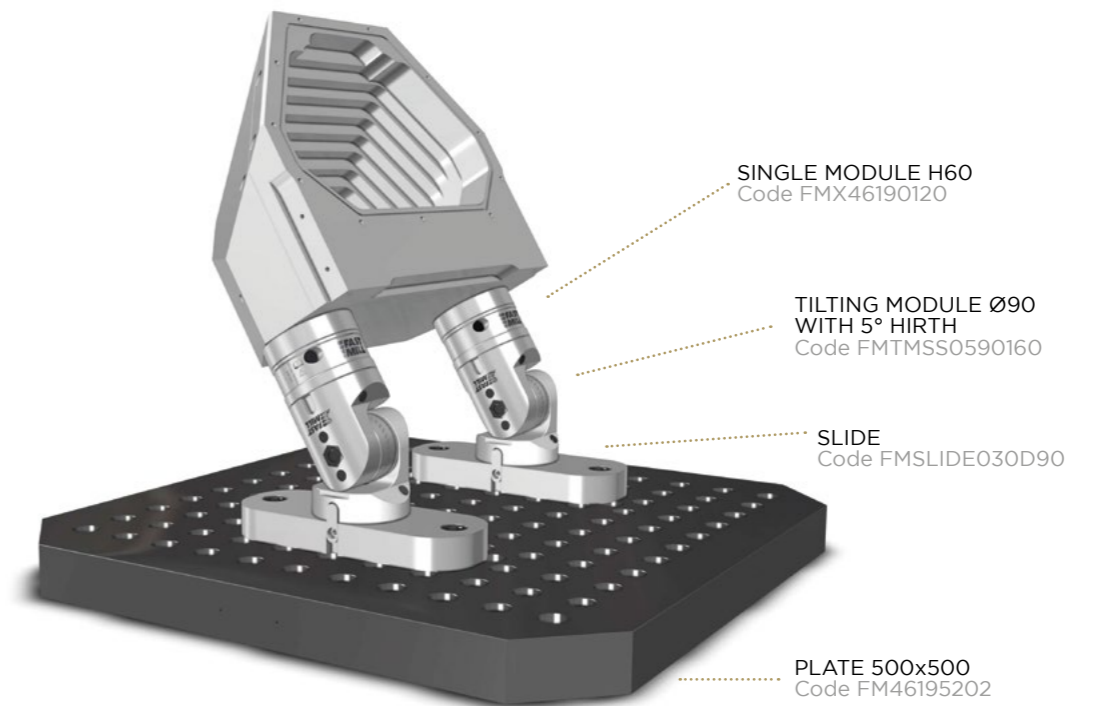
TILTING MODULE WITH 10° HIRTH



SETUP EXAMPLE 0°



SETUP EXAMPLE 30°



PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
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 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS



ADJUSTABLE MODULE Ø90

The adjustable FastMill module allows a vertical movement of +/-6mm. It allows you to push and align the workpiece but also to pull it downwards, a condition that is impossible with traditional clamping systems. Featuring a fine pitch M70 thread system, it provides the force you need with the precision you expect.



SELF ADJUSTABLE MODULE Ø90

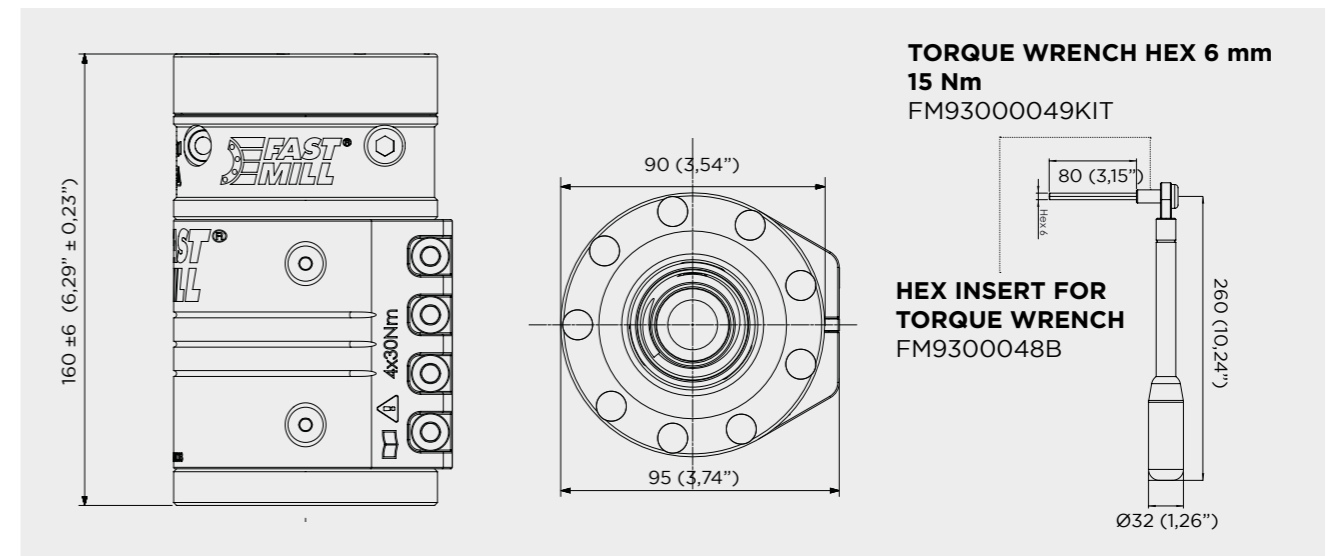
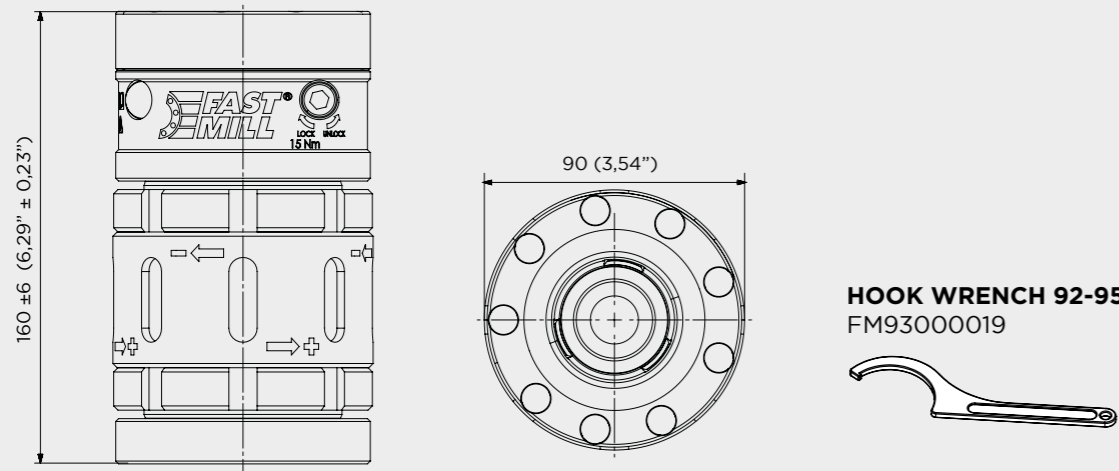
The FastMill self adjustable module allows a vertical support of +/-6 mm, without generating any tension on the piece. In combination with the adjustable module it can follow the deformations of the piece by working the roughing and finishing in the same work operation.

CODE	DESCRIPTION	HEIGHT	Ø	WEIGHT
FMMSADJ901606	Adjustable module Ø90	160 ± 6 (6,29" ± 0,23")	90 (3,54")	5,1 (11,24 lbs)
FM93000019	Hook wrench 92-95			

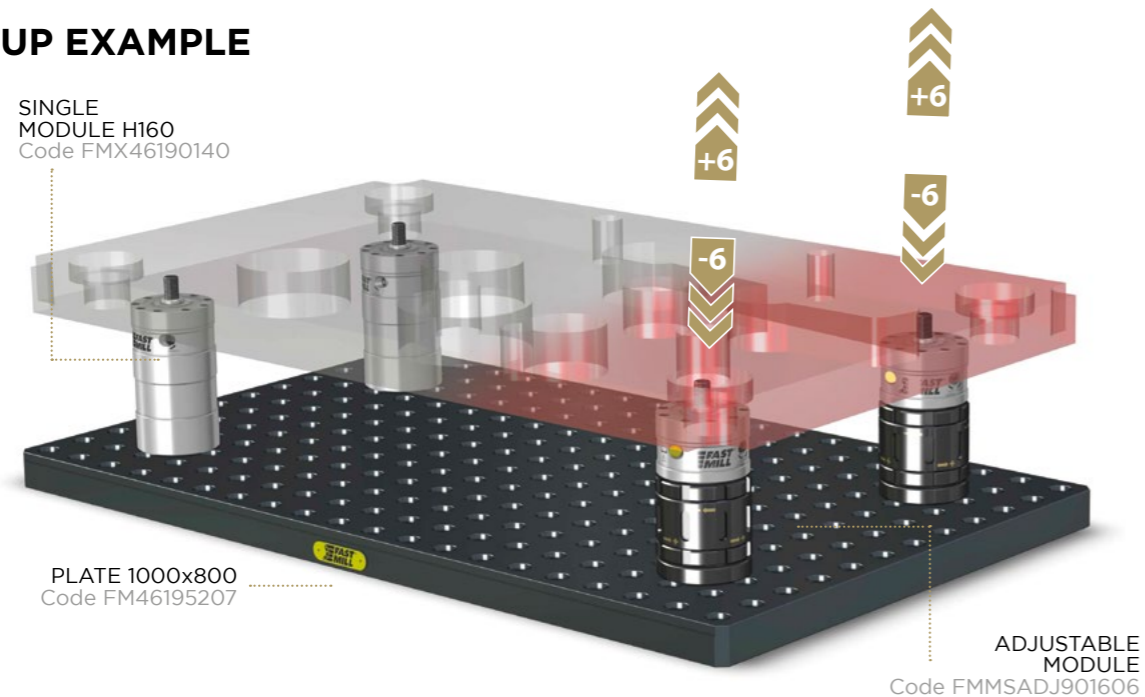
CODE	DESCRIPTION	HEIGHT	Ø	WEIGHT
FMMSSPR901606	Self adjustable module Ø90	160 ± 6 (6,29" ± 0,23")	90 (3,54")	5,1 (11,24 lbs)

CODE	DESCRIPTION	DIMENSION	TORQUE	WEIGHT
FM93000049KIT	Preset torque wrench hex 6 mm 15 Nm	260 (10,23")	15 Nm	0,5 (11 lbs)
FM9300048B	Hex insert for torque wrench			

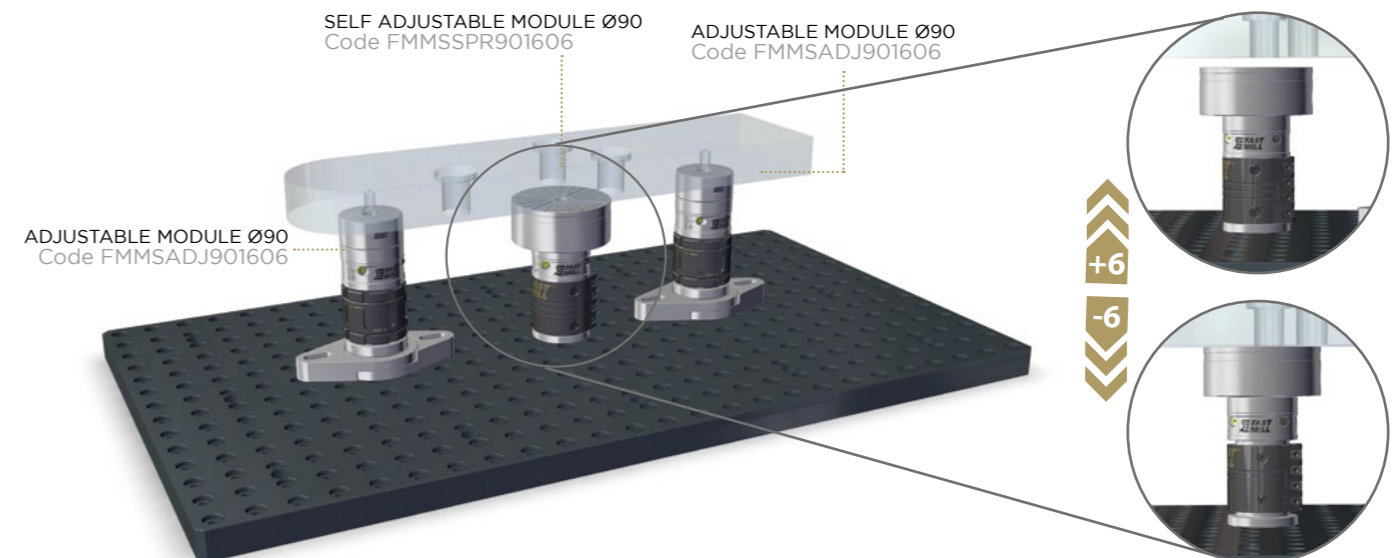
EXTRA FINE PITCH 1° = 5µm



SETUP EXAMPLE



SETUP EXAMPLE



PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

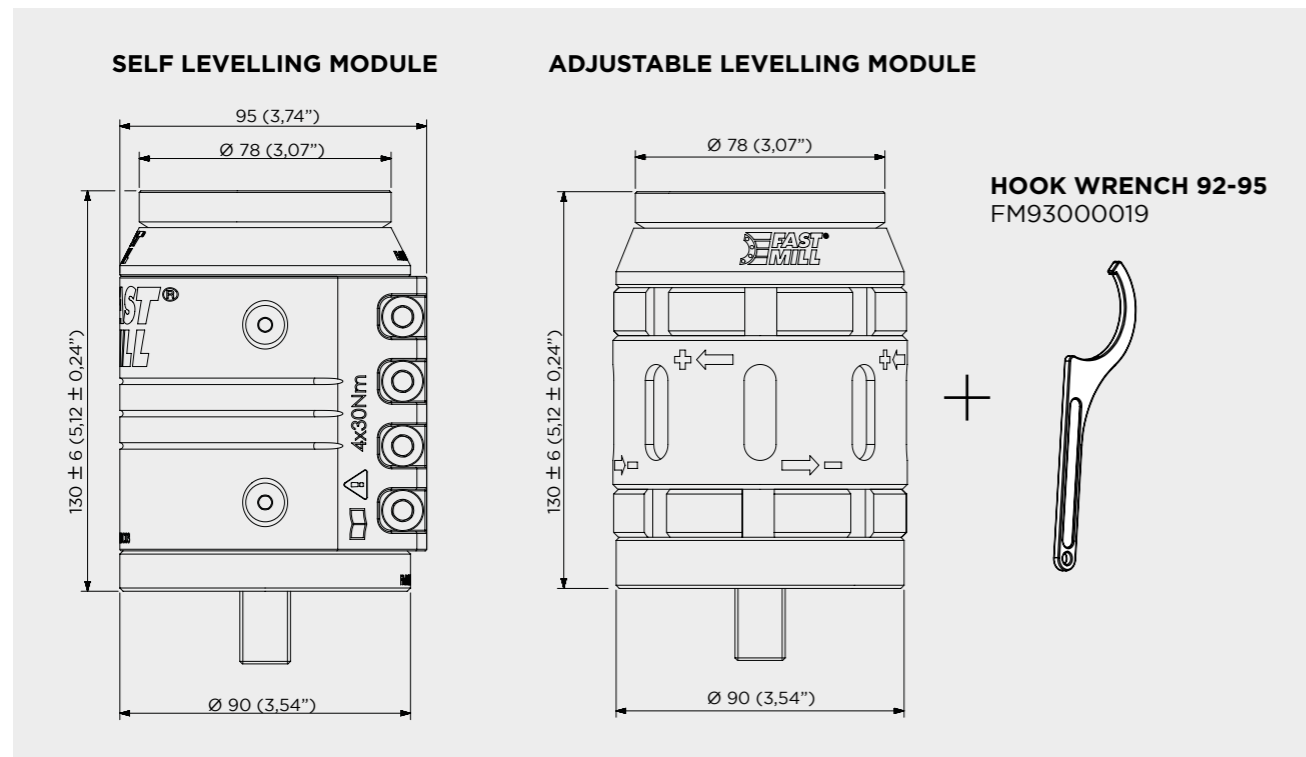


LEVELLING SYSTEM

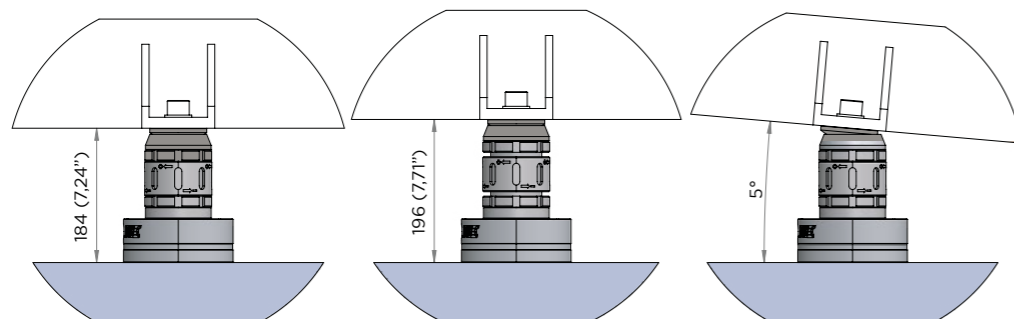
Introducing the new levelling and quick-fixing system, specifically designed for efficient work on structures and benches. This advanced system simplifies setup and adjustments, providing precise leveling and secure fastening.

CODE	DESCRIPTION	HEIGHT	Ø	WEIGHT
FMMLADJ903606	Adjustable levelling module	124 (4,88")	90 (3,54")	4,8 kg (10,58 lbs)
FMMLSPR903606	Self levelling module	124 (4,88")	90 (3,54")	4,8 kg (10,58 lbs)

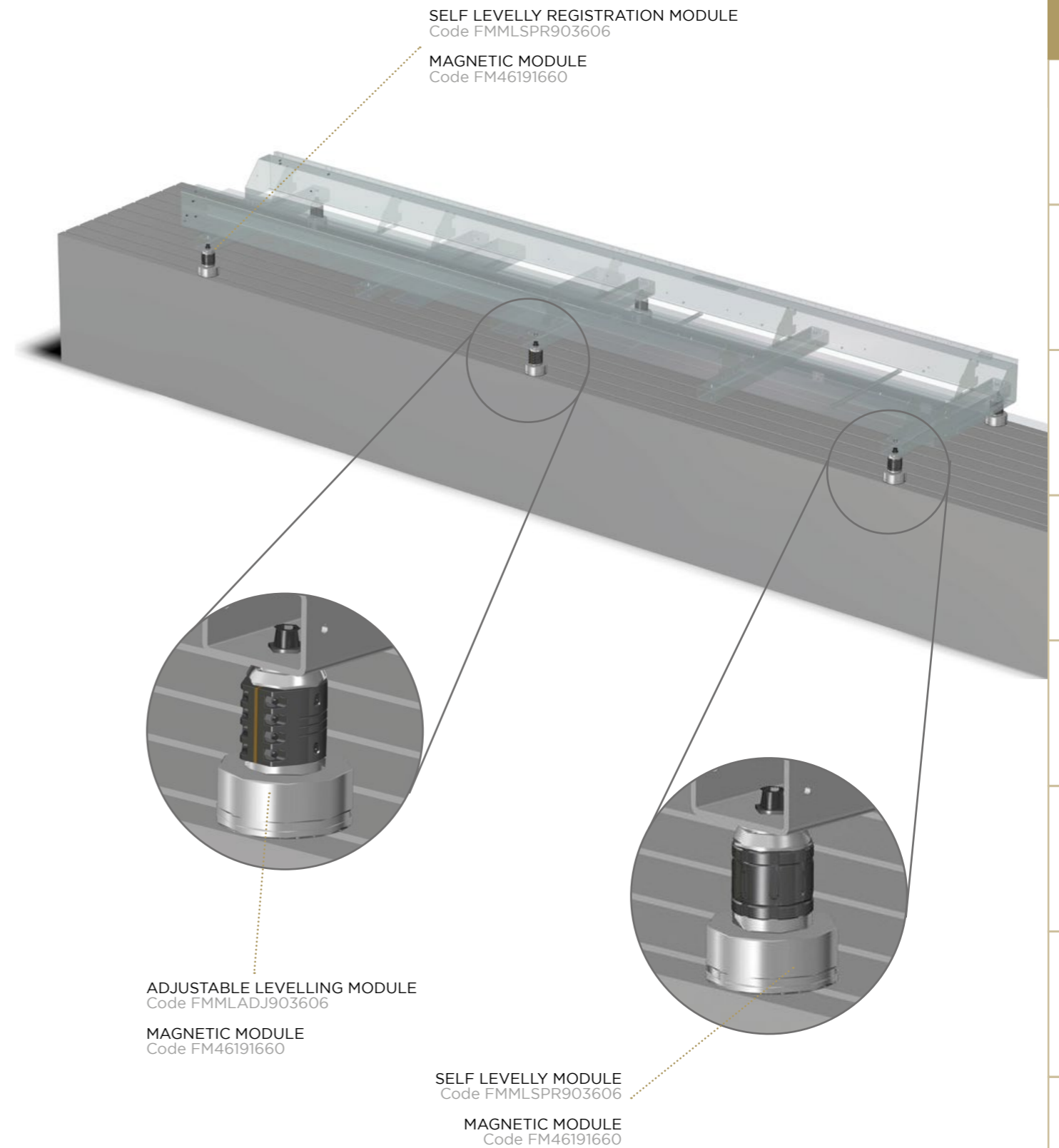
CODE	DESCRIPTION	DIMENSION	TORQUE	WEIGHT
FM93000019	Hook wrench 92-95			
FM93000049KIT	Torque wrench	260 (10,23")	15 Nm	0,5 (11 lbs)



SETUP EXAMPLE



SETUP EXAMPLE



SELF LEVELLY REGISTRATION MODULE
Code FMMLSPR903606

MAGNETIC MODULE
Code FM46191660

ADJUSTABLE LEVELLING MODULE
Code FMMLADJ903606

MAGNETIC MODULE
Code FM46191660

SELF LEVELLY MODULE
Code FMMLSPR903606

MAGNETIC MODULE
Code FM46191660

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
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SPACERS
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VERTICAL CLAMPING
MINI RANGE
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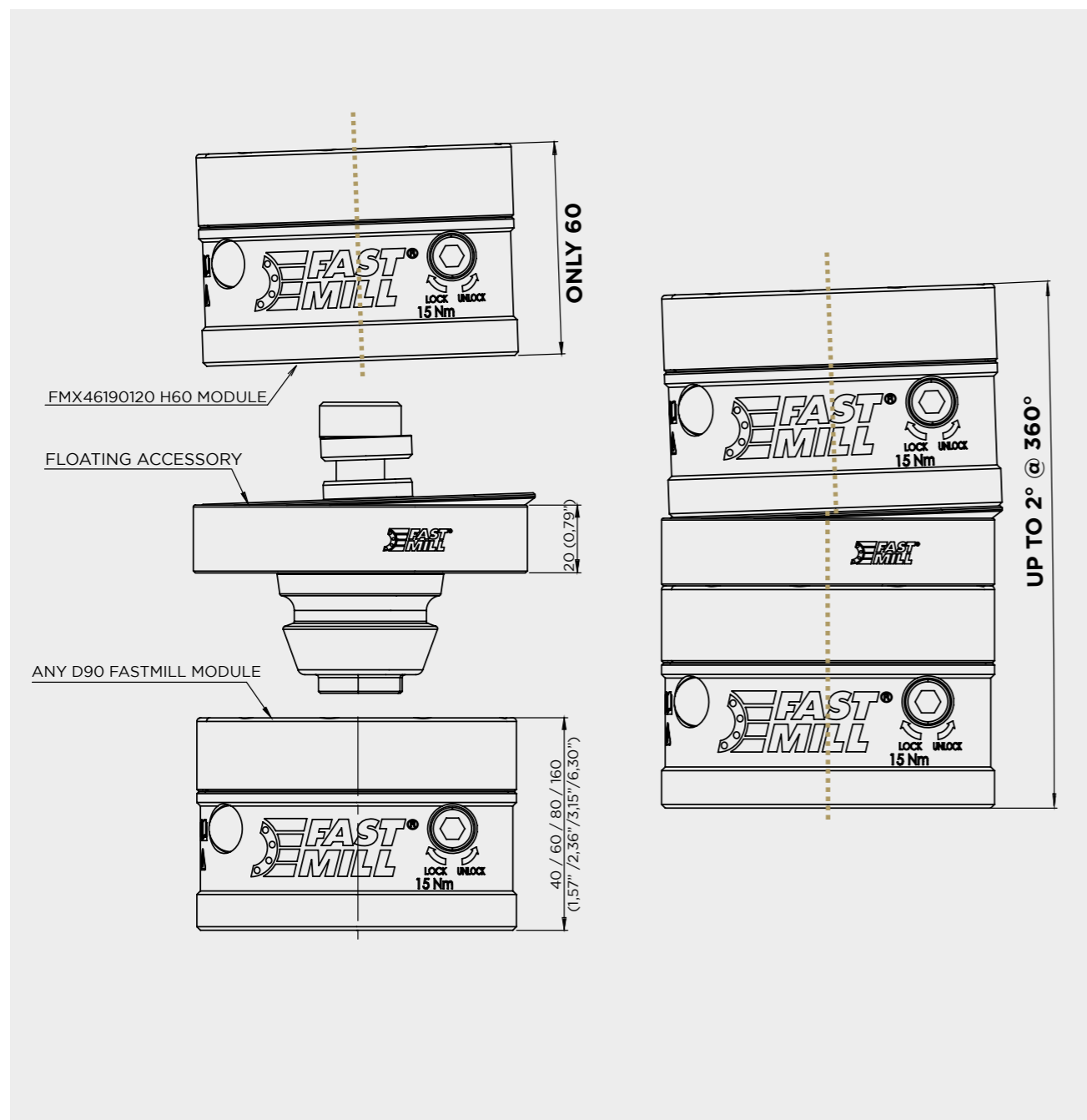
PATENTED



FLOATING ACCESSORY

The new PATENTED FastMill floating accessory allows the orientation of the module up to 2° in each direction. This particular accessory allows the clamping of non-planar workpieces and is also very useful for carpentry structures. Its locking system allows you to maintain the position during machining and, if necessary, by loosening the lower screw it is possible to release the tension of the component and then continue machining. It mounts as an accessory to existing FastMill modules.

CODE	DESCRIPTION	HEIGHT	Ø	ANGLE	WEIGHT
FM46191900	Floating accessory	20 (0,78")	90 (3,54")	Up to 2°	0,5 kg (1,10 lbs)



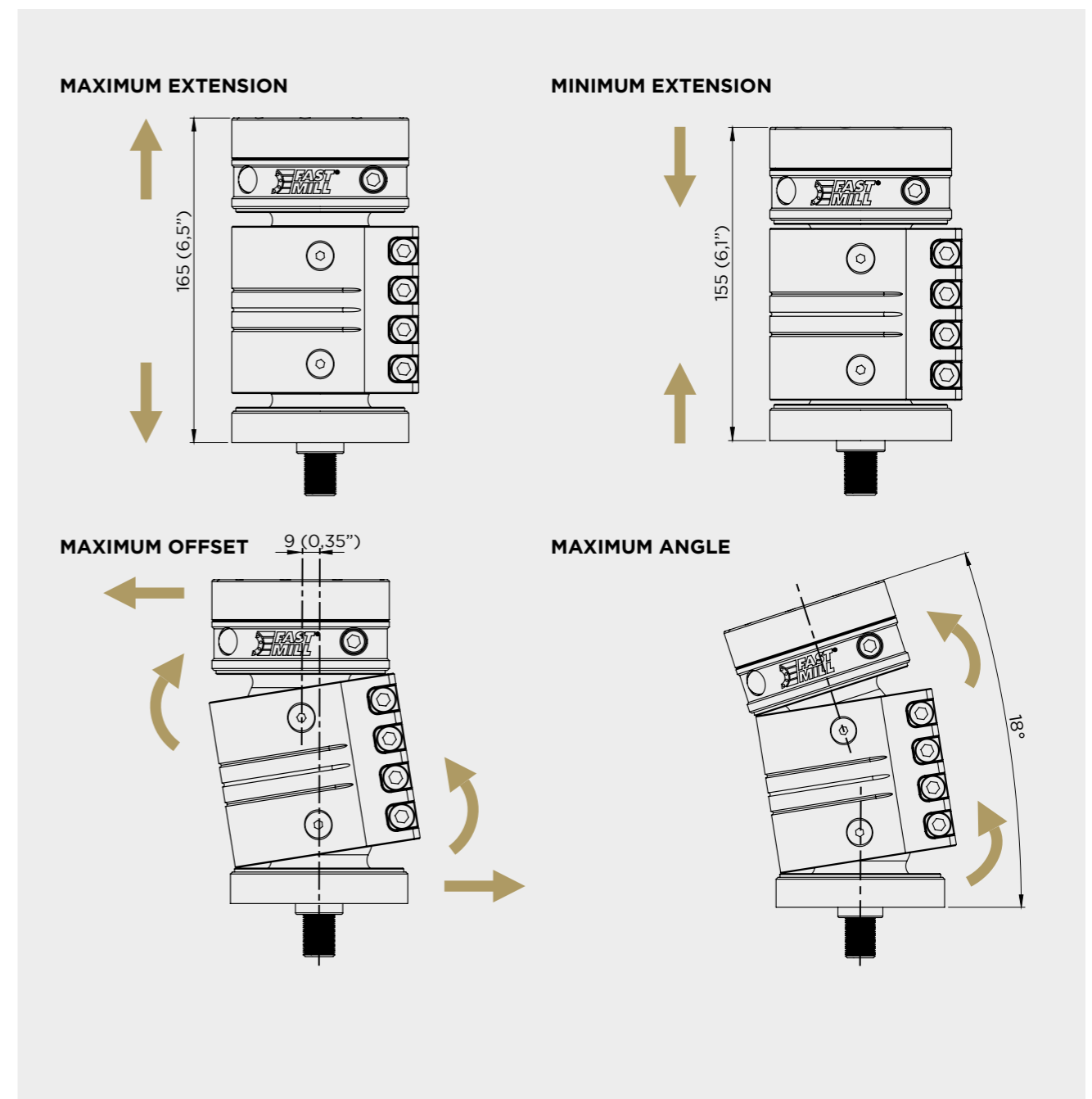
PATENTED



DOUBLE FLOATING MODULE

The new PATENTED floating module is designed and created based on specific production needs. Its allows you to lock any component, even non-planar or deformed ones, without applying any external force to it, thus guaranteeing its free orientation in space and then allowing it to be solidly locked in the resulting position. It is also possible to accommodate deformations developed during the manufacturing process due to internal tensions of the component or its thermal expansion.

CODE	DESCRIPTION	HEIGHT	Ø	ANGLE	WEIGHT
FMMSDFS903605	Double floating module	165/155 (6,5"/6,1")	90 (3,54")	up to 18°	7,1 Kg (15,65 lbs)

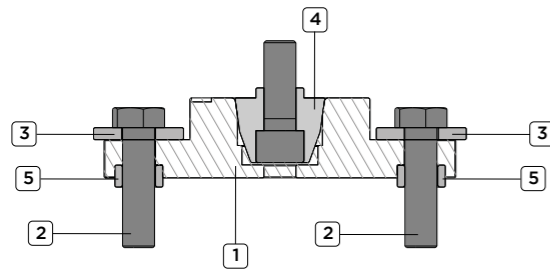


PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

PLATES AND BUSHES
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MAGNETIC
VERTICAL CLAMPING
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CLAMPS

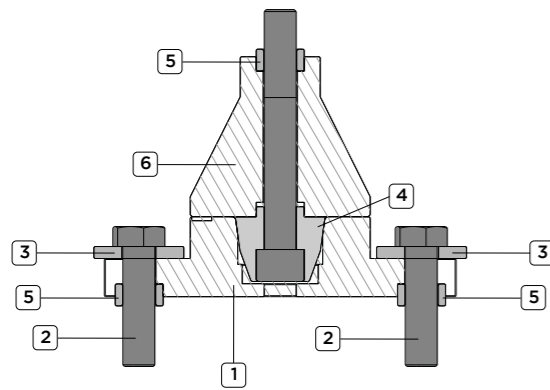
SINGLE MODULE H40 MM FMX46190110 SET UP EXAMPLE

TECHNICAL INFORMATION



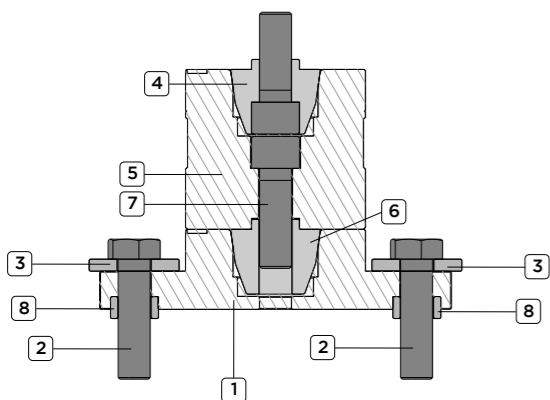
SINGLE MODULE H40 MM ON PLATE OR T-SLOT

- 1 Single module Opt. T-slots - Code FMX46190110
- 2 Hexagon head screw M16x60
- 3 Reducer washer for M16 strengthen screw DIN 6340 AND UNI 6602 A
- 4 Male pin type A M16 Ø24 mm with M16x45 screw - Code FM46191142
- 5 Single centering bush M16 Ø24-24 mm - Code FM46190924



SINGLE MODULE h40 mm ON PLATE OR T-SLOT WITH SPACER

- 1 Single module Opt. T-slots - Code FMX46190110
- 2 Hexagon head screw M16x60
- 3 Reducer washer for M16 strengthen screw DIN 6340 AND UNI 6602 A
- 4 Male pin type A M16 Ø24 mm with M16x45 screw - Code FM46191142
- 5 Single centering bush M16 Ø24-24 mm - Code FM46190924
- 6 Reduction spacer Ø90-40 mm h 60 mm - Code FM46191806

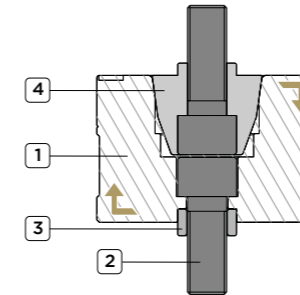


SINGLE MODULE h40 mm ON PLATE OR T-SLOT WITH MODULE h80 mm FMX46190130

- 1 Single module Opt. T-slots - Code FMX46190110
- 2 Hexagon head screw M16x60
- 3 Reducer washer for M16 strengthen screw DIN 6340 AND UNI 6602 A
- 4 Male pin type A M16 Ø24 mm with M16x45 screw - Code FM46191142
- 5 Single module Ø90 mm h 80 mm - Code FMX46190130
- 6 Female pin type A M16 Ø24 mm - Code FM46191242
- 7 Cylindrical head hexagon socket screw 12.9 (DIN912) M16x50
- 8 Single centering bush M16 Ø24-24 mm - Code FM46190924

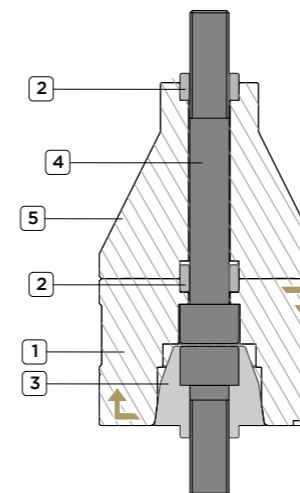
SINGLE MODULE H60 MM FMX46190120 SET UP EXAMPLE

TECHNICAL INFORMATION



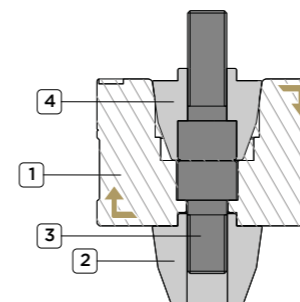
SINGLE MODULE h60 mm ON PLATE OR T-SLOT

- 1 Single module Ø90 mm h60 mm - Code FMX46190120
- 2 Cylindrical head hexagon socket screw 12.9 (DIN912) M16x40
- 3 Single centering bush M16 Ø24-24 mm - Code FM46190924
- 4 Male pin type A M16 Ø24 mm with M16x45 screw - Code FM46191142



SINGLE MODULE h60 mm ON PLATE OR T-SLOT WITH SPACER

- 1 Single module Ø90 mm h60 mm - Code FMX46190120
- 2 Single centering bush M16 Ø24-24 mm - Code FM46190924
- 3 Male pin type A M16 Ø24 mm with M16x45 screw - Code FM46191142
- 4 Cylindrical head hexagon socket screw 12.9 (DIN912) M16x120
- 5 Reduction spacer Ø90-40 mm h 60 mm - Code FM46191806



SINGLE MODULE h60 mm ON PLATE OR T-SLOT WITH FEMALE PIN FM46191242

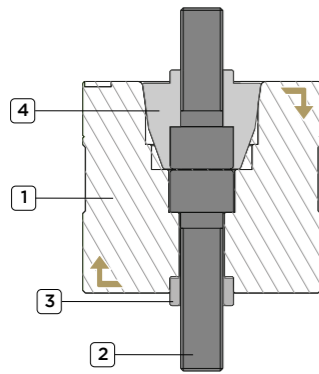
- 1 Single module Ø90 mm h60 mm - Code FMX46190120
- 2 Female pin type A M16 Ø24 mm - Code FM46191242
- 3 Cylindrical head hexagon socket screw 12.9 (DIN912) M16x30
- 4 Male pin type A M16 Ø24 mm with M16x45 screw - Code FM46191142

PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

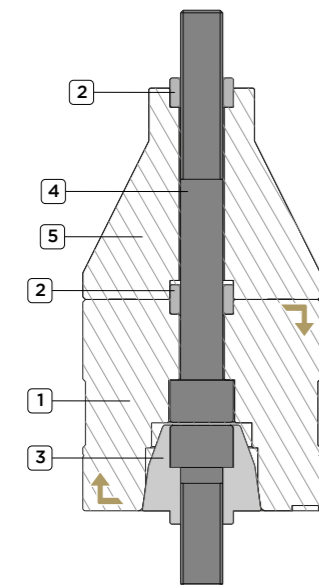
**SINGLE MODULE H80 MM FMX46190130
SET UP EXAMPLE**

TECHNICAL INFORMATION



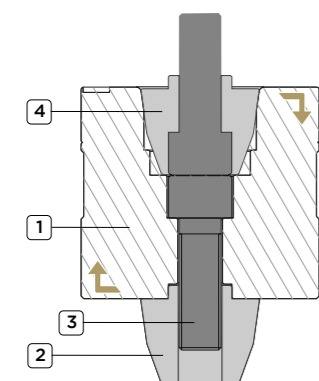
SINGLE MODULE H80 MM ON PLATE OR T-SLOT

- 1 Single module Ø90 mm h80 mm - Code FMx46190130
- 2 Cylindrical head hexagon socket screw 12.9 (DIN912) M16x60
- 3 Single centering bush M16 Ø24-24 mm - Code FM46190924
- 4 Male pin type A M16 Ø24 mm with M16x45 screw - Code FM46191142



SINGLE MODULE H80 MM ON PLATE OR T-SLOT WITH SPACER

- 1 Single module Ø90 mm h80 mm - Code FMx46190130
- 2 Single centering bush M16 Ø24-24 mm - Code FM46190924
- 3 Male pin type A M16 Ø24 mm with M16x45 screw - Code FM46191142
- 4 Cylindrical head hexagon socket screw 12.9 (DIN912) M16x140
- 5 Reduction spacer Ø90-40 mm h 60 mm - Code FM46191806

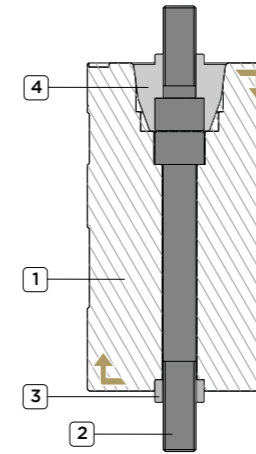


SINGLE MODULE H80 MM ON PLATE OR T-SLOT WITH FEMALE PIN FM46191242

- 1 Single module Ø90 mm h80 mm - Code FMx46190130
- 2 Female pin type A M16 Ø24 mm - Code FM46191242
- 3 Cylindrical head hexagon socket screw 12.9 (DIN912) M16x50
- 4 Male pin type A M16 Ø24 mm with M16x45 screw - Code FM46191142

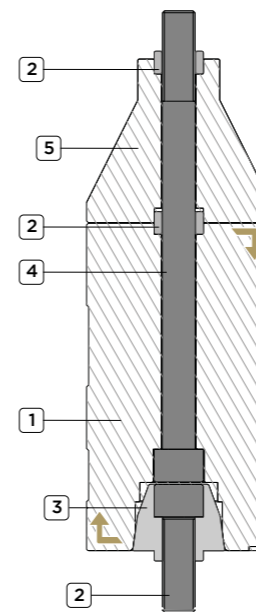
**SINGLE MODULE H160 MM FMX46190140
SET UP EXAMPLE**

TECHNICAL INFORMATION



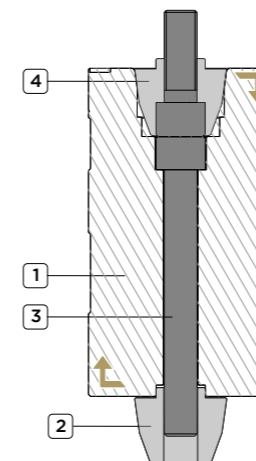
SINGLE MODULE H160 MM ON PLATE OR T-SLOT

- 1 Single module Ø90 mm h160 mm - Code FMX46190140
- 2 Cylindrical head hexagon socket screw 12.9 (DIN912) M16x140
- 3 Single centering bush M16 Ø24-24 mm - Code FM46190924
- 4 Male pin type A M16 Ø24 mm with M16x45 screw - Code FM46191142



SINGLE MODULE H160 MM ON PLATE OR T-SLOT WITH SPACER

- 1 Single module Ø90 mm h160 mm - Code FMX46190140
- 2 Single centering bush M16 Ø24-24 mm - Code FM46190924
- 3 Male pin type A M16 Ø24 mm with M16x45 screw - Code FM46191142
- 4 Cylindrical head hexagon socket screw 12.9 (DIN912) M16x220
- 5 Reduction spacer Ø90-40 mm h 50 mm - Code FM46191806



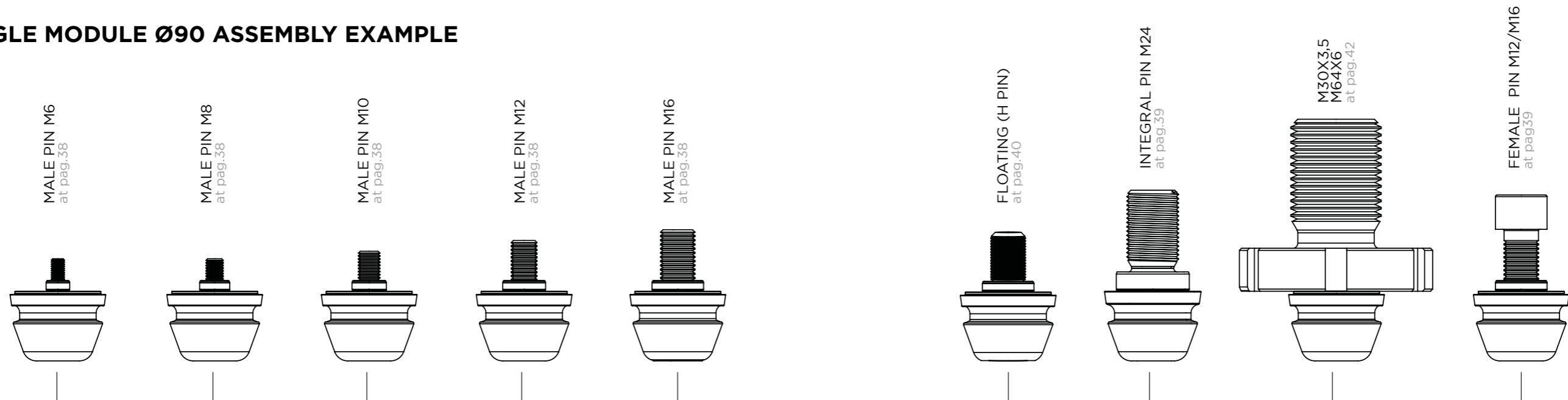
SINGLE MODULE H160 MM ON PLATE OR T-SLOT WITH FEMALE PIN FM46191242

- 1 Single module Ø90 mm h160 mm - Code FMX46190140
- 2 Female pin type A M16 Ø24 mm - Code FM46191242
- 3 Cylindrical head hexagon socket screw 12.9 (DIN912) M16x130
- 4 Male pin type A M16 Ø24 mm with M16x45 screw - Code FM46191142

PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

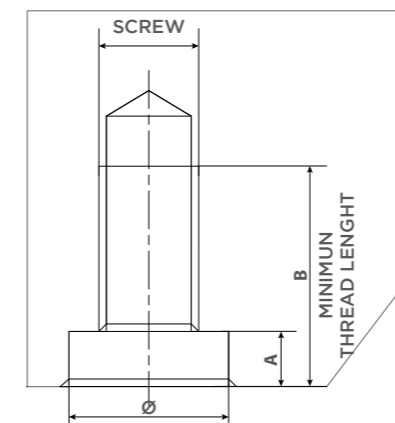
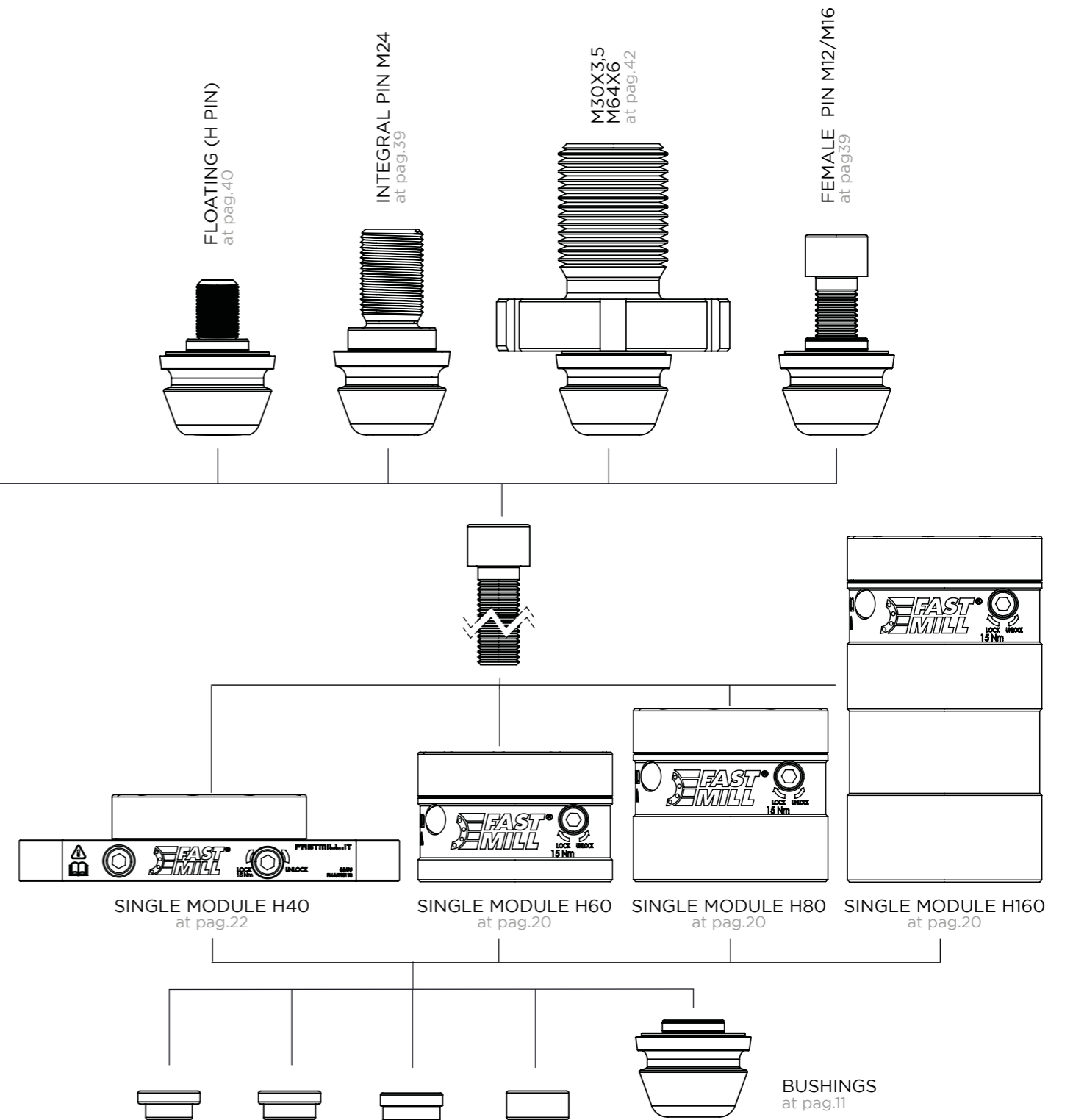
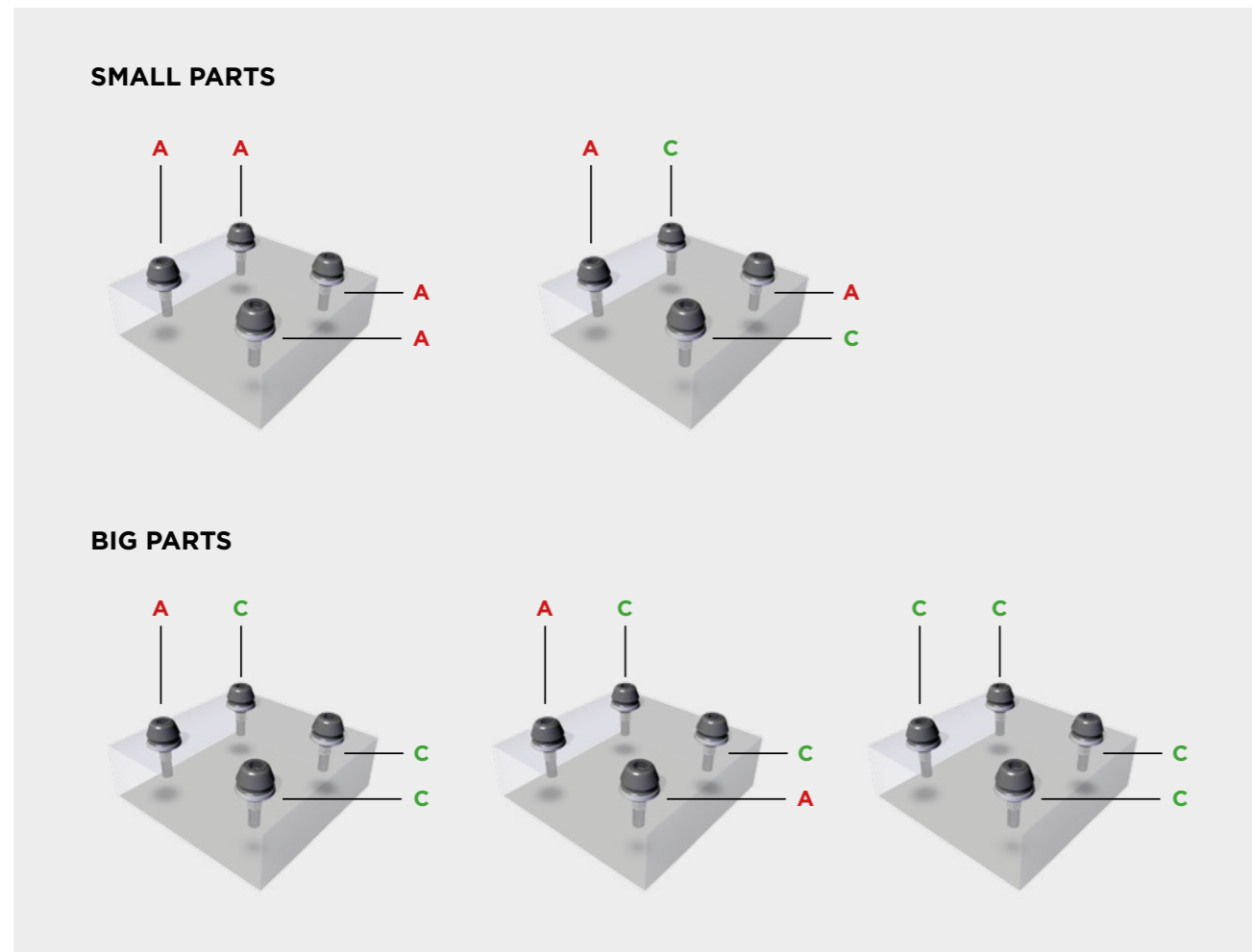
PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

SINGLE MODULE Ø90 ASSEMBLY EXAMPLE



TECHNICAL INFORMATION

Clamping and positioning of fixture and/or workpiece are achieved through the clamping pins. Type A is used for centering and clamping, type C only for clamping.



STANDARD AND MINI RANGE WORKPIECE PREPARATION

SCREW	Ø	A	B (STEEL)	B (CAST IRON/ALLOY)
M6	10-11 mm H6	7 mm	16 mm	20 mm
M8	12-14 mm H6	7 mm	20 mm	27 mm
M10	14-16 mm H6	7 mm	22 mm	29 mm
M12	18-20 mm H6	7 mm	26 mm	32 mm
M12 *	18-20 mm H6	9,5 mm	26 mm	32 mm
M16	22-24 mm H6	7 mm	32 mm	40 mm
M24	34-36 mm H6	10 mm	48 mm	60 mm

* For FMZ pin.

PLATES AND BUSHES

MODULES AND PINS D90

MODULES AND PINS D49

SPACERS

RISERS

THIRD POINT

MAGNETIC

VERTICAL CLAMPING

MINI RANGE

FASTMILL ZERO

CLAMPS

PLATES AND BUSHES

MODULES AND PINS D90

MODULES AND PINS D49

SPACERS

RISERS

THIRD POINT

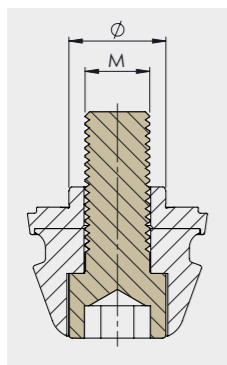
MAGNETIC

VERTICAL CLAMPING

MINI RANGE

FASTMILL ZERO

CLAMPS



MALE PIN FOR SINGLE MODULE Ø90

The male pins for D90 modules are a concentration of technology expressed in the smartest way possible. The rugged pre-centering body of the pin absorbs shock and pre-centers the workpiece with the module, while protecting the overlying centering ring ensuring mating accuracy. Finally, the commercial standard screw holds everything to the workpiece and can be swapped out in a flash to change your clamping setup. Available type A for clamping and positioning and type C for clamping with a slight freedom in positioning.

A = CENTERING AND CLAMPING **C = CLAMPING**  Screw 12.9 (DIN912) included.

M6 MALE PIN FOR SINGLE MODULE Ø90

CODE	DESCRIPTION	M	Ø	TYPE
FM46191105	Male pin	M6	10 (0,39")	A
FM46193105	Male pin	M6	10 (0,39")	C
FM46191106	Male pin	M6	11 (0,43")	A
FM46193106	Male pin	M6	11 (0,43")	C

M8 MALE PIN FOR SINGLE MODULE Ø90

CODE	DESCRIPTION	M	Ø	TYPE
FM46191107	Male pin	M8	12 (0,47")	A
FM46193107	Male pin	M8	12 (0,47")	C
FM46191108	Male pin	M8	14 (0,55")	A
FM46193108	Male pin	M8	14 (0,55")	C

M10 MALE PIN FOR SINGLE MODULE Ø90

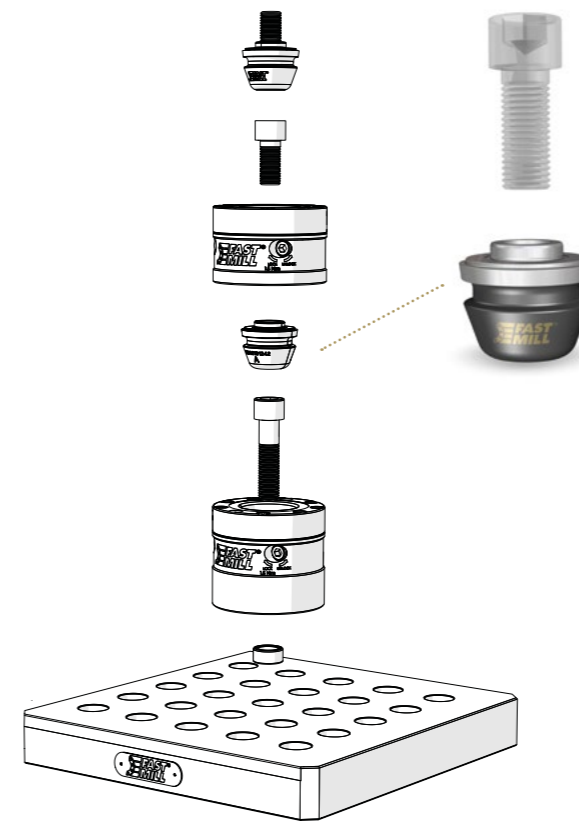
CODE	DESCRIPTION	M	Ø	TYPE
FM46191109	Male pin	M10	14 (0,55")	A
FM46193109	Male pin	M10	14 (0,55")	C
FM46191110	Male pin	M10	16 (0,62")	A
FM46193110	Male pin	M10	16 (0,62")	C

M12 MALE PIN FOR SINGLE MODULE Ø90

CODE	DESCRIPTION	M	Ø	TYPE
FM46191111	Male pin	M12	18 (0,70")	A
FM46193111	Male pin	M12	18 (0,70")	C
FM46191121	Male pin	M12	20 (0,78")	A
FM46193121	Male pin	M12	20 (0,78")	C
FM46191131	Male pin	M12	24 (0,94")	A
FM46193131	Male pin	M12	24 (0,94")	C
FM46191141	Male pin	M12	25 (0,98")	A
FM46193141	Male pin	M12	25 (0,98")	C

M16 MALE PIN FOR SINGLE MODULE Ø90


CODE	DESCRIPTION	M	Ø	TYPE
FM46191132	Male pin	M16	22 (0,86")	A
FM46193132	Male pin	M16	22 (0,86")	C
FM46191142	Male pin	M16	24 (0,94")	A
FM46193142	Male pin	M16	24 (0,94")	C
FM46191143	Male pin	M16	25 (0,98")	A
FM46193143	Male pin	M16	25 (0,98")	C

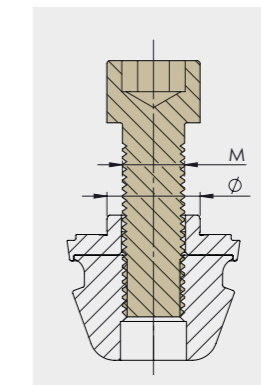


FEMALE PIN FOR SINGLE MODULE Ø90

Female pin with threaded body, with identical characteristics to the male pin. This concept allows the fixing of a screw from above. Used for clamping on workpieces with reduced thickness (where it would not be possible to thread) or for assembling one module on top of the other.

A = CENTERING AND CLAMPING **C = CLAMPING**

 Screw not included.

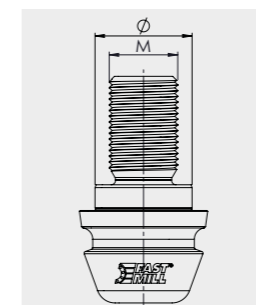


M12 FEMALE PIN FOR SINGLE MODULE Ø90

CODE	DESCRIPTION	M	Ø	TYPE
FM46191211	Female pin	M12	18 (0,70")	A
FM46193211	Female pin	M12	18 (0,70")	C
FM46191221	Female pin	M12	20 (0,78")	A
FM46193221	Female pin	M12	20 (0,78")	C

M16 FEMALE PIN FOR SINGLE MODULE Ø90

CODE	DESCRIPTION	M	Ø	TYPE
FM46191232	Female pin	M16	22 (0,86")	A
FM46193232	Female pin	M16	22 (0,86")	C
FM46191242	Female pin	M16	24 (0,94")	A
FM46193242	Female pin	M16	24 (0,94")	C



INTEGRAL PIN M24

The integral pin M24 has been designed for extremely heavy use, thus covering the entire range of machining. Available type A for clamping and centering or type C for clamping with a slight freedom of positioning.

A = CENTERING AND CLAMPING **C = CLAMPING**

M24 INTEGRAL PIN FOR SINGLE MODULE Ø90

CODE	DESCRIPTION	M	Ø	TYPE
FM46191162	Integral Pin	M24	34 (1,33")	A
FM46191164	Integral Pin	M24	34 (1,33")	C
FM46191163	Integral Pin	M24	36 (1,33")	A
FM46191165	Integral Pin	M24	36 (1,33")	C

PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

PATENTED

PATENTED



FLOATING PIN (H PIN)

The patented H pin is a system created by FastMill that allows clamping on workpieces offering a limited degree of deformation on the face in contact with the FastMill modules. H pin, utilizing the sliding and tilting design, allows workpieces to be machined after hardening without the need to make further clamping holes by simply enlarging the centering counterbore.

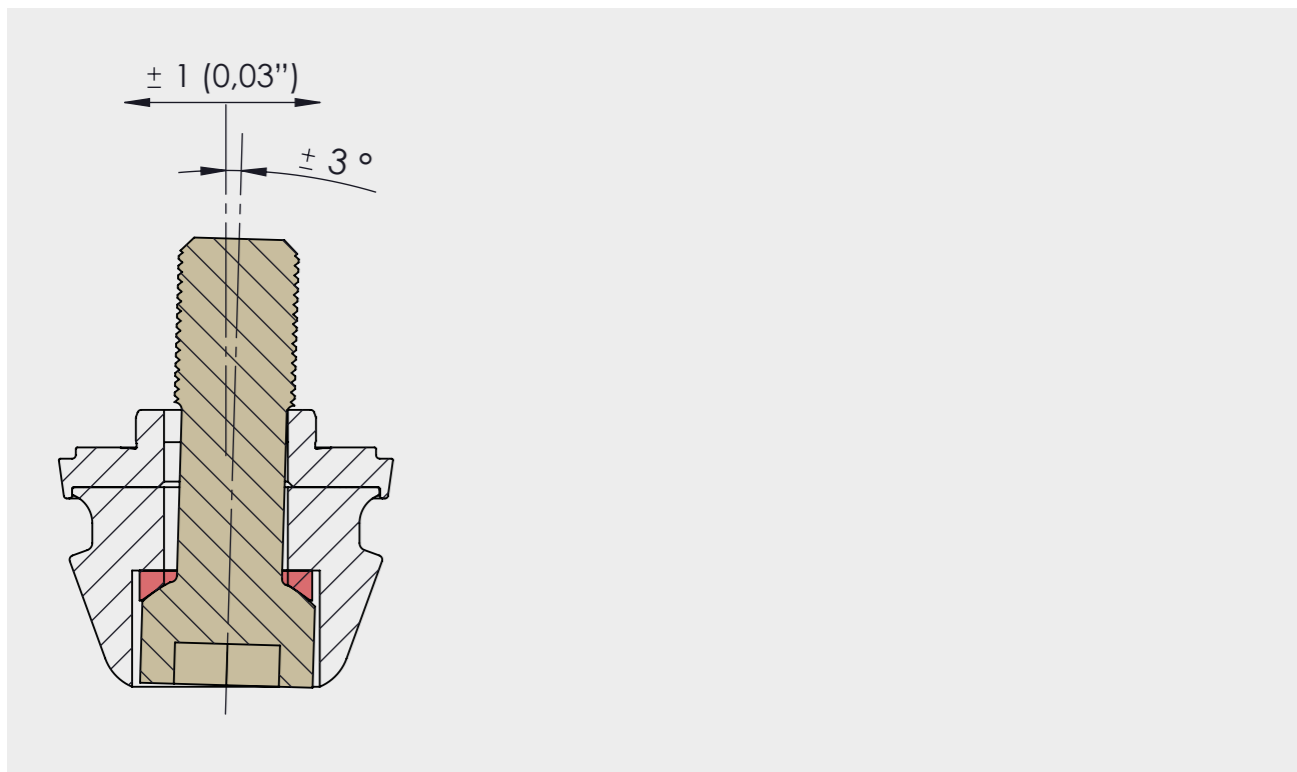
A = CENTERING AND CLAMPING **C = CLAMPING**

M12 FLOATING PIN

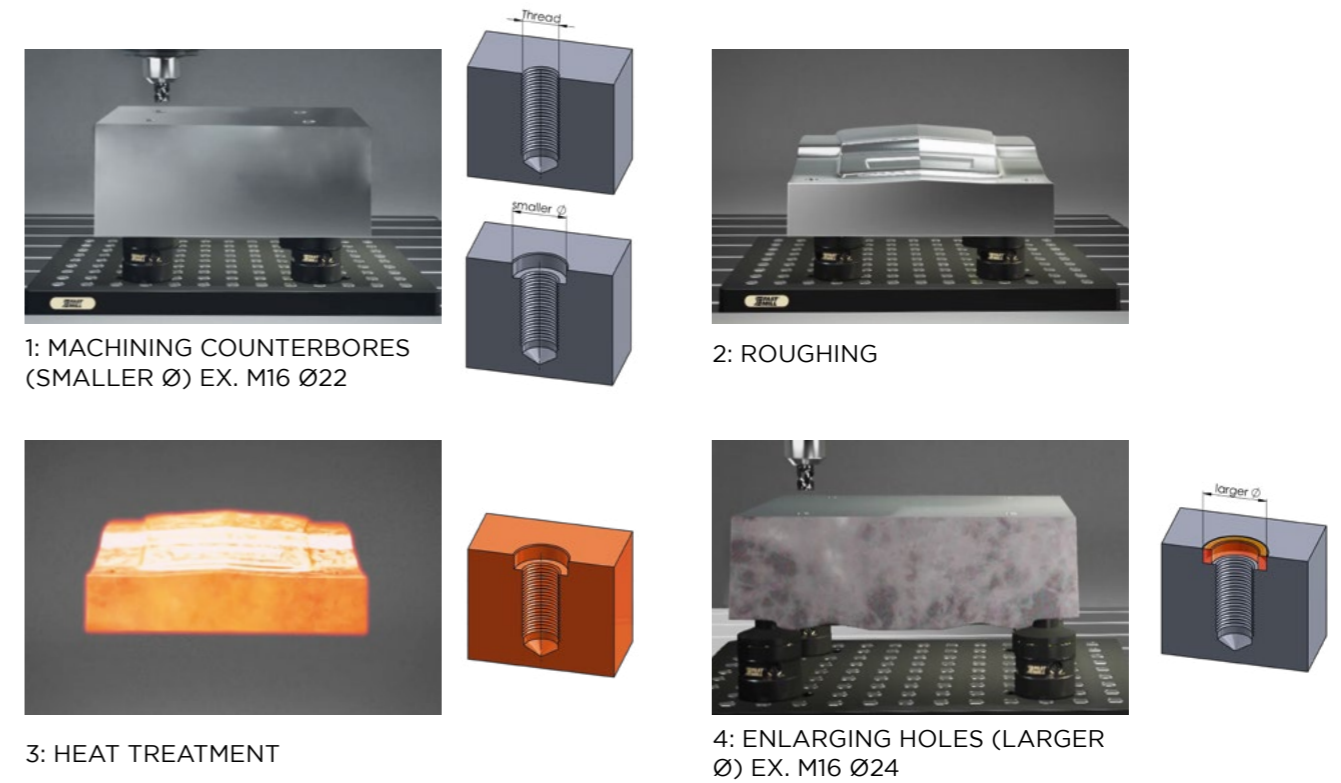
CODE	DESCRIPTION	M	Ø	TYPE
FM46191411	Floating Pin	M12	18 (0,70")	A
FM46193411	Floating Pin	M12	18 (0,70")	C
FM46191421	Floating Pin	M12	20 (0,78")	A
FM46193421	Floating Pin	M12	20 (0,78")	C

M16 FLOATING PIN

CODE	DESCRIPTION	M	Ø	TYPE
FM46191442	Floating Pin	M16	24 (0,94")	A
FM46193442	Floating Pin	M16	24 (0,94")	C

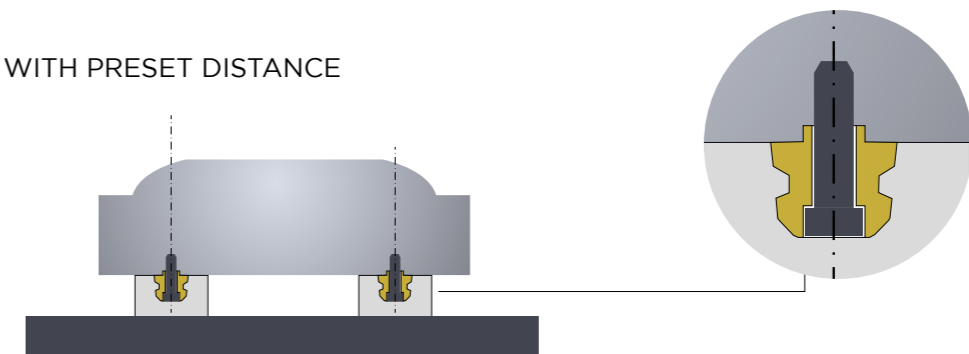


RE-MACHINING PROCESS OF THE COUNTERBORES TO COMPENSATE FOR DISTORTION OF THE PART.

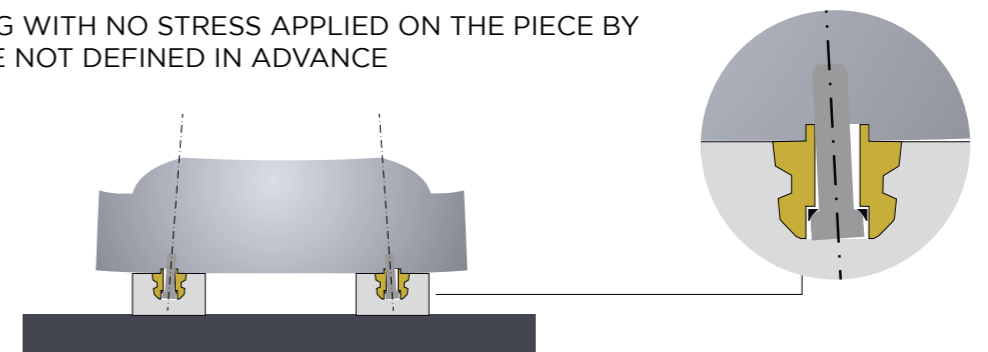


FLOATING PIN (H PIN): INNOVATIVE SOLUTION FOR WORKPIECE RE-POSITIONING WITH NO STRESS APPLIED ON THE PIECE.

CLAMPING WITH PRESET DISTANCE



CLAMPING WITH NO STRESS APPLIED ON THE PIECE BY DISTANCE NOT DEFINED IN ADVANCE



PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS



ADAPTER M20 > M64 FOR CLAMPING ON EXISTING LIFTING HOLES

FastMill adapter is used directly on the workpiece lifting holes for fixing our clamping systems where it is not possible to perform any type of machining to house the pins. The available threads cover the main lifting eye range. On the face opposite the thread there is a standard FastMill interface with M16 hole and D24 counterbore.

CODE	DESCRIPTION	M	S	L	WEIGHT
FM93000043	Adapter	M20x2,5	45	30 (1,18")	2,14 (4,72 lbs)
FM93000028	Adapter	M24x3	45	35 (1,37")	2,19 (4,83 lbs)
FM93000010	Adapter	M30x3,5	20	40 (1,57")	1,10 (2,43 lbs)
FM93000023	Adapter	M36x3	20	50 (1,96")	1,27 (2,80 lbs)
FM93000011	Adapter	M36x4	20	50 (1,96")	1,27 (2,80 lbs)
FM93000024	Adapter	M42x3	20	60 (2,36")	1,53 (3,37 lbs)
FM93000012	Adapter	M42x4,5	20	60 (2,36")	1,50 (3,31 lbs)
FM93000025	Adapter	M48x3	20	70 (2,75")	1,87 (4,12 lbs)
FM93000013	Adapter	M48x5	20	70 (2,75")	1,84 (4,06 lbs)
FM93000014	Adapter	M56x5,5	20	80 (3,14")	2,36 (5,20 lbs)
FM93000015	Adapter	M64x6	20	90 (3,54")	3,06 (6,75 lbs)

SETUP EXAMPLE

THIRD POINT
Code FM46191600

ADAPTER M20 > M64
Code FM93000010

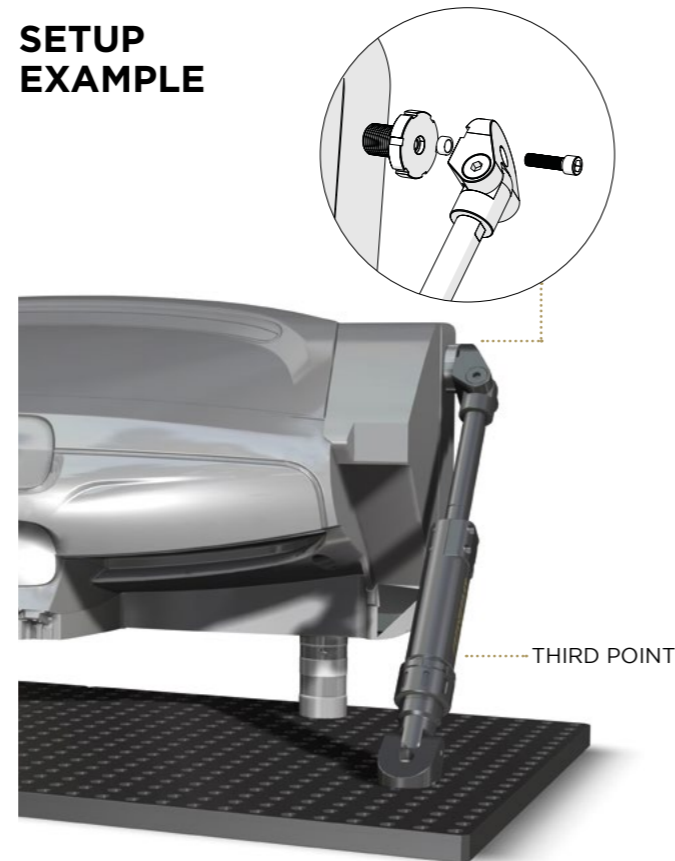
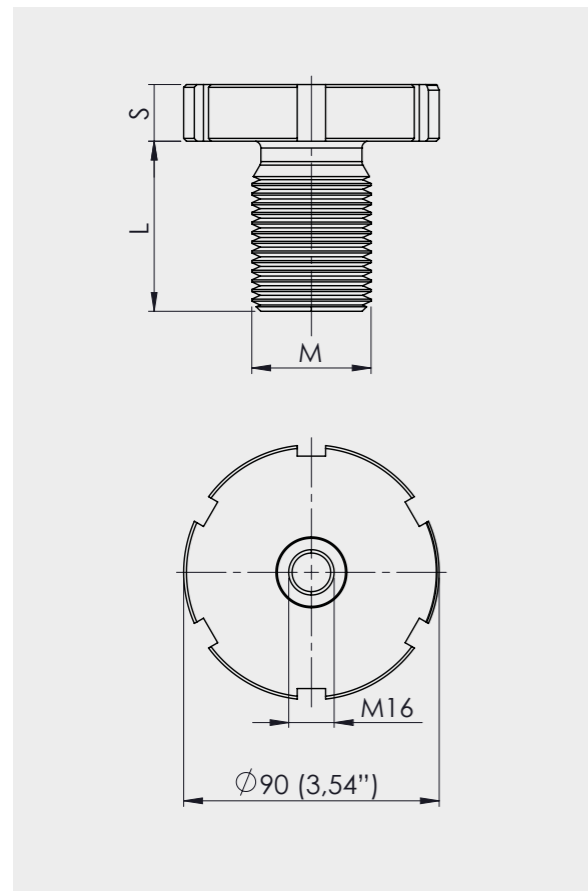
ADJUSTABLE MODULE
Code FMMSADJ901606

SLIDE PLATE FOR Ø90 MODULE
Code FM SLIDE030D90

ADJUSTABLE MODULE
Code FMMSADJ901606

CLOCK PLATE FOR Ø90 MODULE
Code FM CLOCK030D90

SETUP EXAMPLE



PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

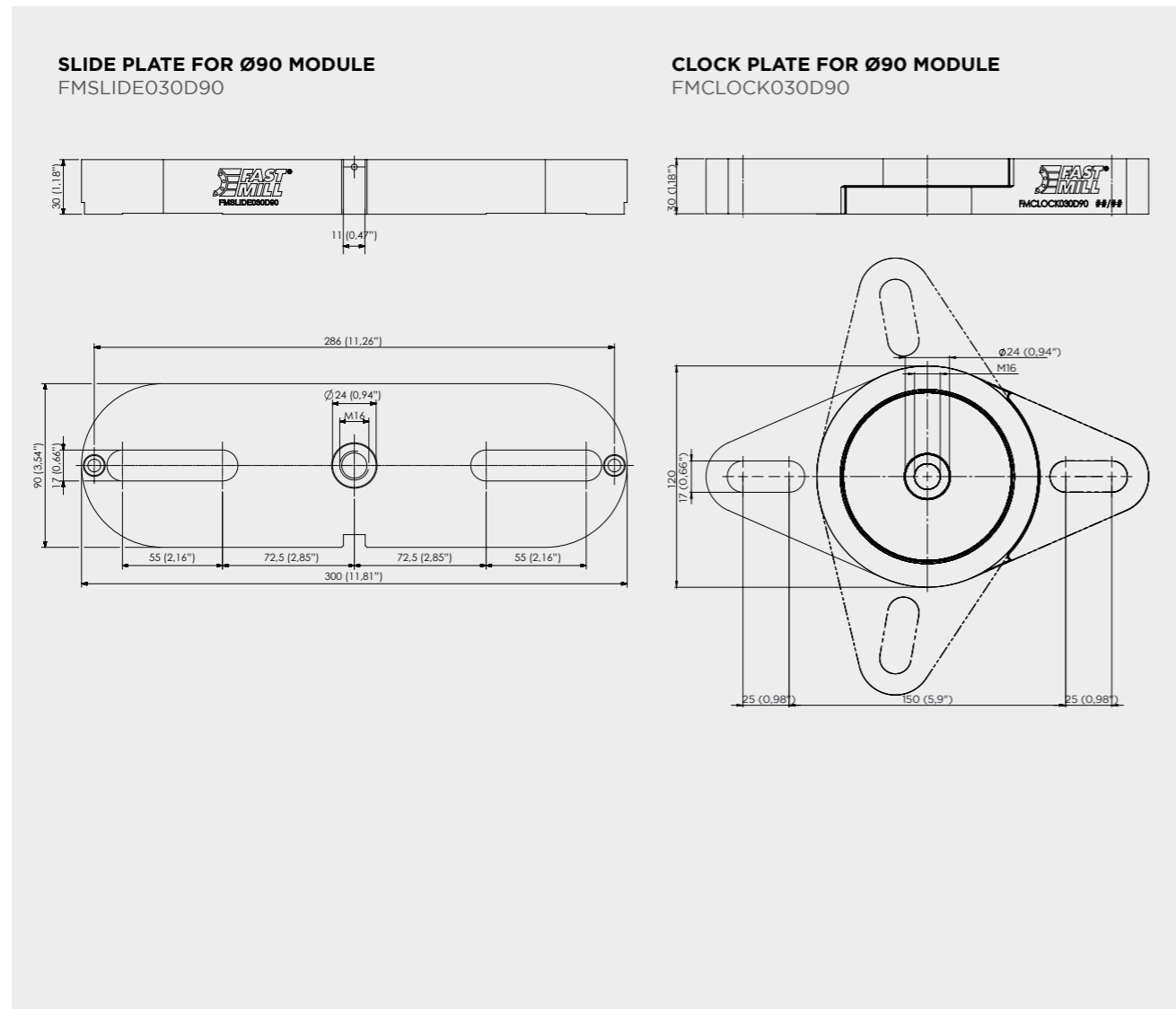
PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
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 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS



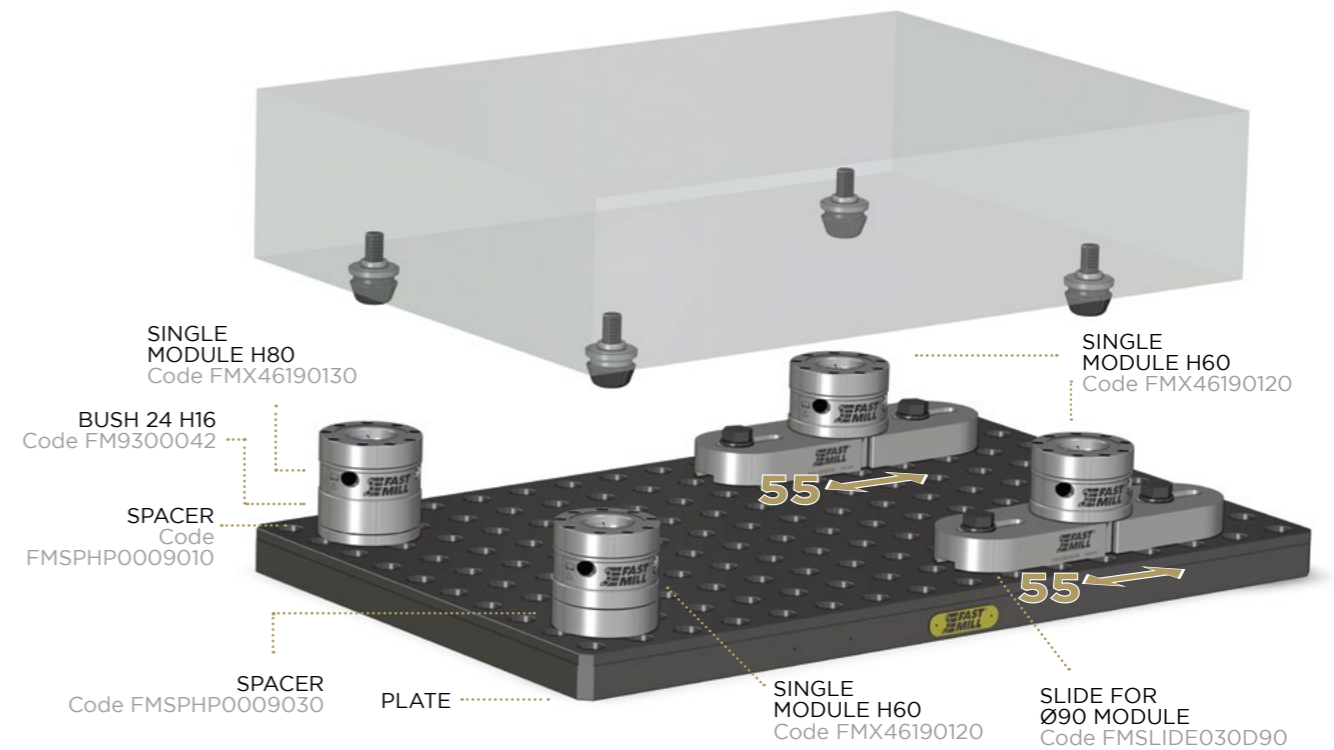
**SLIDE PLATE FOR Ø90 MODULE
CLOCK PLATE FOR Ø90 MODULE**

The FastMill slide and clock solutions for D90 module allow the fixing of a component on which it is not possible to maintain a drilling and counterbore at 50mm pitch. Maximum clamping flexibility and possibility of using existing holes on the workpiece.

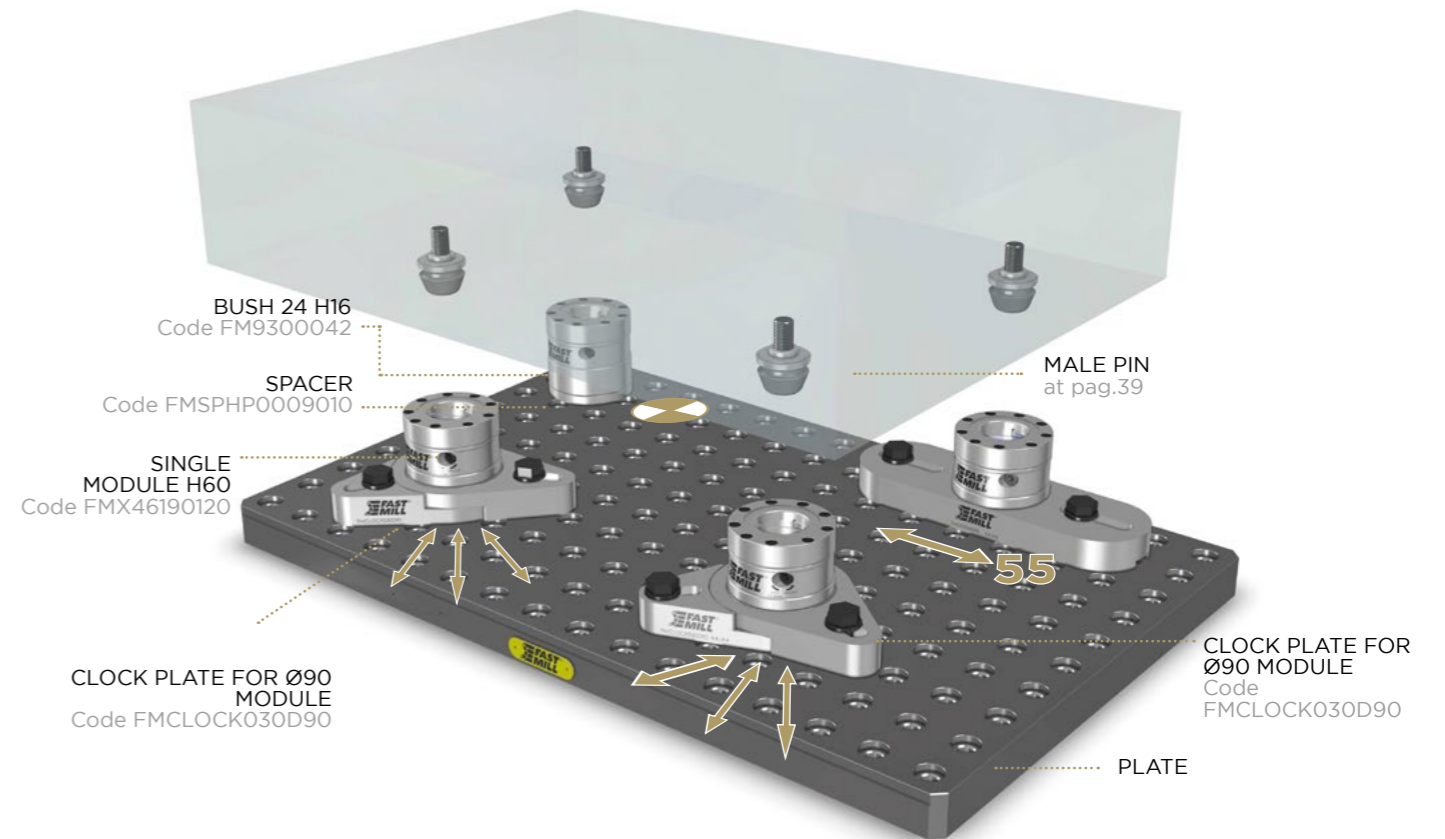
CODE	DESCRIPTION	DIMENSION	HEIGHT	WEIGHT
FMSLIDE030D90	Slide plate for Ø90 module	300x90 (11,81"x3,54")	30 (1,18")	5,1 (11,24 lbs)
FMCLOCK030D90	Clock plate for Ø90 module	240x120 (9,44"x4,72")	30 (1,18")	2,2 (4,85 lbs)



SETUP 2 ZERO POINTS / 2 SLIDE POINTS



SETUP 1 ZERO POINT / 3 FREE POINTS

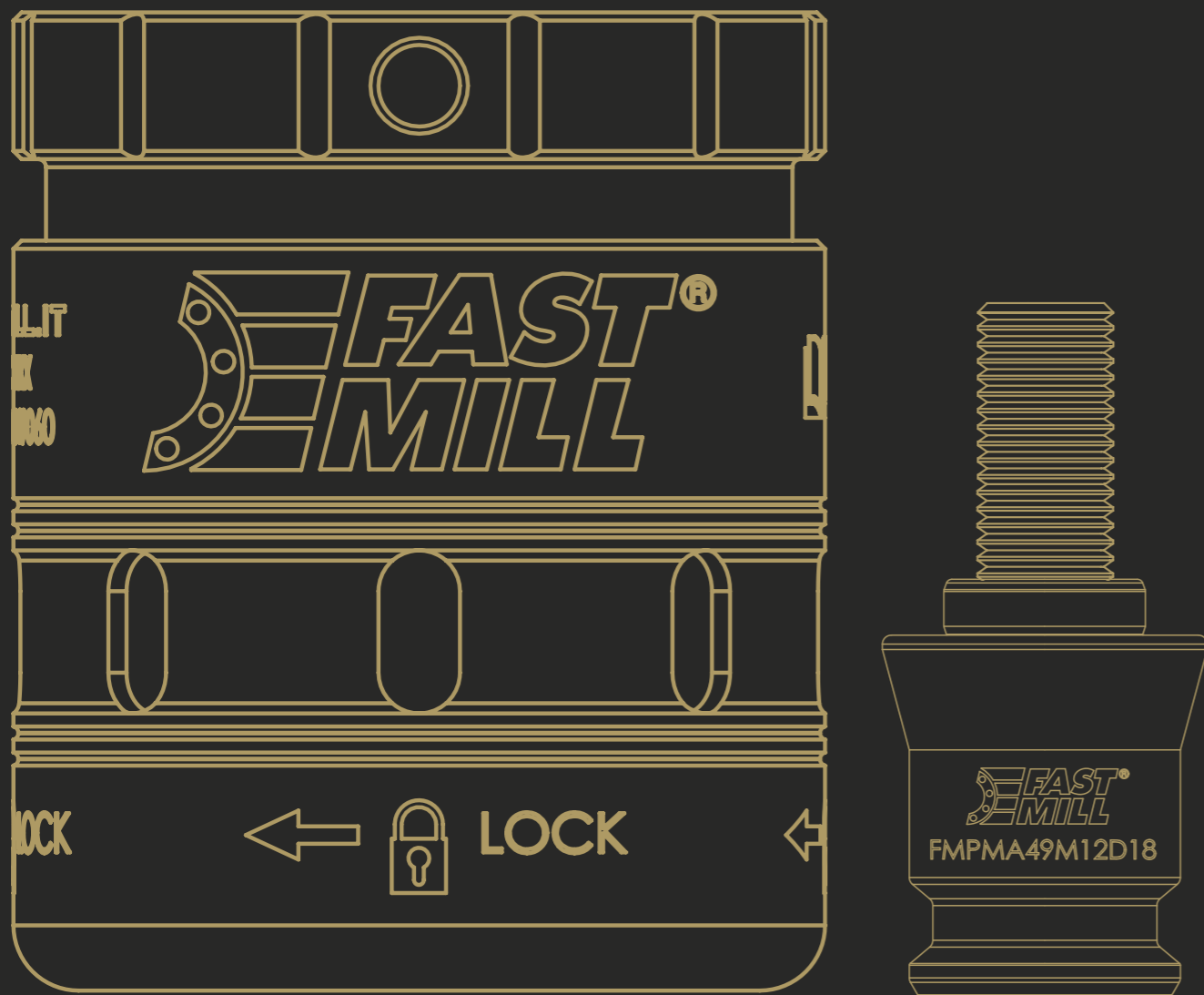


PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

MODULES AND PINS D49

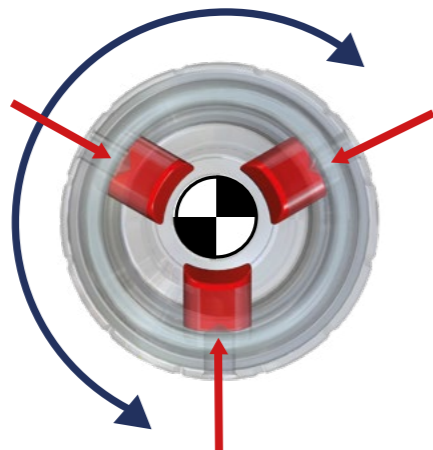


MAIN FEATURES

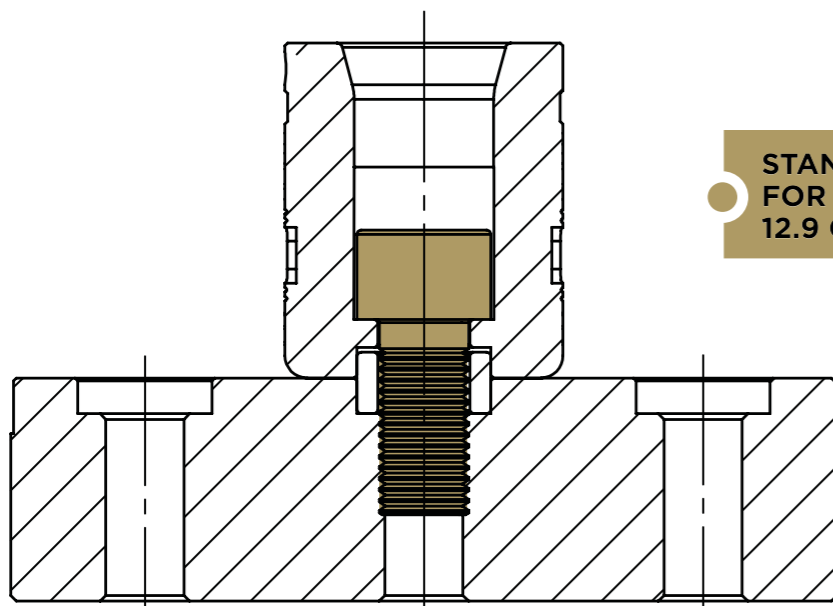
360° POSITIONING / NO NEED TO ORIENT THE SYSTEM



- STAINLESS STEEL
- HARDENED BODY
- 70Nm LOCKING
- SAFETY UNLOCK



- ULTRA PRECISE ZERO POINT
- AUTO-CENTERING SYSTEM



- STANDARD SCREW FOR PLATE FIXING 12.9 GRADE

MAIN FEATURES

360° POSITIONING / NO NEED TO ORIENT THE SYSTEM



- STRONG SOLID BODY DESIGN - HARDENED STEEL



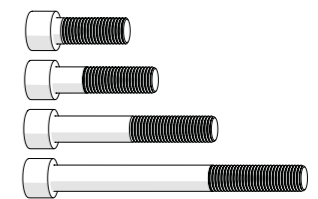
- STANDARD SET SCREW (12.9 GRADE) FOR WORKPIECE FIXING
- QUICK AND LOW COST CHANGEOVER FOR DIFFERENT HEIGHT SETTINGS BY CHANGING THE SCREW LENGTH



- WITHSTANDS SHOCK WITHOUT COMPROMISING FUNCTIONALITY
- ALLOW THE WORKPIECE TO REST ON THE FLOOR

TECHNICAL TIPS

The whole range of FASTMILL® modules use standard 12.9 (DIN912) screws from M6 to M10 or higher of different heights for the connection of the pieces, to the pallets and to the spacers.



PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
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CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
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CLAMPS

PATENTED

PATENTED



SINGLE MODULE Ø49

Patented by FastMill, this module allows the user to combine extreme ease of use with high focus on to medium machining, all while maintaining maximum positioning precision. Also perfect for EDM applications and in aggressive environments thanks to stainless material.

CODE	DESCRIPTION	HEIGHT	Ø	FIXING SCREW
FMSSS0049060	Single module Ø49	60 (2,36")	49,8 (1,96")	M16

CODE	DESCRIPTION	DIMENSION	TORQUE	WEIGHT
FM93000048KIT	Preset torque wrench 70 Nm	280 (11,02")	70 Nm	0,5 (11 lbs)
FM9300048T1	Torque wrench insert			0,1 (2 lbs)

PRESET TORQUE WRENCH 70 Nm
FM93000048KIT

TORQUE WRENCH INSERT
FM9300048T1

SINGLE MODULES Ø49 SETUP EXAMPLE

Related bushes at pag.11

Related pins at pag.56

SINGLE MODULES Ø49 COMBINATION EXAMPLE

MALE PIN
Code FMPMA49M16D24

STANDARD 12.9 (DIN912) SCREW
Code VTCEI M16x60

BUSH
Code FM46190924

SINGLE MODULE Ø49 (1,96")
Code FMMSS0049060

PLATE
Code FM46195202

SINGLE MODULES Ø49 COMBINATION EXAMPLE



PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

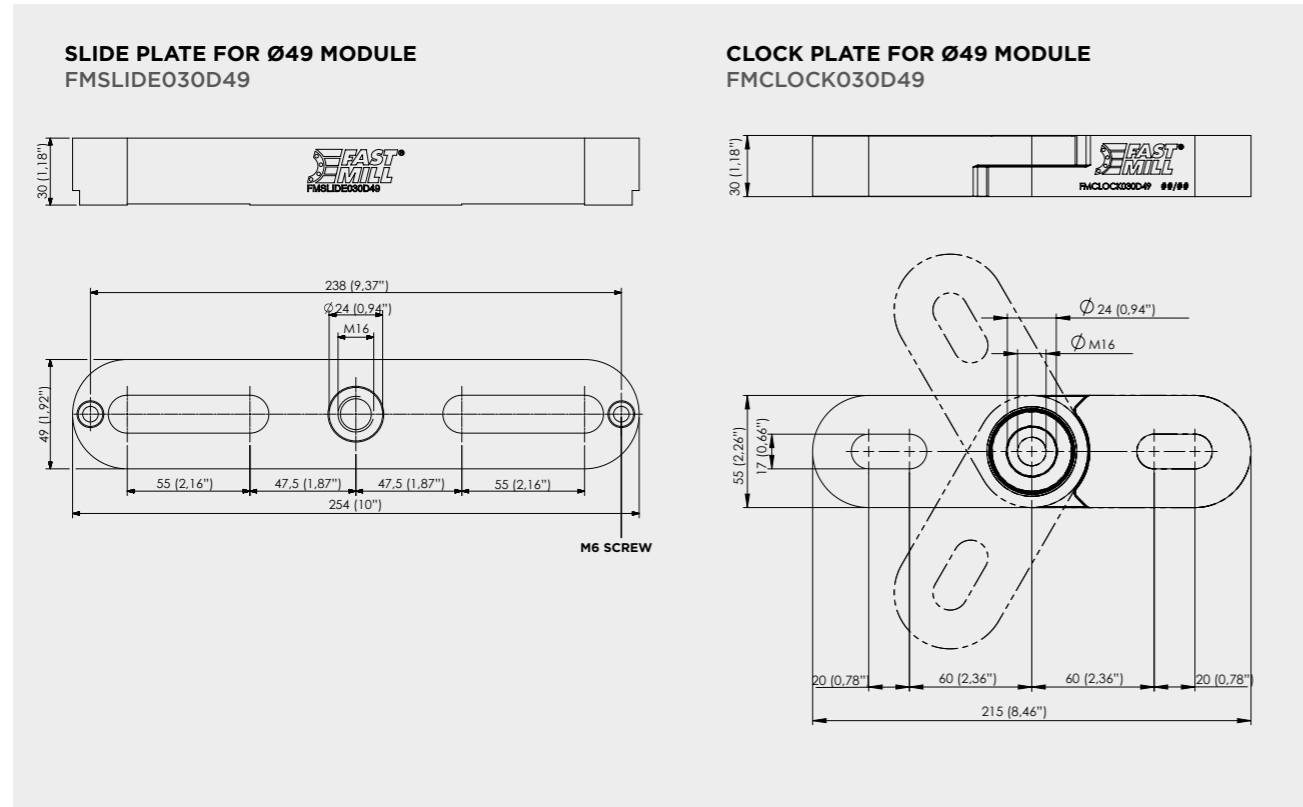
PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS



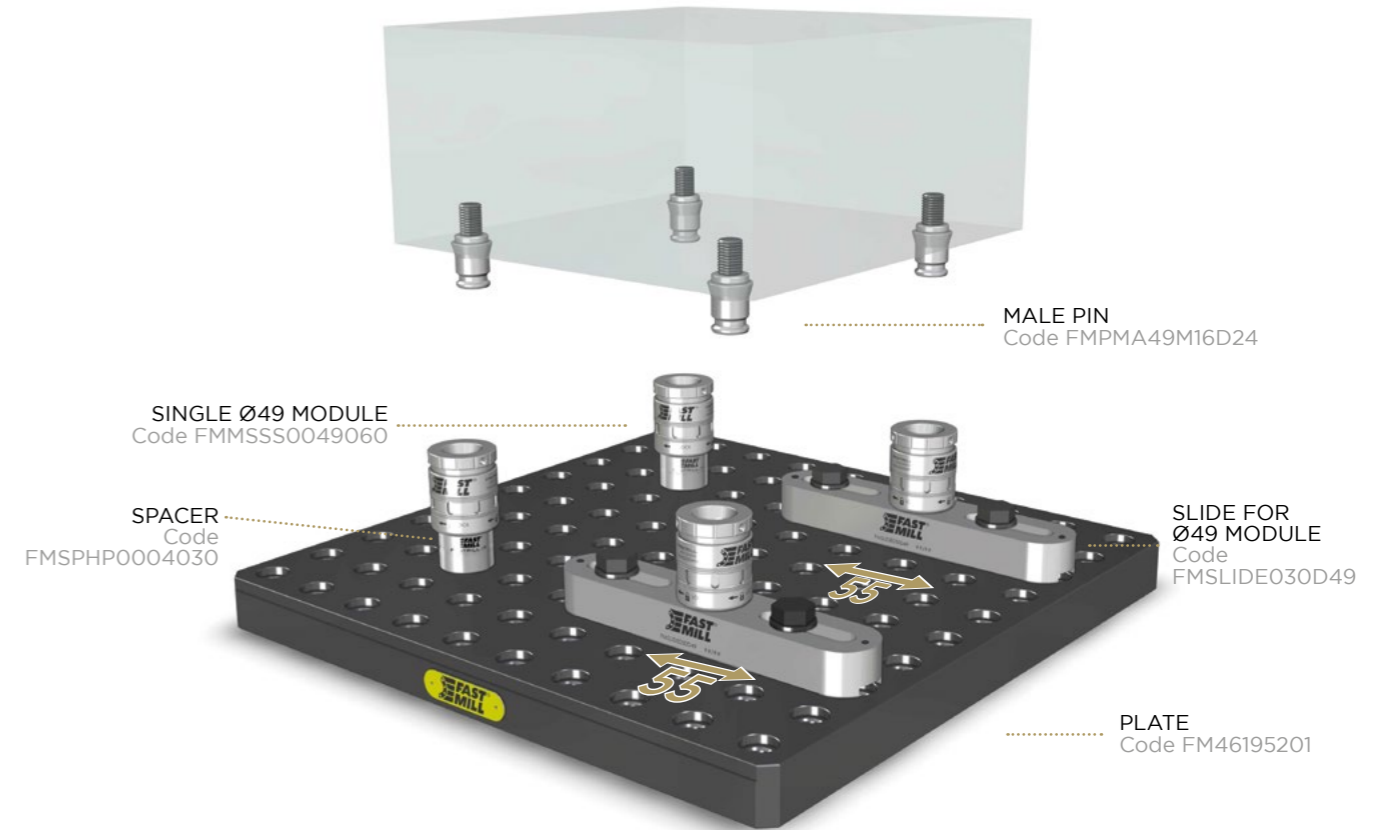
**SLIDE PLATE FOR Ø49 MODULE
CLOCK PLATE FOR Ø49 MODULE**

The FastMill slide and clock solutions for D49 module allow the fixing on the plate grid of a component on which it is not possible to maintain a drilling and counterbore at 50mm pitch. Maximum clamping flexibility and possibility of using existing holes on the workpiece.

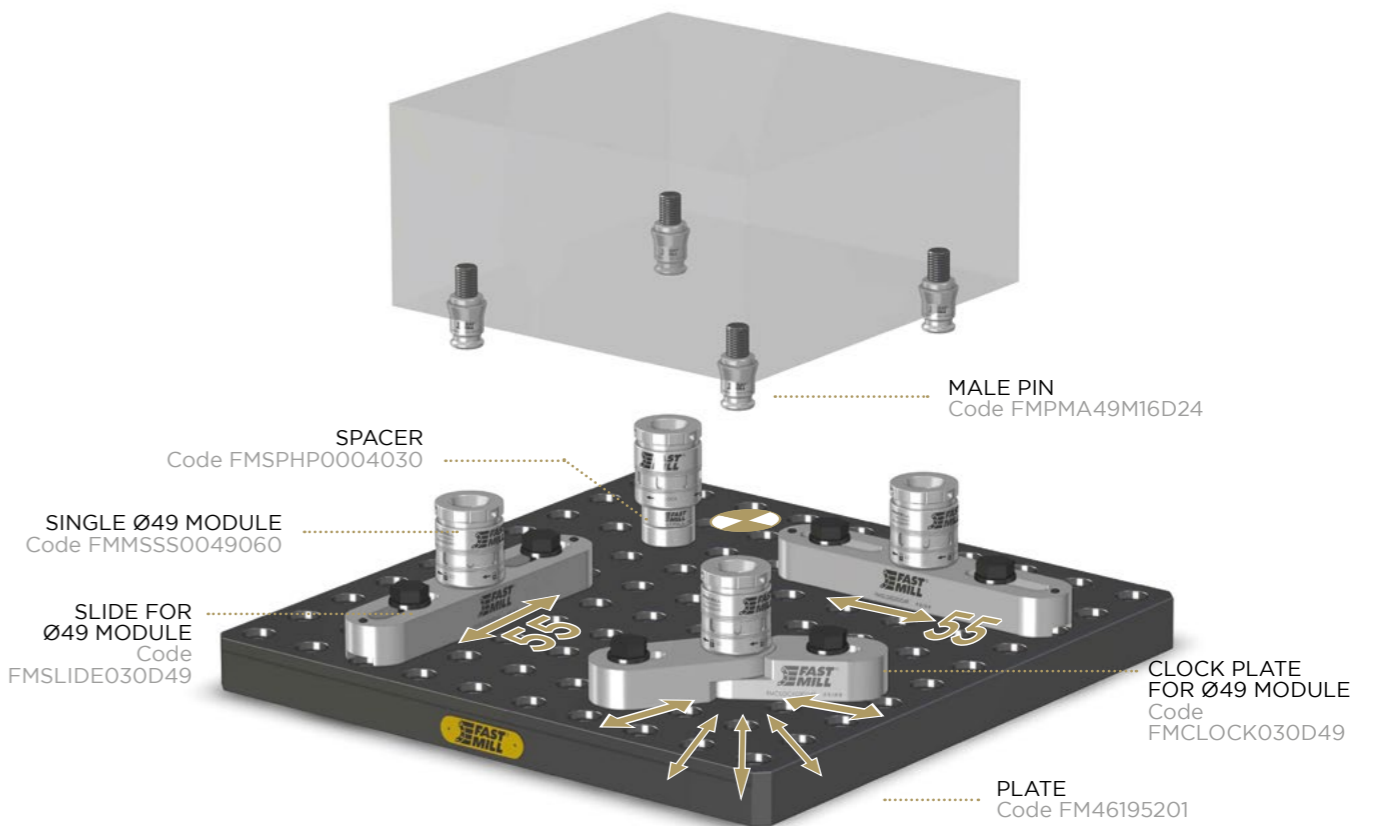
CODE	DESCRIPTION	DIMENSION	HEIGHT	WEIGHT
FMSLIDE030D49	Slide plate for Ø49 module	254x49 (10"x1,92")	30 (1,18")	2,0 (4,40 lbs)
FMCLOCK030D49	Clock plate for Ø49 module	215x55 (8,46"x2,16")	30 (1,18")	2,2 (4,85 lbs)



SETUP 2 ZERO POINTS / 2 SLIDE POINTS



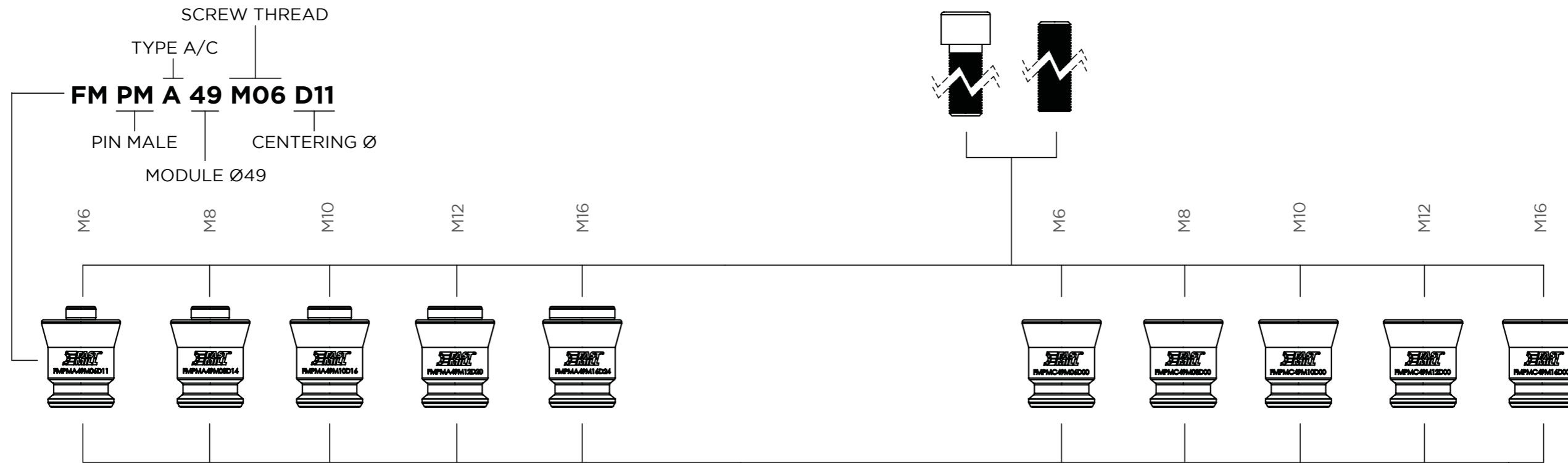
SETUP 1 ZERO POINT / 3 FREE POINTS



PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

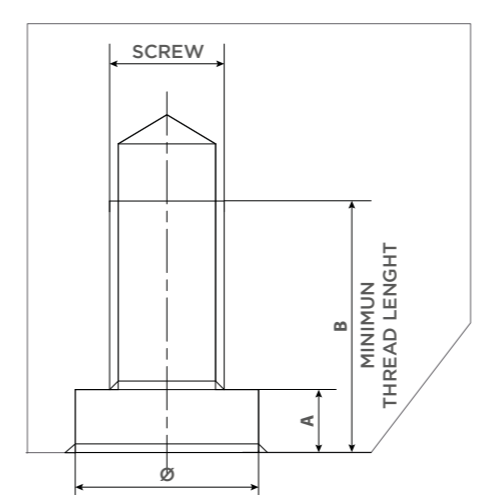
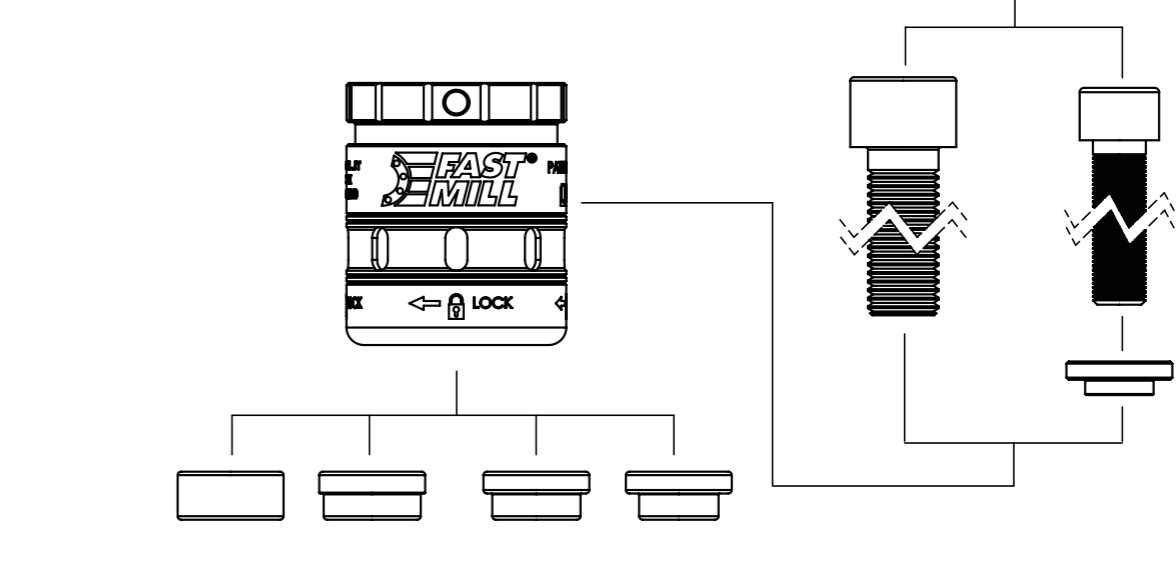
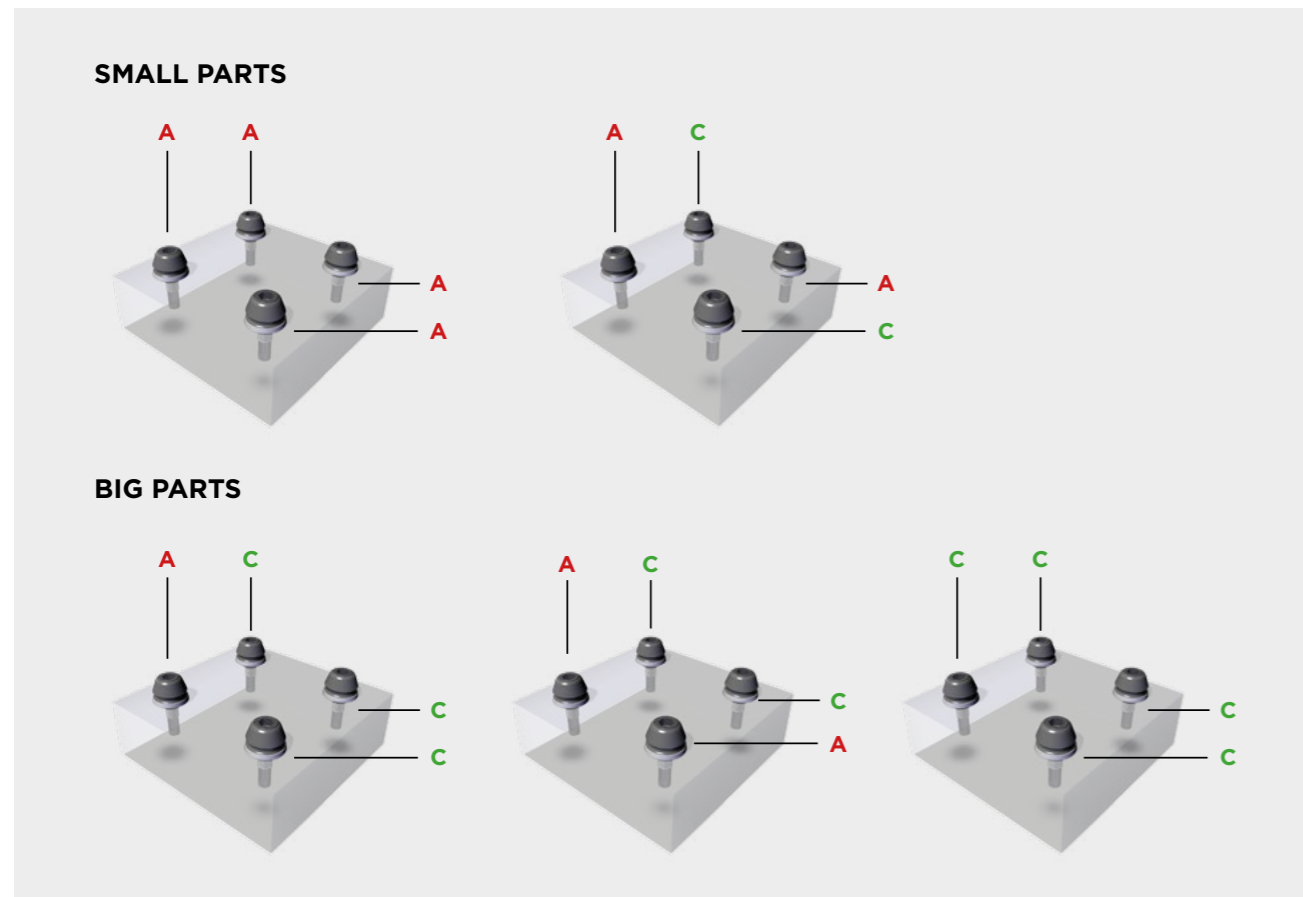
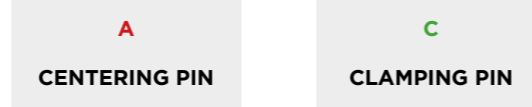
PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

SINGLE MODULE Ø49 ASSEMBLY EXAMPLE



TECHNICAL INFORMATION

Clamping and positioning of fixture and/or workpiece are achieved through the clamping pins. Type A is used for centering and clamping, type C only for clamping.



STANDARD AND MINI RANGE WORKPIECE PREPARATION

SCREW	Ø	A	B (STEEL)	B (CAST IRON/ALLOY)
M6	10-11 mm H6	7 mm	16 mm	20 mm
M8	12-14 mm H6	7 mm	20 mm	27 mm
M10	14-16 mm H6	7 mm	22 mm	29 mm
M12	18-20 mm H6	7 mm	26 mm	32 mm
M12 *	18-20 mm H6	9,5 mm	26 mm	32 mm
M16	22-24 mm H6	7 mm	32 mm	40 mm
M24	34-36 mm H6	10 mm	48 mm	60 mm

* For FMZ pin.

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
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VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
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CLAMPS



PIN FOR SINGLE MODULE Ø49

Pins for D49 modules are made of hardened stainless steel, in sizes from M6 to M16 with counterbore from D10 to D24. They use class 12.9 screw sets, easy to replace and change the length in order to adapt to any clamping setup. Available type A for clamping and positioning and type C for clamping with a slight freedom in positioning.

A = CENTERING AND CLAMPING **C = CLAMPING**

M6 PIN FOR SINGLE MODULE Ø49

CODE	DESCRIPTION	M	Ø	TYPE
FMPMA49M06D10	Pin	M6	10 (0,39")	A
FMPMC49M06D10	Pin	M6	10 (0,39")	C
FMPMA49M06D11	Pin	M6	11 (0,43")	A
FMPMC49M06D11	Pin	M6	11 (0,43")	C
FMPMC49M06D00	Pin	M6	-	C

M8 PIN FOR SINGLE MODULE Ø49

CODE	DESCRIPTION	M	Ø	TYPE
FMPMA49M08D12	Pin	M8	12 (0,47")	A
FMPMC49M08D12	Pin	M8	12 (0,47")	C
FMPMA49M08D14	Pin	M8	14 (0,55")	A
FMPMC49M08D14	Pin	M8	14 (0,55")	C
FMPMC49M08D00	Pin	M8	-	C

M10 PIN FOR SINGLE MODULE Ø49

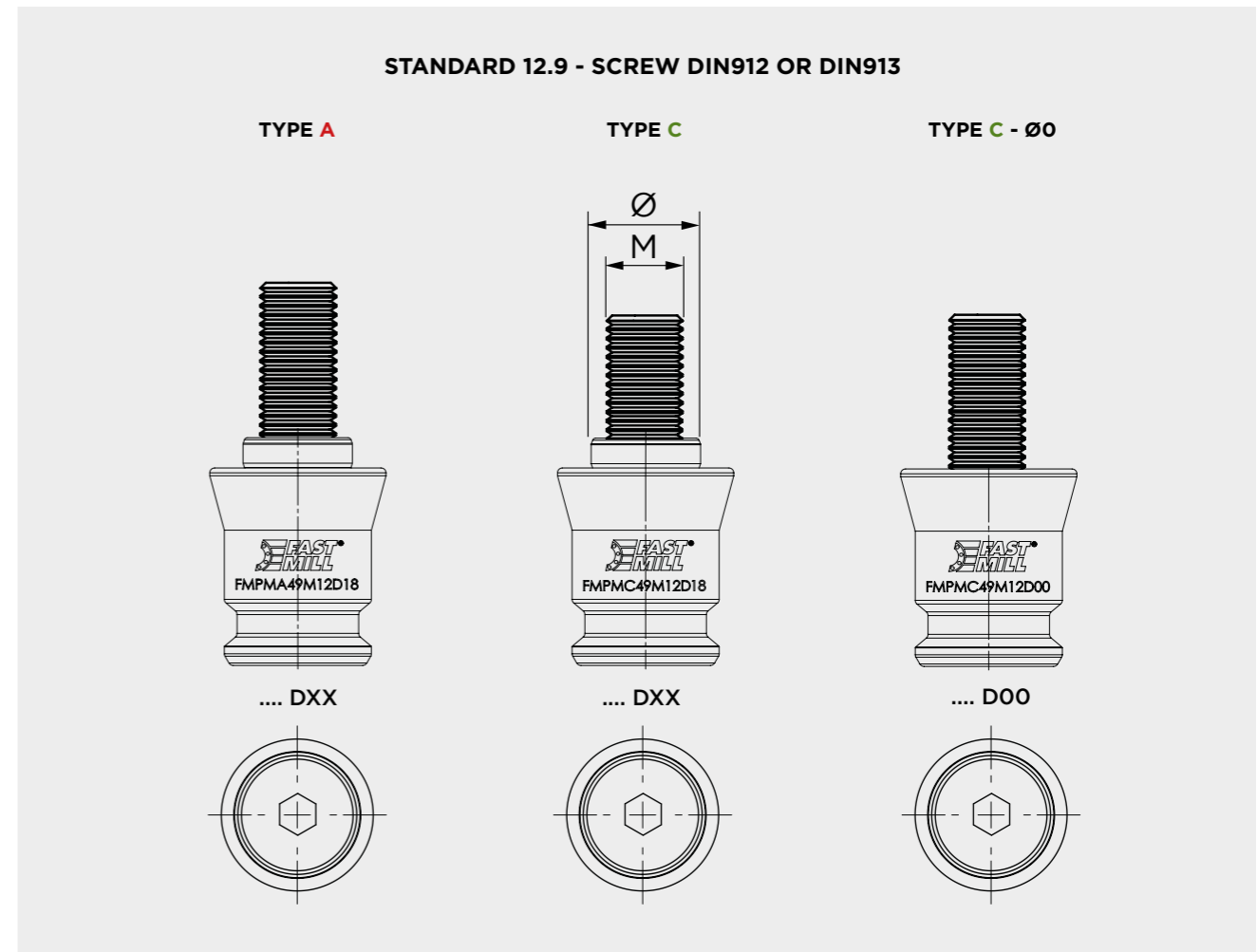
CODE	DESCRIPTION	M	Ø	TYPE
FMPMA49M10D14	Pin	M10	14 (0,55")	A
FMPMC49M10D14	Pin	M10	14 (0,55")	C
FMPMA49M10D16	Pin	M10	16 (0,62")	A
FMPMC49M10D16	Pin	M10	16 (0,62")	C
FMPMC49M10D00	Pin	M10	-	C

M12 PIN FOR SINGLE MODULE Ø49

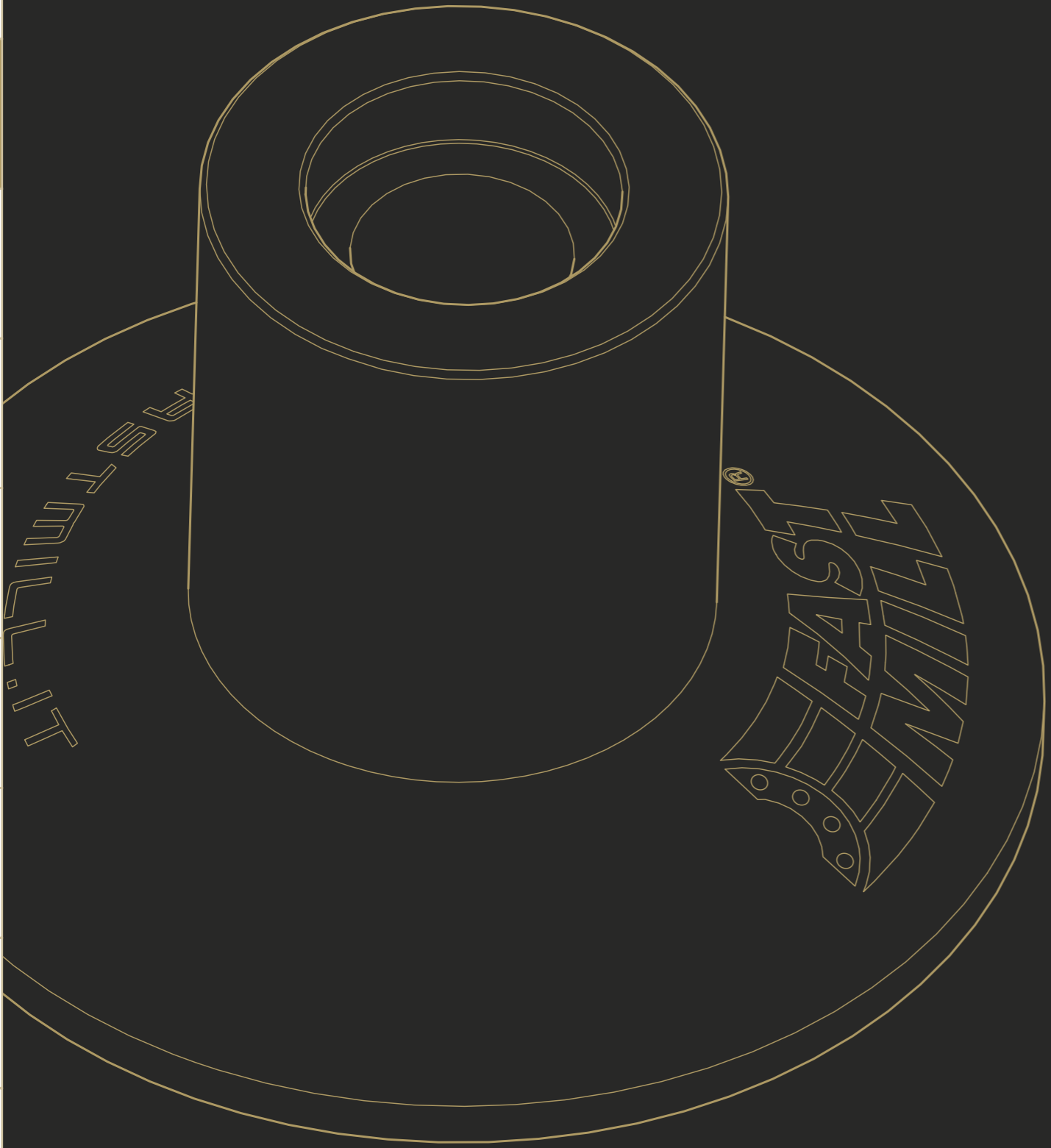
CODE	DESCRIPTION	M	Ø	TYPE
FMPMA49M12D18	Pin	M12	18 (0,70")	A
FMPMC49M12D18	Pin	M12	18 (0,70")	C
FMPMA49M12D20	Pin	M12	20 (0,78")	A
FMPMC49M12D20	Pin	M12	20 (0,78")	C
FMPMC49M12D00	Pin	M12	-	C

M16 PIN FOR SINGLE MODULE Ø49

CODE	DESCRIPTION	M	Ø	TYPE
FMPMA49M16D22	Pin	M16	22 (0,86")	A
FMPMC49M16D22	Pin	M16	22 (0,86")	C
FMPMA49M16D24	Pin	M16	24 (0,94")	A
FMPMC49M16D24	Pin	M16	24 (0,94")	C
FMPMC49M16D00	Pin	M16	-	C



CLAMPS	FASTMILL ZERO	MINI RANGE	VERTICAL CLAMPING	MAGNETIC	THIRD POINT	RISERS	SPACERS	MODULES AND PINS D49	MODULES AND PINS D90	PLATES AND BUSHES
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SPACERS

CLAMPS	FASTMILL ZERO	MINI RANGE	VERTICAL CLAMPING	MAGNETIC	THIRD POINT	RISERS	SPACERS	MODULES AND PINS D49	MODULES AND PINS D90	PLATES AND BUSHES
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**SPACER Ø40 HIGH PRECISION
REDUCTION Ø90 - 40 HIGH PRECISION
SPACER Ø90 HIGH PRECISION**
HARDENED - GROUND

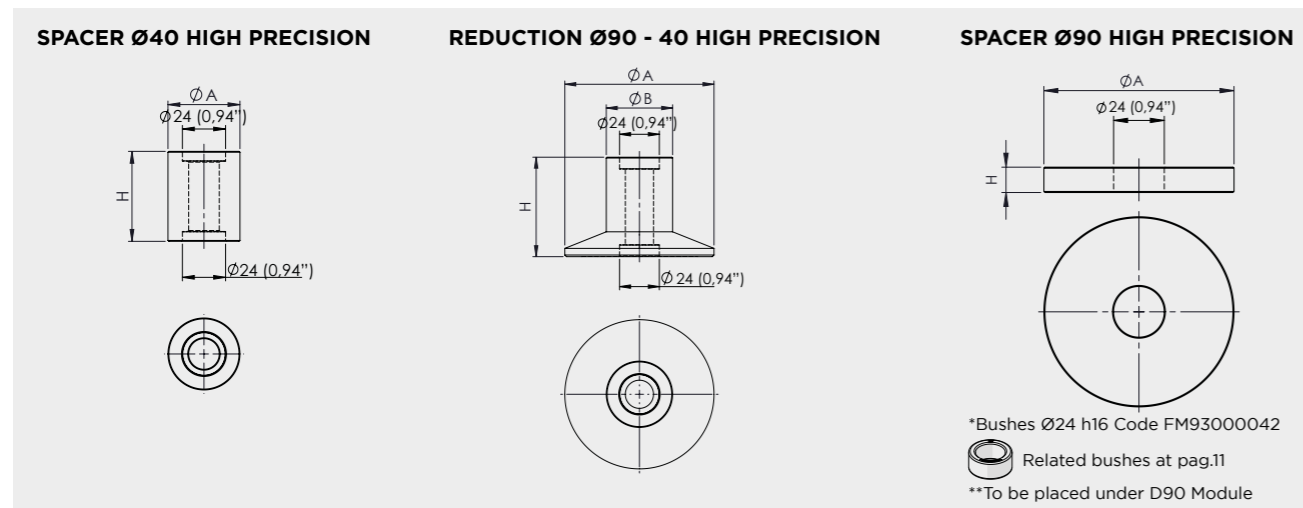
Spacer range allows the customer to customize the Z height of the workpiece allowing distance from the table. Furthermore, thanks to the counterbore and the use of FastMill bushings, the alignment of the component with respect to the module is always guaranteed. Various sizes and diameters are available for all needs

CODE	DESCRIPTION	Ø A	Ø B	HEIGHT
FMSPHP0004010	Spacer High Precision	40 (1,57")	-	10 (0,39")
FMSPHP0004015	Spacer High Precision	40 (1,57")	-	15 (0,59")
FMSPHP0004020	Spacer High Precision	40 (1,57")	-	20 (0,78")
FMSPHP0004025	Spacer High Precision	40 (1,57")	-	25 (0,98")
FMSPHP0004030	Spacer High Precision	40 (1,57")	-	30 (1,18")
FMSPHP0004040	Spacer High Precision	40 (1,57")	-	40 (1,57")
FMSPHP0004050	Spacer High Precision	40 (1,57")	-	50 (1,96")

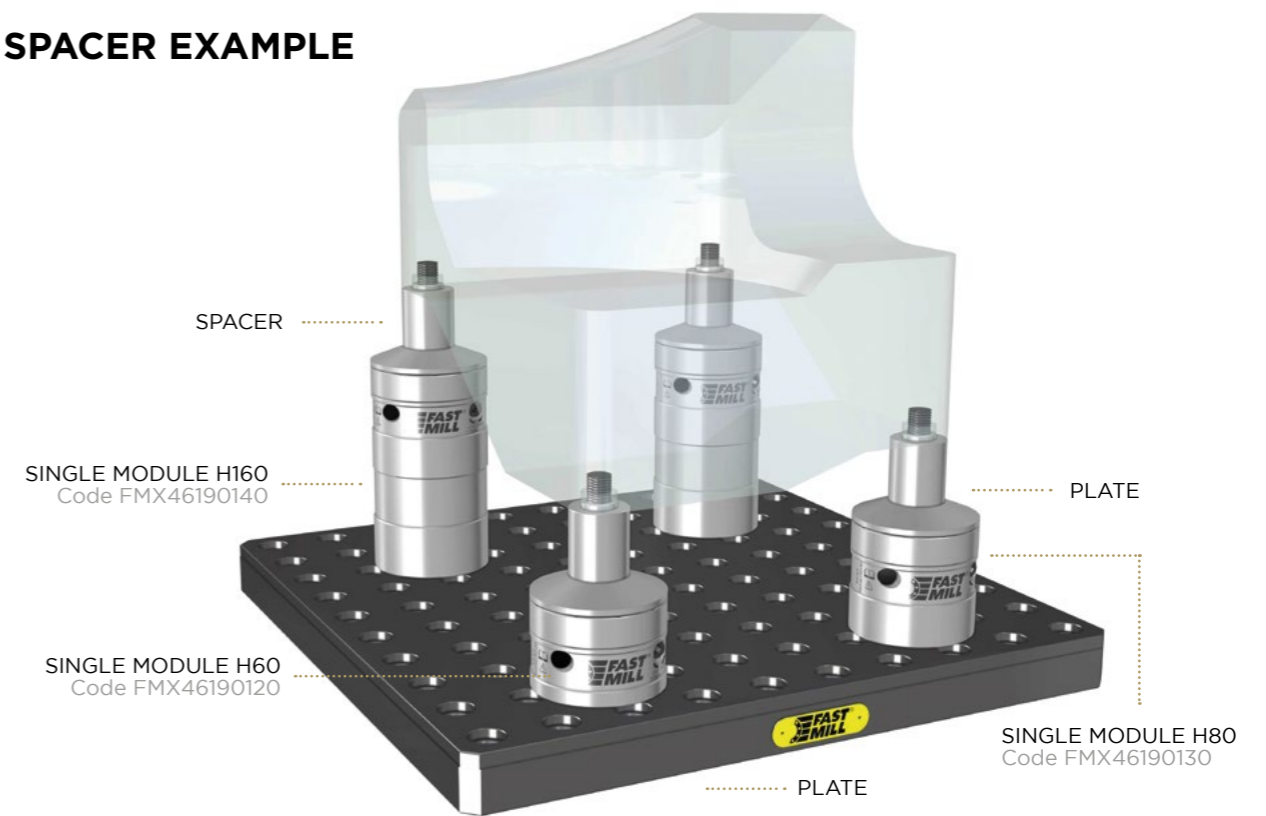
CODE	DESCRIPTION	Ø A	Ø B	HEIGHT
FM46191801	Reduction High Precision	90 (3,54")	40 (1,57")	10 (0,39")
FM46191802	Reduction High Precision	90 (3,54")	40 (1,57")	20 (0,78")
FM46191803	Reduction High Precision	90 (3,54")	40 (1,57")	30 (1,18")
FM46191804	Reduction High Precision	90 (3,54")	40 (1,57")	40 (1,57")
FM46191805	Reduction High Precision	90 (3,54")	40 (1,57")	50 (1,96")
FM46191806	Reduction High Precision	90 (3,54")	40 (1,57")	60 (2,36")

CODE	DESCRIPTION	Ø A	Ø B	HEIGHT
FMSPHP0009005*	Spacer High Precision	90 (3,54")	-	5 (0,19")**
FMSPHP0009010	Spacer High Precision	90 (3,54")	-	10 (0,39")
FMSPHP0009020	Spacer High Precision	90 (3,54")	-	20 (0,78")
FMSPHP0009030	Spacer High Precision	90 (3,54")	-	30 (1,18")
FMSPHP0009040	Spacer High Precision	90 (3,54")	-	40 (1,57")

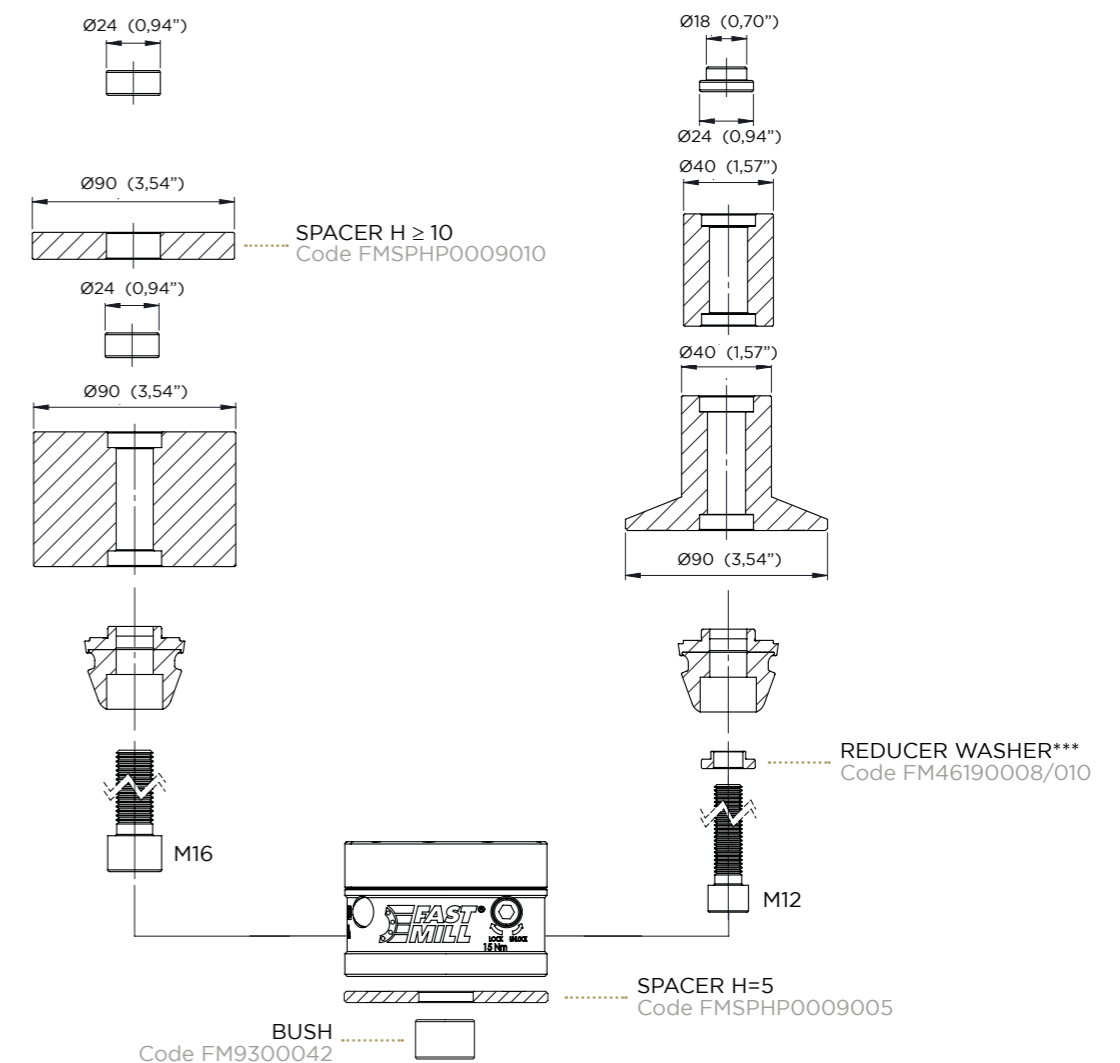
CODE	DESCRIPTION	Ø	M
FM46190008 (***) at pag.58)	Reducer washer for pin	M12	M6
FM46190010 (***) at pag.58)	Reducer washer for pin	M12	M8



SPACER EXAMPLE



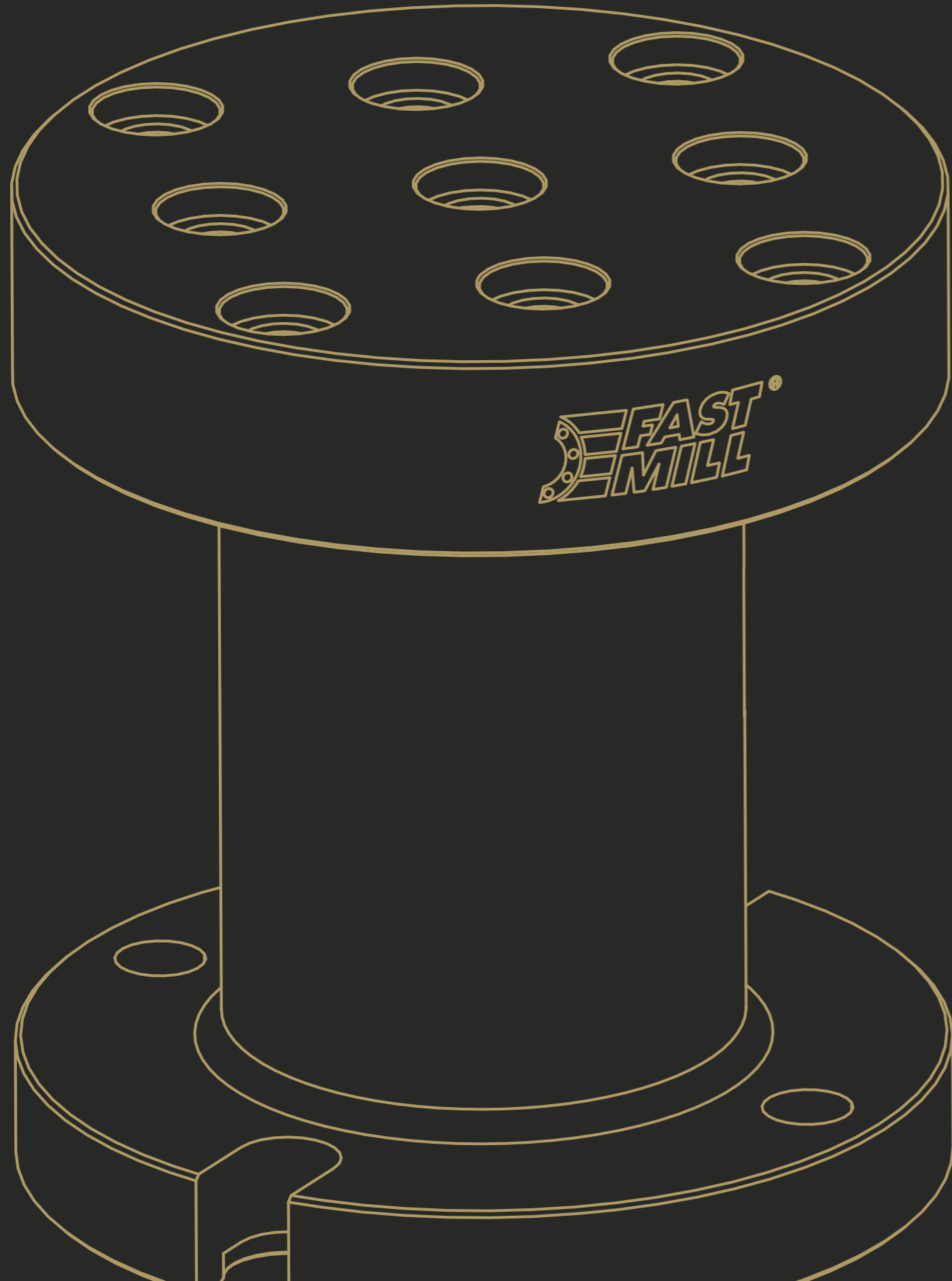
SPACERS ASSEMBLY EXAMPLE



PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

CLAMPS	FASTMILL ZERO	MINI RANGE	VERTICAL CLAMPING	MAGNETIC	THIRD POINT	RISERS	SPACERS	MODULES AND PINS D49	MODULES AND PINS D90	PLATES AND BUSHES
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RISERS

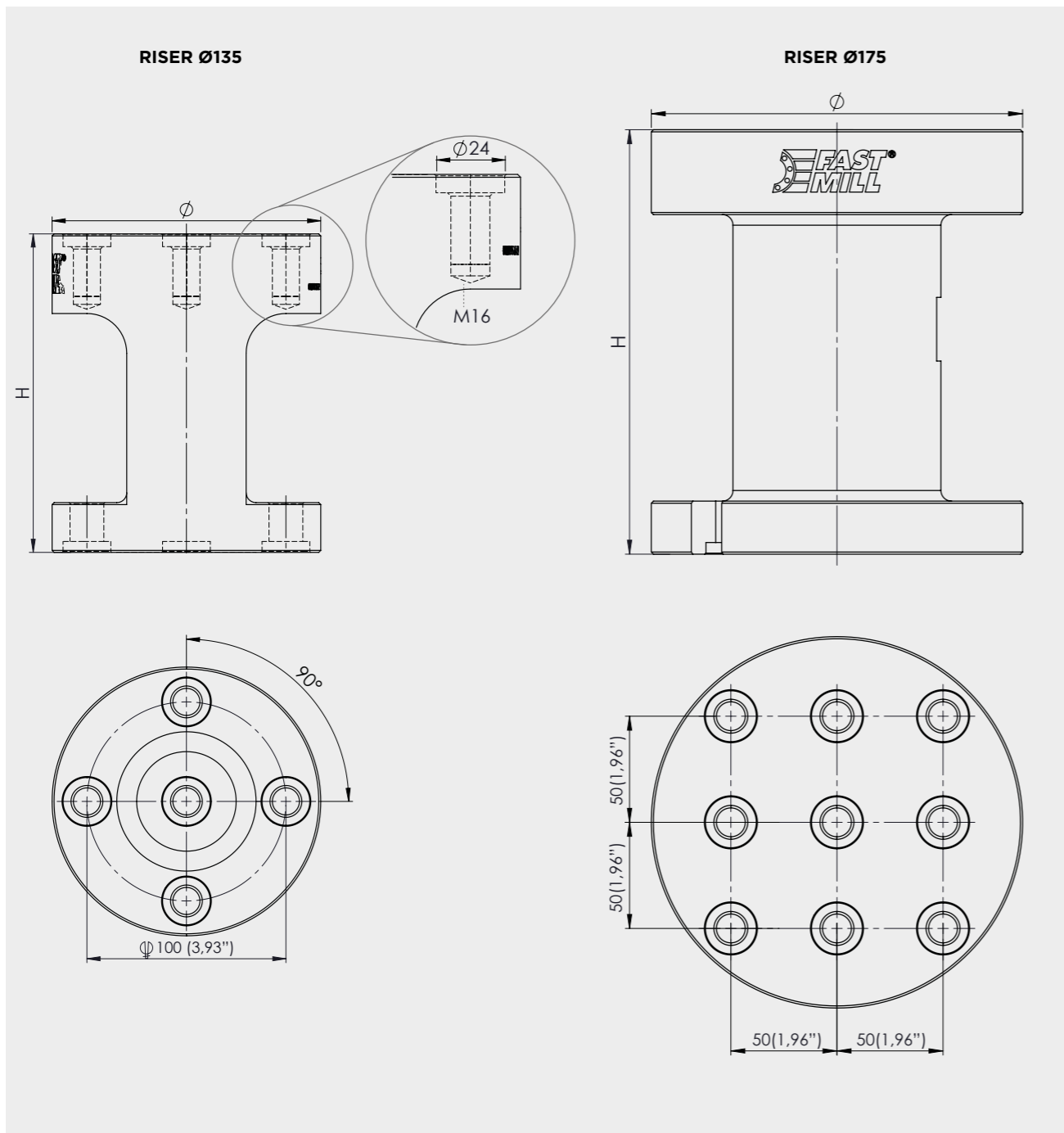
CLAMPS	FASTMILL ZERO	MINI RANGE	VERTICAL CLAMPING	MAGNETIC	THIRD POINT	RISERS	SPACERS	MODULES AND PINS D49	MODULES AND PINS D90	PLATES AND BUSHES
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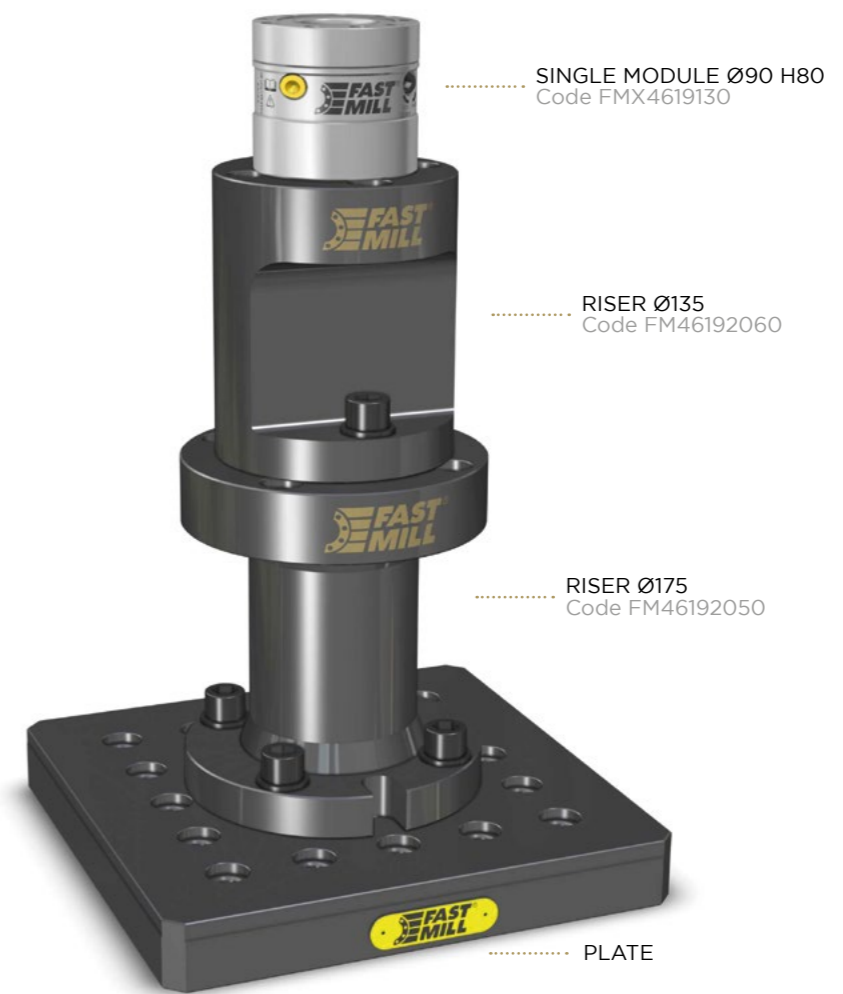
RISERS Ø135 - Ø175

The FastMill riser range is used to raise the entire clamping set up in the Z direction while maintaining a solid support surface. Thanks to the precise centering, the position of the counterbore corresponds to that of the FastMill plate on which the riser is mounted. Available in two sizes and diameters to cover all needs

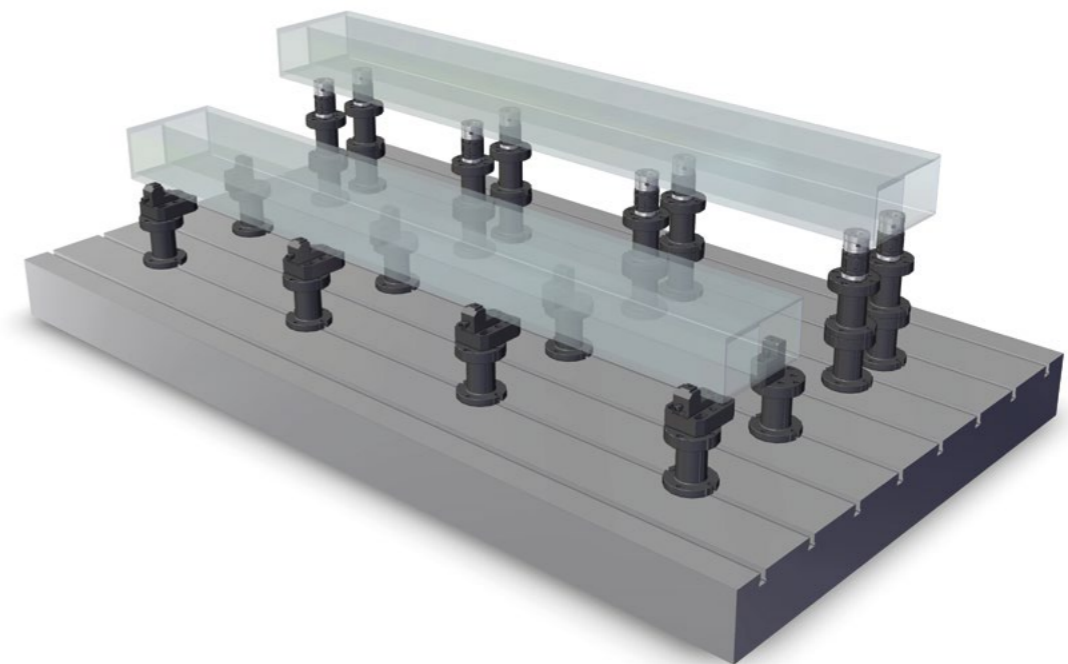
CODE	DESCRIPTION	Ø	HEIGHT	WEIGHT
FM46192060	Riser	135 (5,31")	160 (6,29")	13 (28,66 lbs)
FM46192050	Riser	175 (6,88")	200 (7,87")	20 (44,09 lbs)



RISER ASSEMBLY EXAMPLE



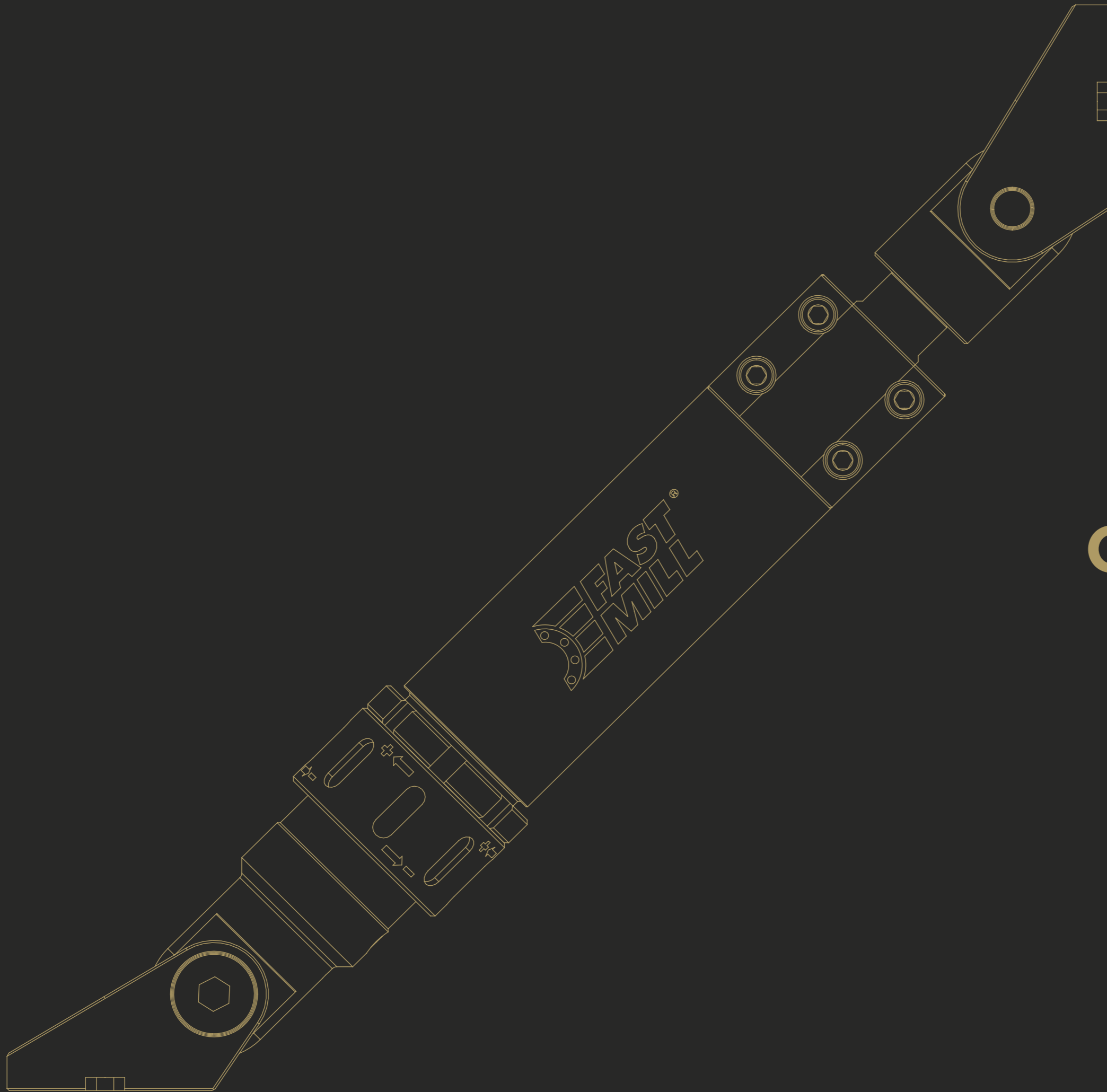
RISER ASSEMBLY EXAMPLE



PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

CLAMPS	FASTMILL ZERO	MINI RANGE	VERTICAL CLAMPING	MAGNETIC	THIRD POINT	RISERS	SPACERS	MODULES AND PINS D49	MODULES AND PINS D90	PLATES AND BUSHES
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THIRD CLAMPING POINT

PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

THIRD CLAMPING POINT SET



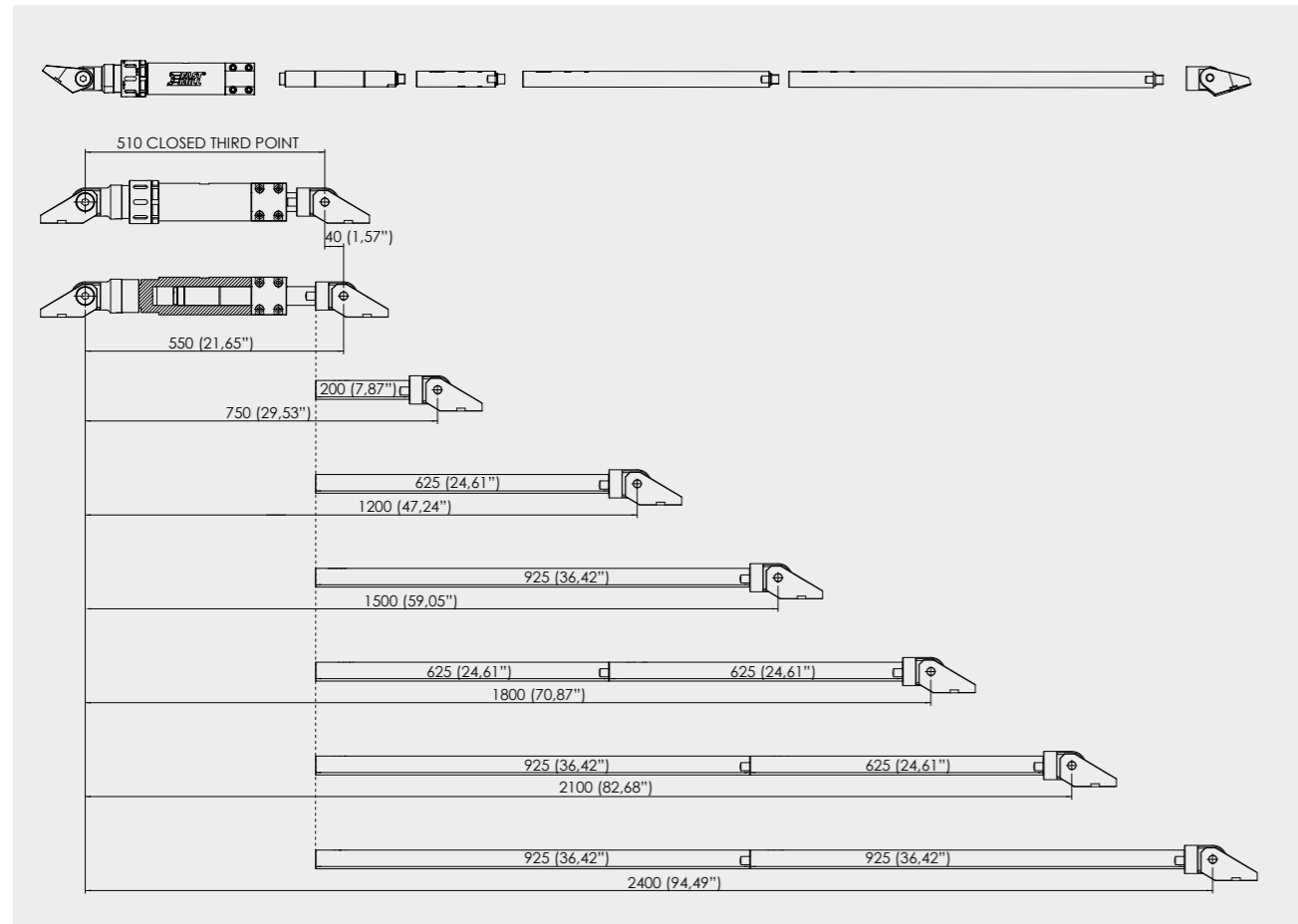
A third clamping point for roughing, finishing and drilling operations of pieces fixed in a vertical position. Thanks to its rigid telescopic system and its additional modular extensions, the third clamping point supports workpieces and opposes vibrations and flexures caused by machining operations, thus avoiding the use of expensive, heavy and bulky fastening brackets. The third clamping point can be fixed directly on plates or workpieces by means of standard TCEI screws or FASTMILL® coordinate modules/risers. Alternatively, it can be fixed on the machine's T-slots. In addition to fixing, thanks to its efficient fine adjustment system, it can be adjusted for the purposes of thrust or traction to ensure verticality of workpieces before their machining.

CODE	DESCRIPTION	DIMENSION
FM46191600	Third clamping point set	630/820 (24,80"/32,28")

SET CONFIGURATION	N°
Third clamping point	1 piece
C-hook spanner 92-95	1 piece
Bush Ø24-24 mm	2 pieces
Cylindrical head hexagon socket screw 12.9 (DIN912)	2 pieces

ACCESSORIES

CODE	DESCRIPTION	DIMENSION
FM46191650	Extension L=200	+ 200 (7,87")
FM46191656	Extension L=625	+ 625 (24,6")
FM46191659	Extension L=925	+ 925 (36,4")
FM93000019	C-hook spanner 92-95	



THIRD POINT LIGHT



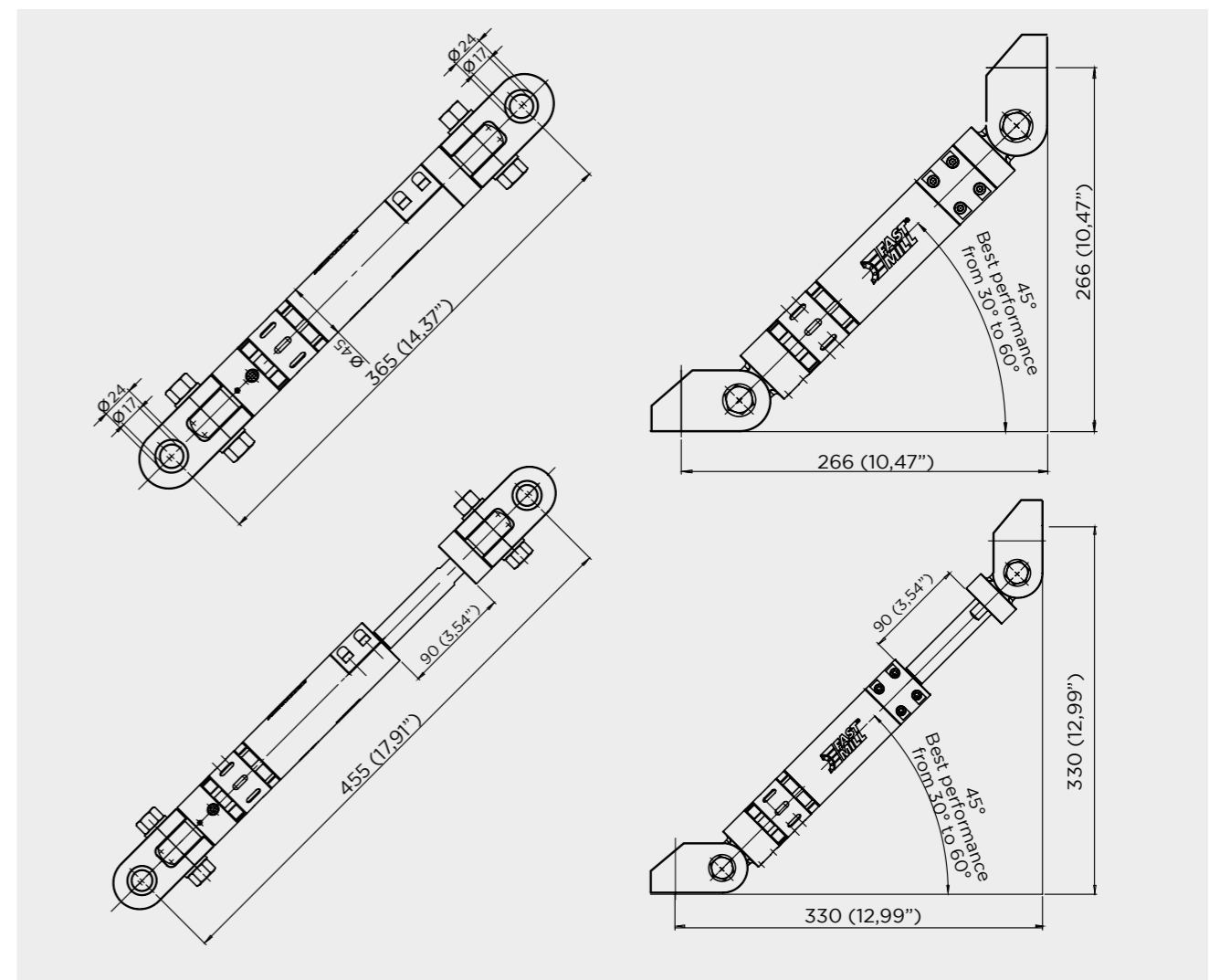
The new third light point is a transversal component capable of absorbing vibrations in most applications. It is used for roughing, finishing, drilling operations on all those components that require greater support to avoid the triggering of unwanted vibrations. It is also used successfully in welded structures combined with FastMill magnetic systems. Its particular structure allows it to adapt to the desired length and then apply, if necessary, a pushing or pulling force on the workpiece using the threaded ring nut.

CODE	DESCRIPTION	DIMENSION	WEIGHT
FM46192500	Third clamping point light set	365/455 (14,37" / 17,9")	5 (11,02 lbs)

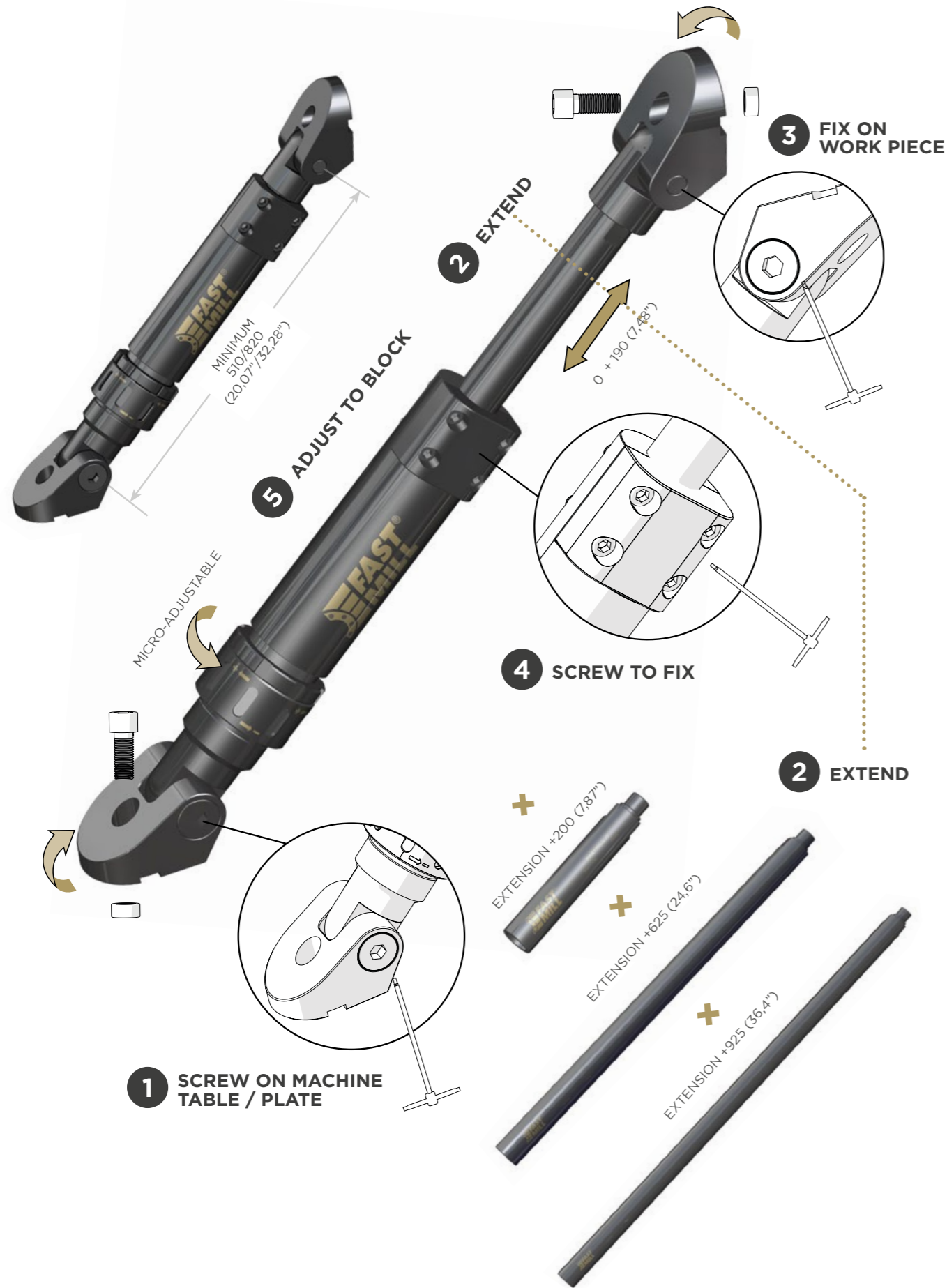
SET CONFIGURATION	N°
Third clamping point	1 piece
C - hook spanner 45	1 piece
Bush Ø24-24 mm	2 pieces
Cylindrical head hexagon socket screw 12.9 (DIN912)	2 pieces

ACCESSORIES

CODE	DESCRIPTION	DIMENSION
FM93000029	C - hook spanner 45	

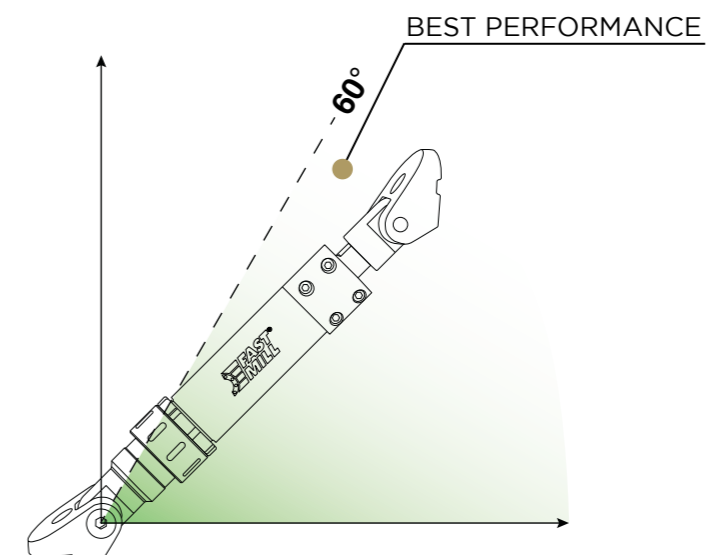
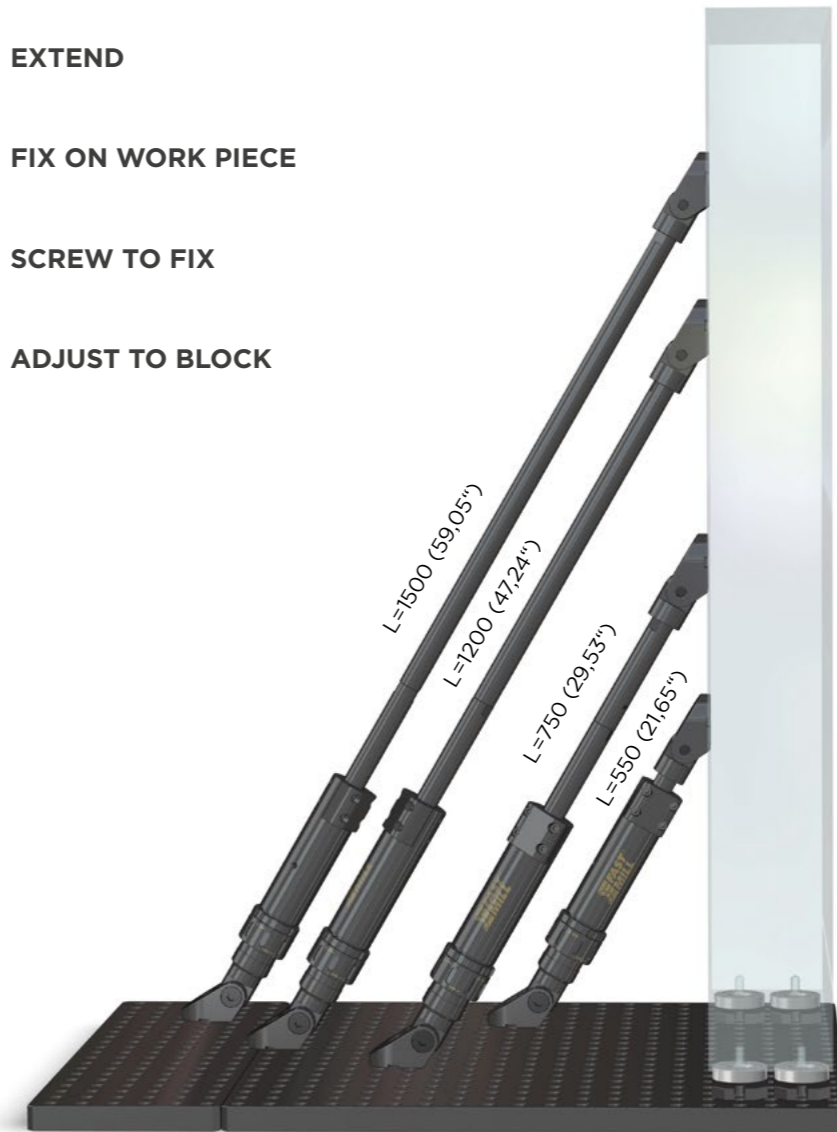


THIRD CLAMPING POINT SET



SET UP EXAMPLE

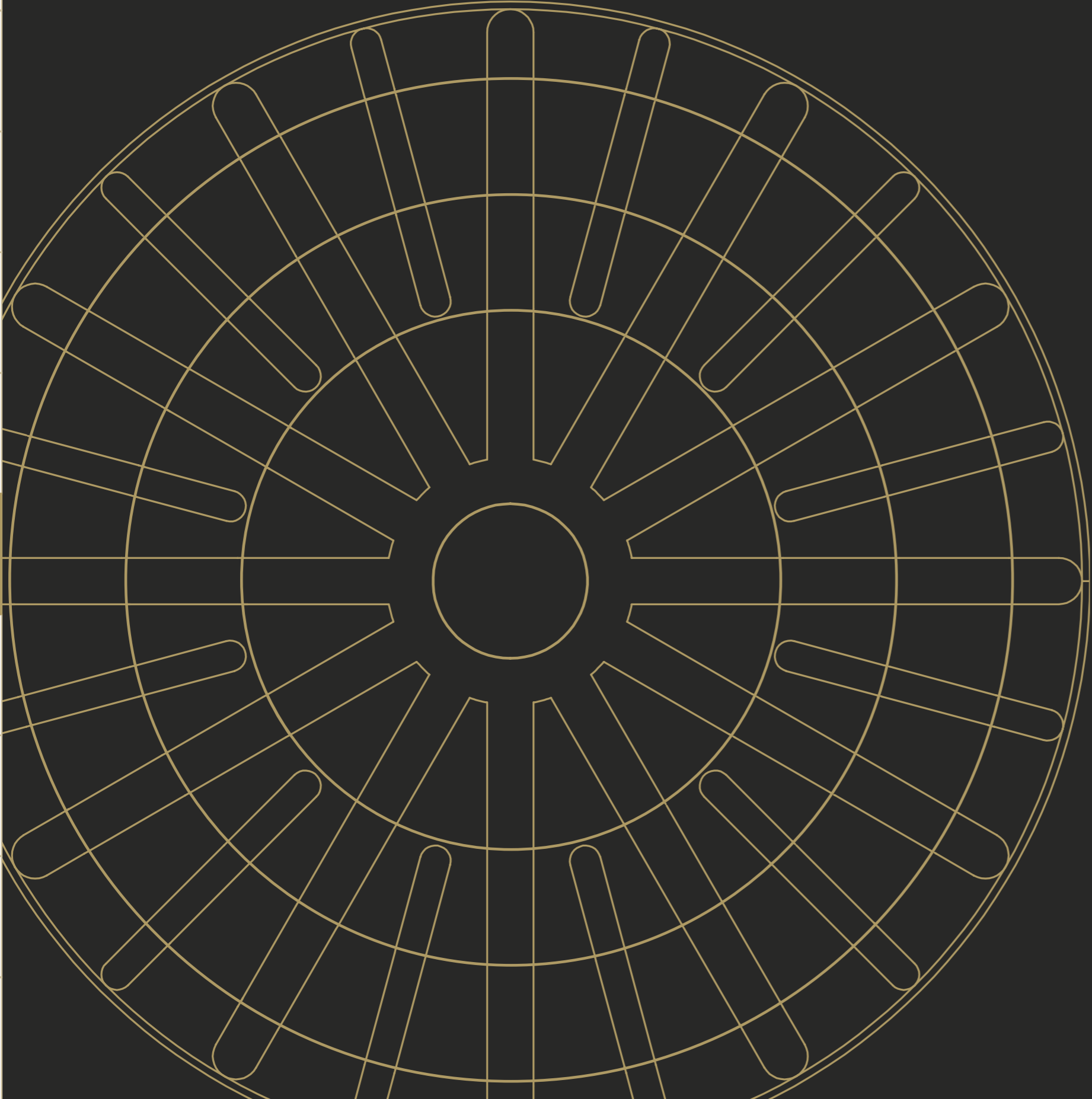
- 1 SCREW ON MACHINE TABLE / PLATE
- 2 EXTEND
- 3 FIX ON WORK PIECE
- 4 SCREW TO FIX
- 5 ADJUST TO BLOCK



PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

CLAMPS	FASTMILL ZERO	MINI RANGE	VERTICAL CLAMPING	MAGNETIC	THIRD POINT	RISERS	SPACERS	MODULES AND PINS D49	MODULES AND PINS D90	PLATES AND BUSHES
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MAGNETIC

CLAMPS	FASTMILL ZERO	MINI RANGE	VERTICAL CLAMPING	MAGNETIC	THIRD POINT	RISERS	SPACERS	MODULES AND PINS D49	MODULES AND PINS D90	PLATES AND BUSHES
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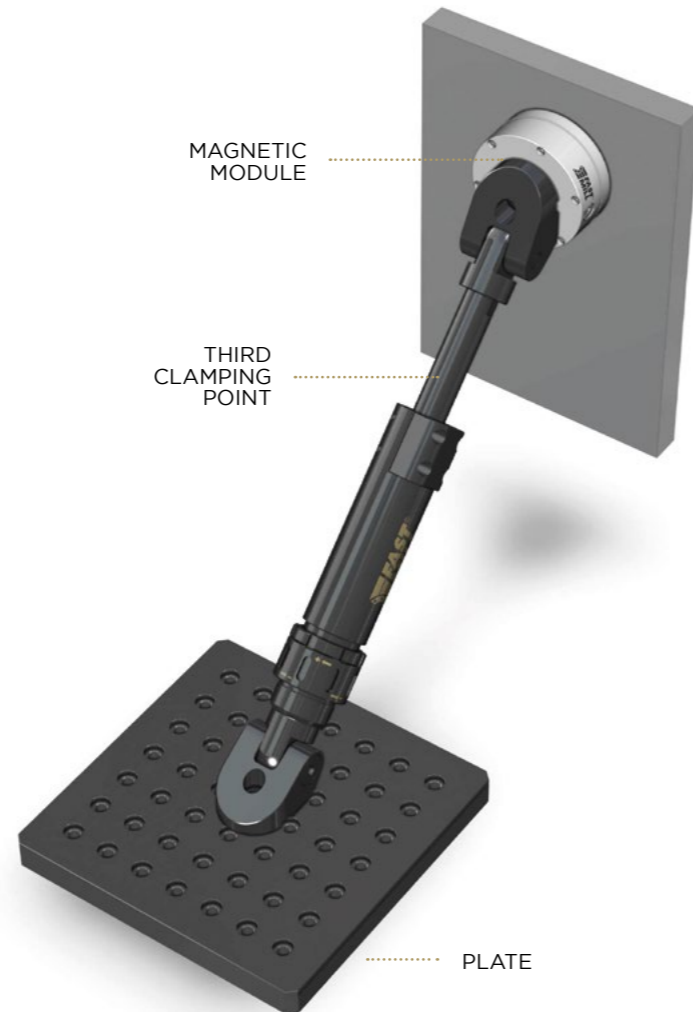
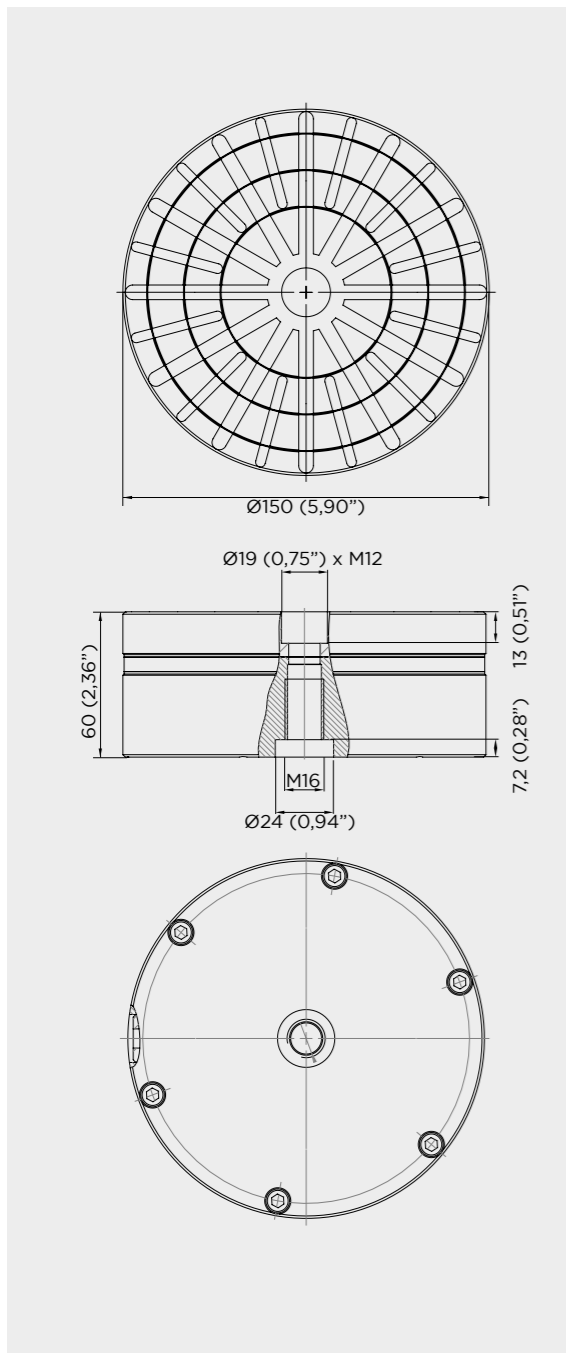


MAGNETIC MODULE

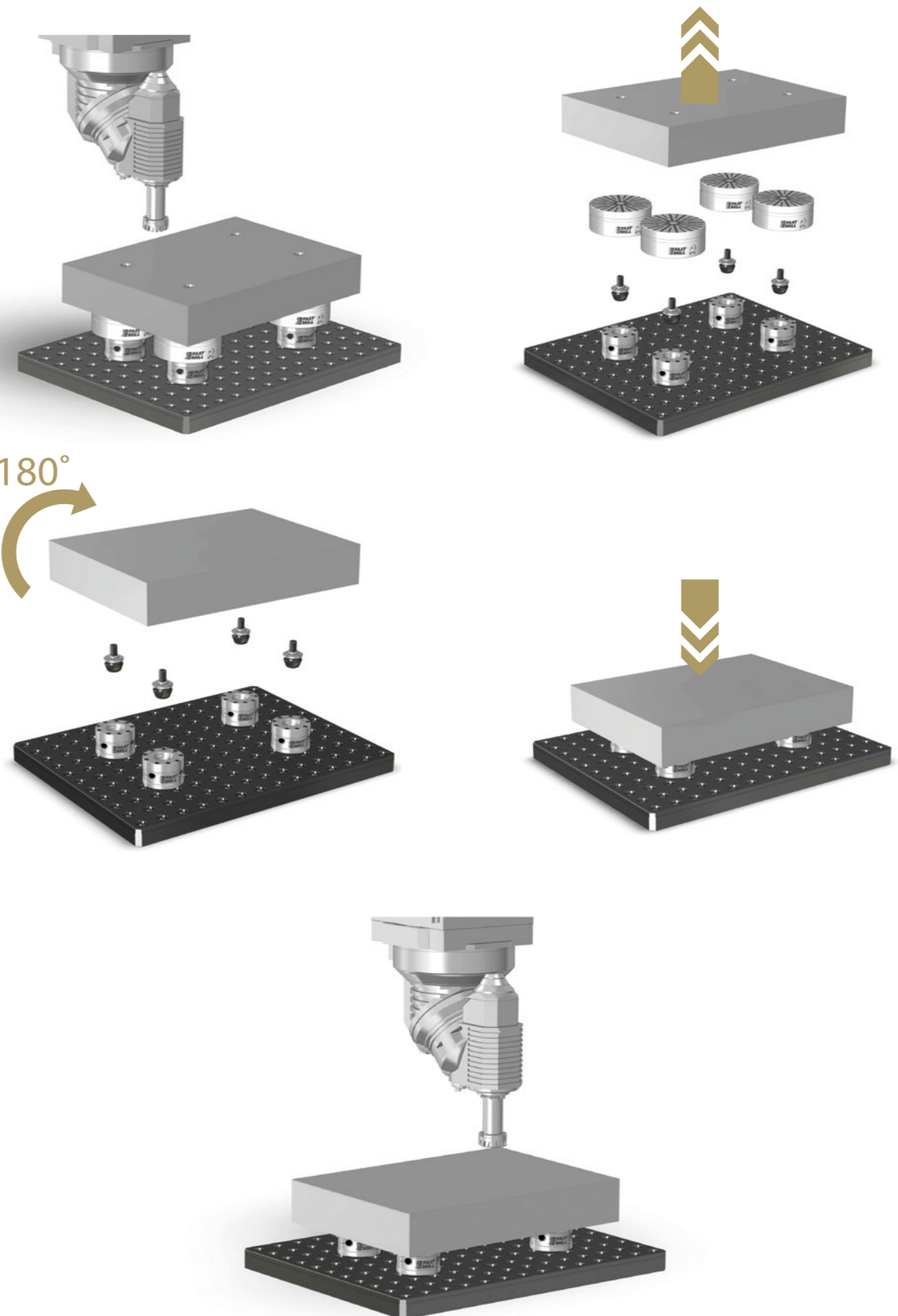
Magnetic module is an extremely versatile element made with manually operated permanent magnets. Thanks to the Fastmill interface on the back face, it can be used on top of a module or connected to a third point. Some of the applications are for example:

- Create a magnetic chuck for the pre-process phase directly on Fastmill modules
- Fastening of welded structures
- Fastening thin walls, where normally it is not possible to make a threaded hole
- Fixing or absorbing working vibrations on strategic points of the structure when connected to a third point.

CODE	DESCRIPTION	DIMENSION MM (IN)
FM46191660	Magnetic module	Ø 150 (5,90")



MAGNETIC MODULE - PRE-PROCESS MACHINING EXAMPLE

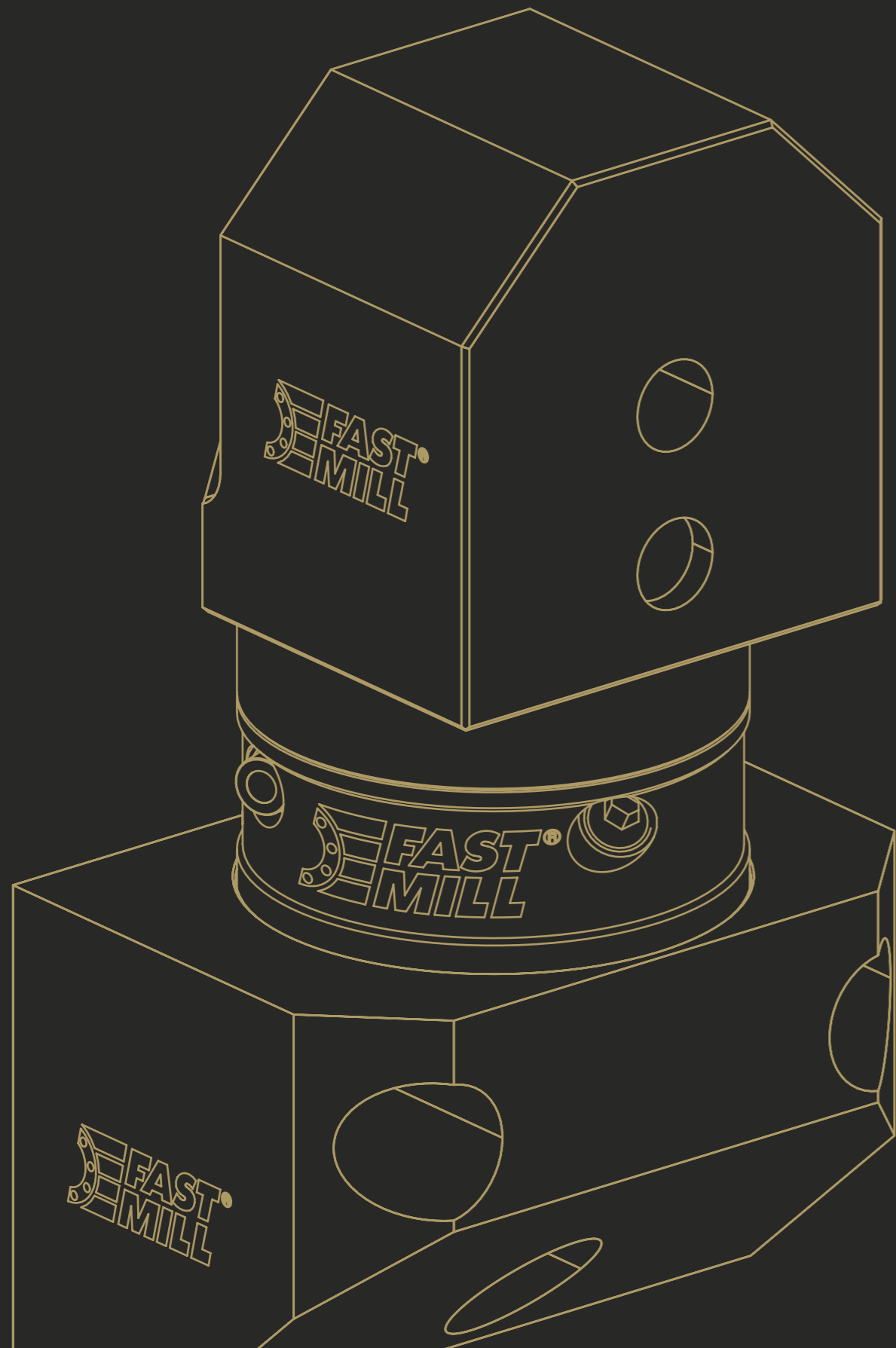


PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
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CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
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MINI RANGE
FASTMILL ZERO
CLAMPS

PLATES AND BUSHES	MODULES AND PINS D90	MODULES AND PINS D49	SPACERS	RISERS	THIRD POINT	MAGNETIC	VERTICAL CLAMPING	MINI RANGE	FASTMILL ZERO	CLAMPS
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VERTICAL CLAMPING





VERTICAL CLAMPING AND POSITIONING SET

Vertical clamping and positioning system allows a vertical type of fixing on medium-sized components, while ensuring a known position of the piece with respect to space. The system works using our standard Fastmill modules to which appropriate accessories are applied for vertical assembly. A lateral fixing accessory is also available in cases with no possibility of fixing on the back of the workpiece.

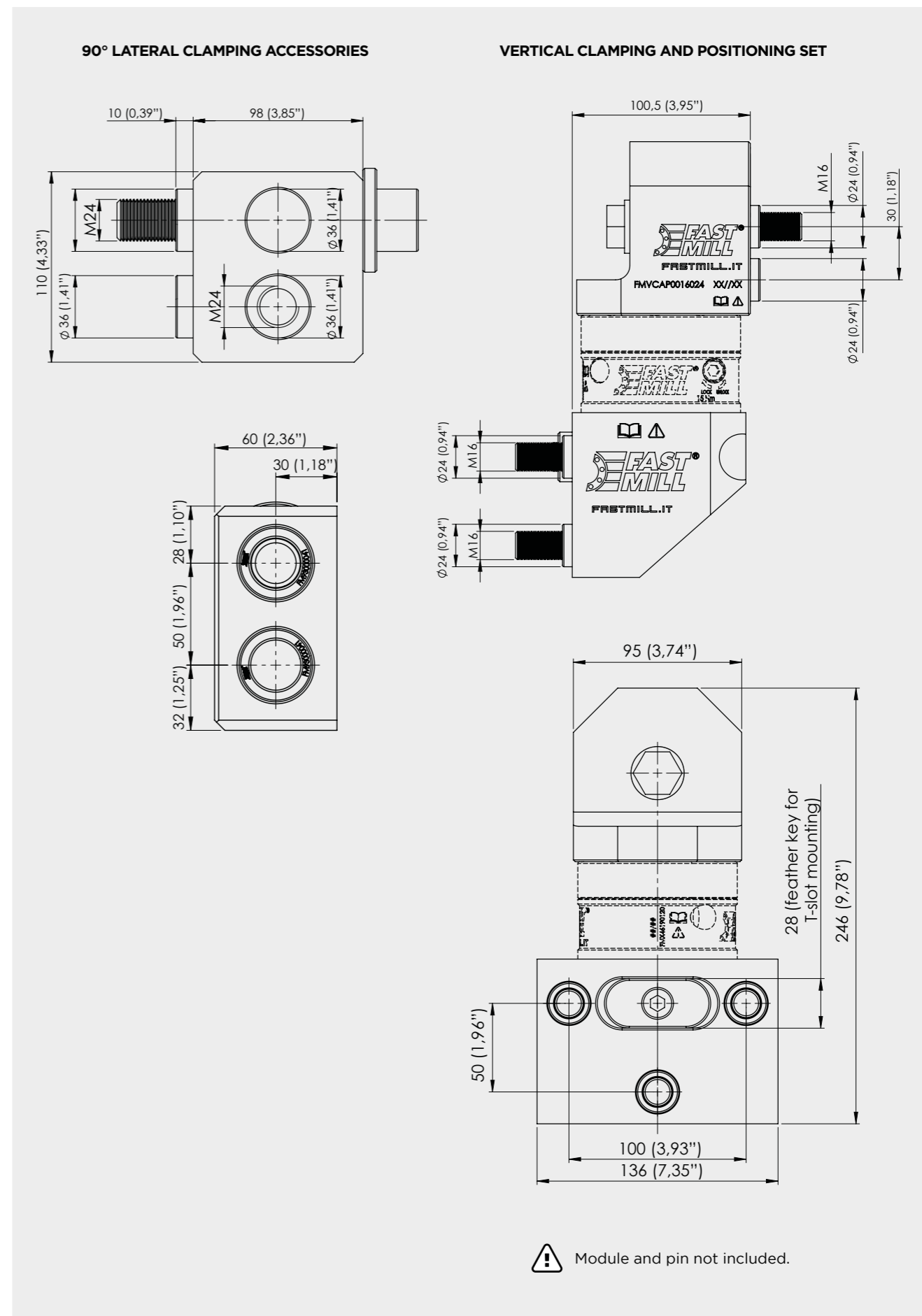
CODE	
FMVCA0016024	Vertical clamping and positioning set (module not included)

SET CONFIGURATION	N°
Bush Ø24-24 mm	6 pieces
TCEI M16X60 mm UNI 5931-12,9 screw	3 pieces
TCEI M16X40 mm UNI 5931-12,9 screw	1 piece
TCEI M16X20 mm UNI 5931-12,9 screw	1 piece
TE M16X100 mm UNI 5739-12,9 screw	1 piece
Feather key 28X16X60 DIN6885 C	1 piece
7x30 UNI 6592-69 washer	1 piece



90° LATERAL CLAMPING ACCESSORIES

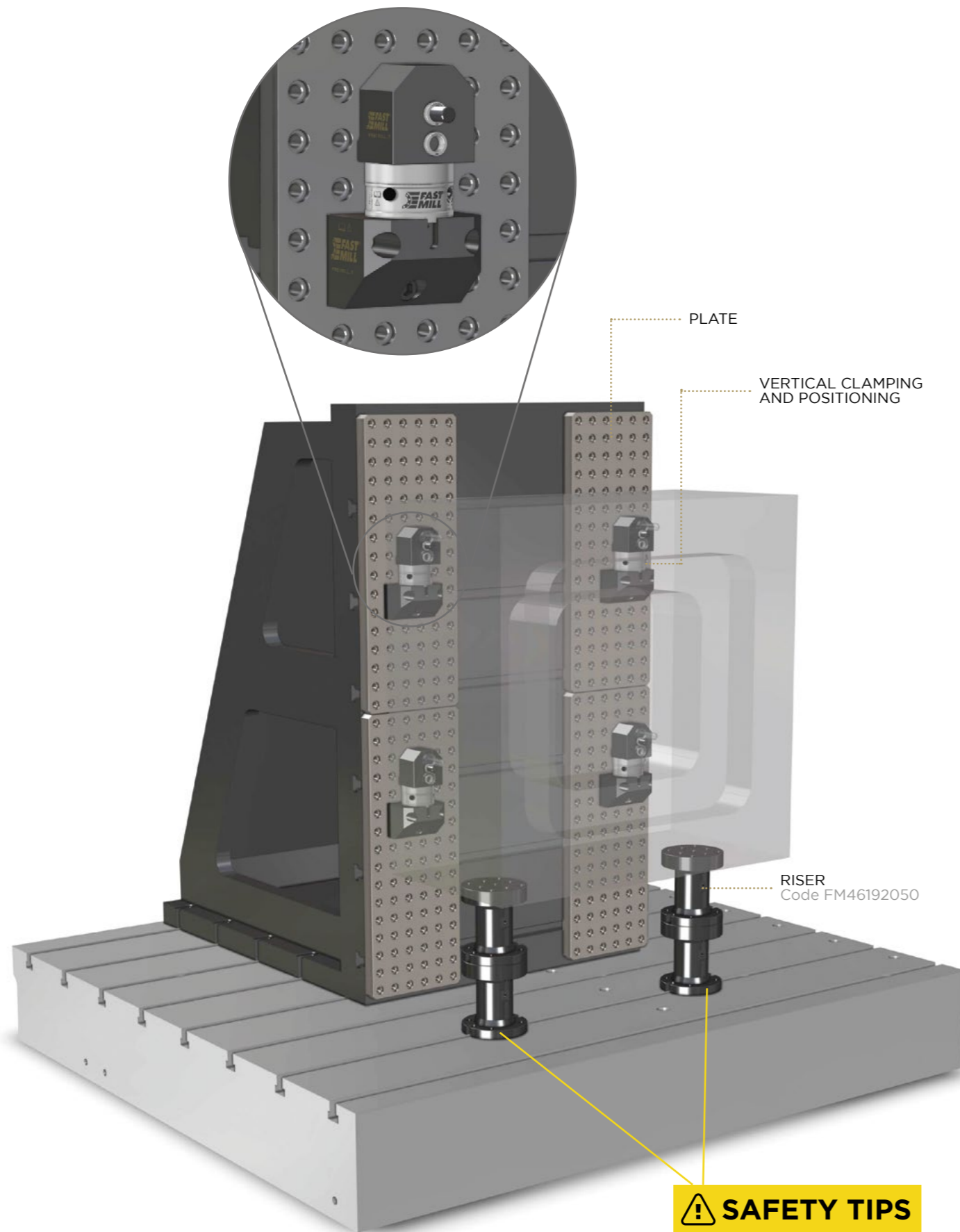
CODE	DESCRIPTION	DIMENSION	HEIGHT	WEIGHT
FMVCHPLATERAL	90° Lateral clamping accessories	98x60 (3,85"x2,36")	110 (4,33")	2,7 (5,95 lbs)



PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

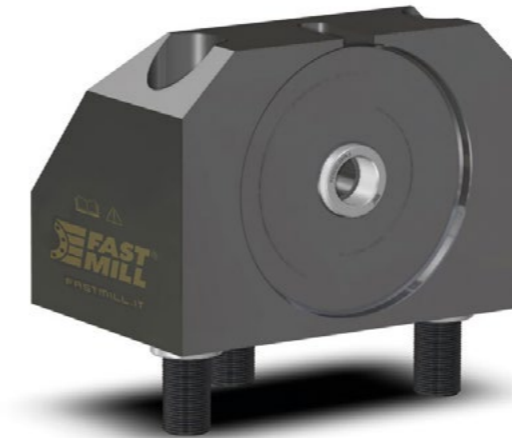
PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

SETUP EXAMPLE



! SAFETY TIPS

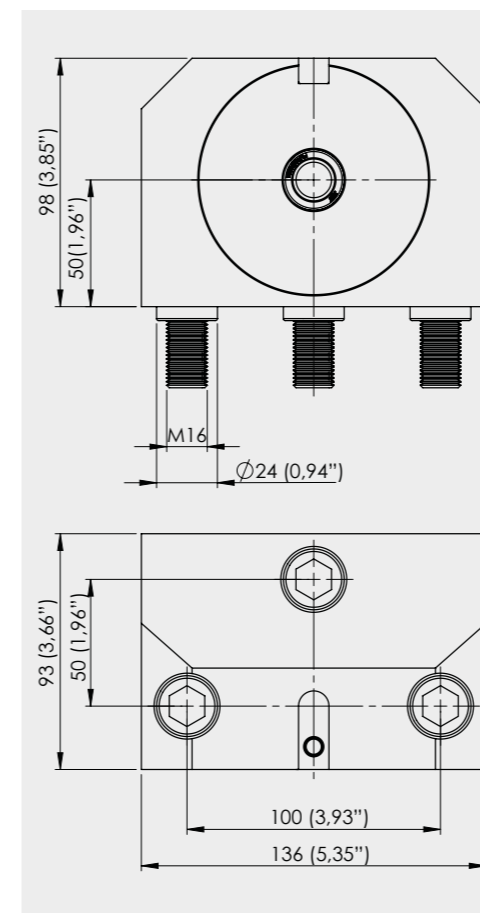
90° INDEX RISER SET



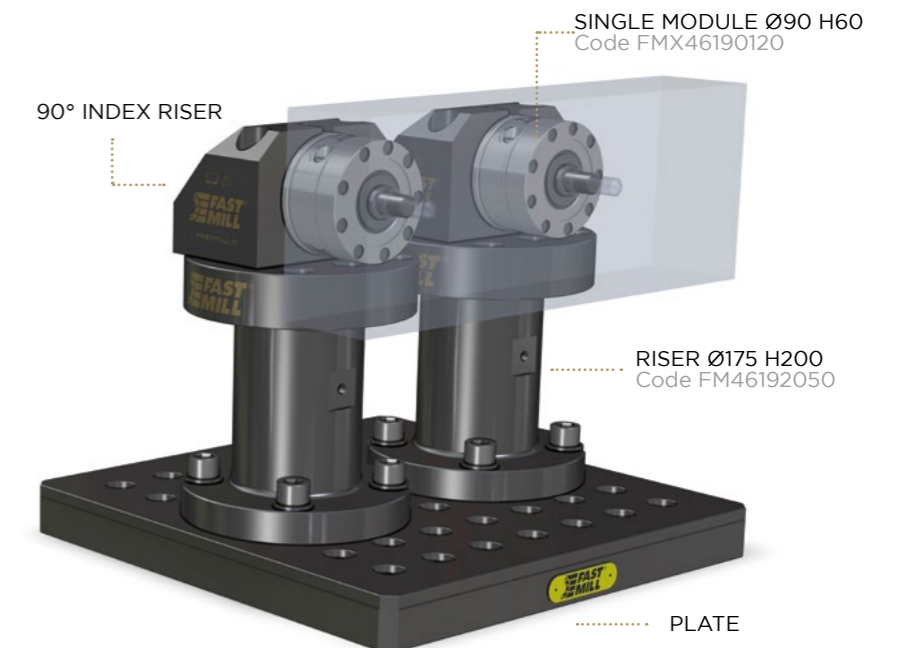
90° Index riser set is an accessory able to quickly mount a module in a vertical position, thus expanding the possibility of machining on 3-axis machines or for any particular needs and also comes with a removable key for use with standard modules and indexed modules.

CODE	DESCRIPTION
FM90IR0016024	90° Index riser set

SET CONFIGURATION	N°
Eather key 12H6X8X30 for index	1 piece
Bush Ø24-24 mm	5 pieces
TCEI M4X10 mm UNI 5931 inox screw	1 piece
TCEI M16X60 mm UNI 5931-12,9 screw	3 pieces



SETUP EXAMPLE



PLATES AND BUSHES
MODULES AND PINS D90
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SPACERS
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CLAMPS

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MINI RANGE
FASTMILL ZERO
CLAMPS

CLAMPS

FASTMILL ZERO

MINI RANGE

VERTICAL CLAMPING

MAGNETIC

THIRD POINT

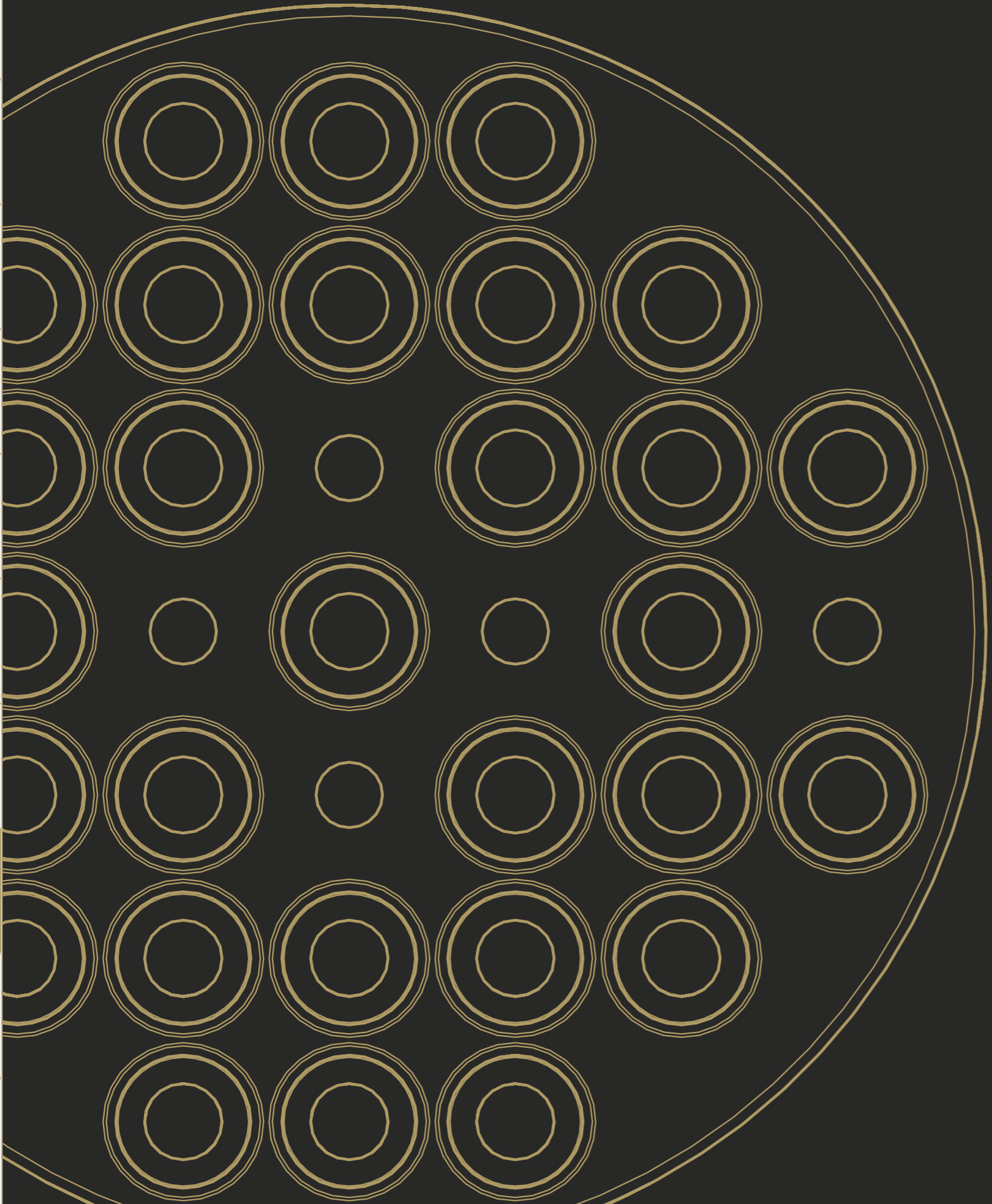
RISERS

SPACERS

MODULES AND PINS D49

MODULES AND PINS D90

PLATES AND BUSHES



MINI RANGE

CLAMPS

FASTMILL ZERO

MINI RANGE

VERTICAL CLAMPING

MAGNETIC

THIRD POINT

RISERS

SPACERS

MODULES AND PINS D49

MODULES AND PINS D90

PLATES AND BUSHES




PALLET


FastMill pallets allow to hold small and medium-sized components. Made of pre-treated stainless steel, they offer great rigidity which allowing to obtain finishes with very low roughness. Prepared for precision clamping, they allow the machining of the components, on 5 free faces, optimizing work cycle and minimizing machine stops.

Introducing the all-new Mini Range M4 collection: a complete lineup of pallets, pins, and spacers with minimal dimensions, specifically designed for securing small parts with precision. The range also includes the innovative Plug, which ensures consistent reference points across multiple positionings, enhancing accuracy and efficiency in your work.


M4 WORKPIECE FIXING SCREW

CODE	XxY	H	PxP	X1xY1	N° MODULES REQUIRED	REQUIRED FOR ASSEMBLY
FM46195028	160x100 (6,3"x3,9")	36 (1,41")	10 (0,39")	100x0 (3,93"x0)	2	 No. 2 Male pin M8 Ø12


M6 WORKPIECE FIXING SCREW

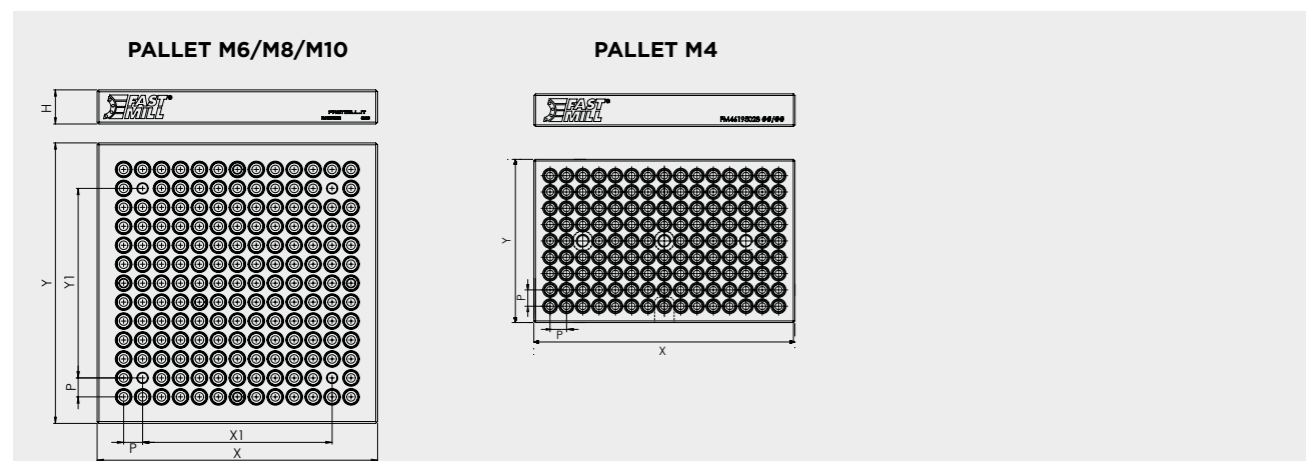
CODE	XxY	H	PxP	X1xY1	N° MODULES REQUIRED	REQUIRED FOR ASSEMBLY
FM46195020	196x196 (7,71"x7,71")	36 (1,41")	15 (0,59")	100x0 (3,93"x0)	2*	 *No. 2 Male pin M12 Ø20 No. 4 Male pin M12 Ø20
FM46195021	246x246 (9,68"x9,68")	36 (1,41")	15 (0,59")	100x100 (3,93"x 3,93")	4	
FM46195022	296x296 (11,65"x11,65")	36 (1,41")	15 (0,59")	200x200 (7,87"x 7,87")	4	

M8 WORKPIECE FIXING SCREW

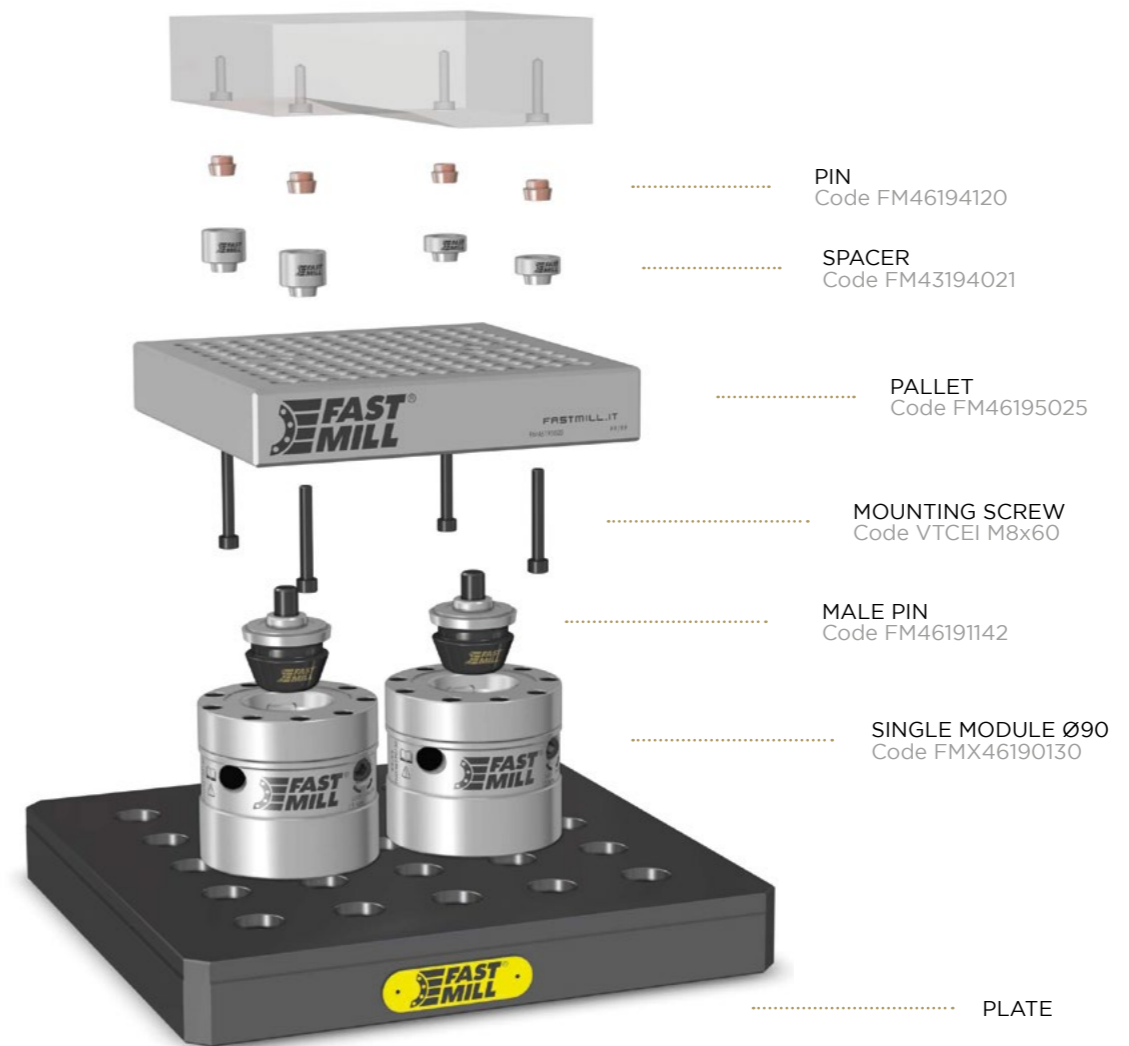
CODE	XxY	H	PxP	X1xY1	N° MODULES REQUIRED	REQUIRED FOR ASSEMBLY
FM46195025	246x246 (9,68"x9,68")	36 (1,41")	20 (0,78")	100x100 (3,93"x 3,93")	4	 No. 4 Male pin M12 Ø20
FM46195026	296x296 (11,65"x11,65")	36 (1,41")	20 (0,78")	200x200 (7,87"x 7,87")	4	

M10 WORKPIECE FIXING SCREW

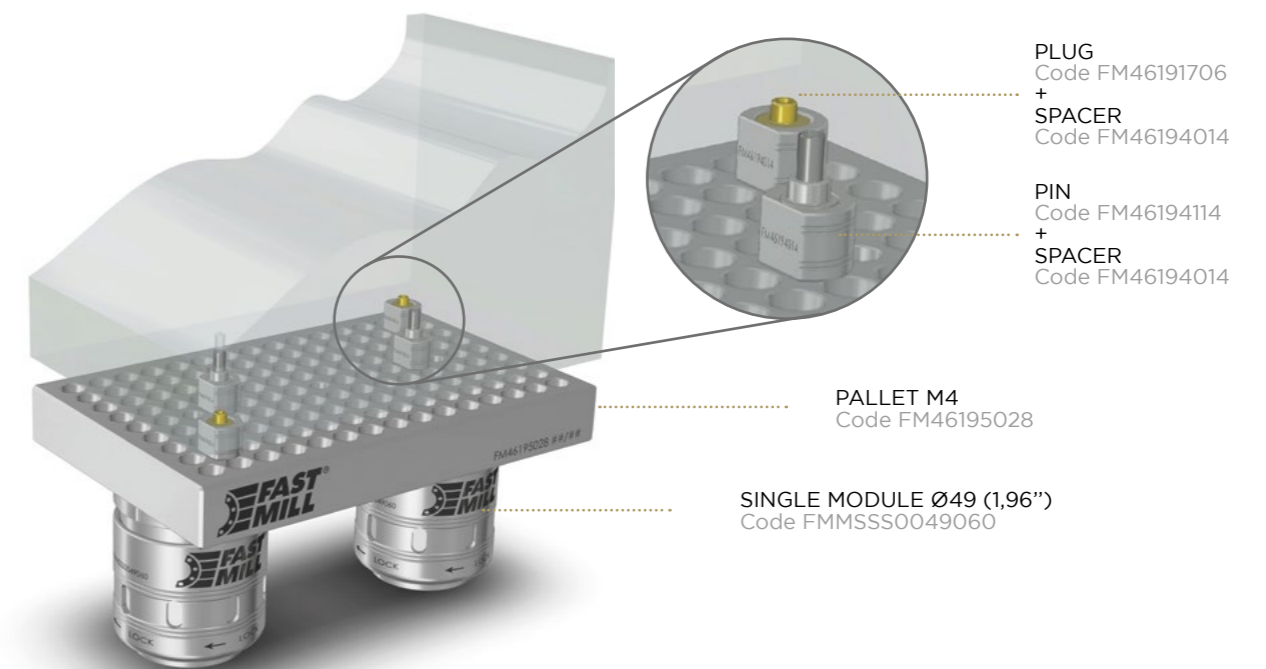
CODE	XxY	H	PxP	X1xY1	N° MODULES REQUIRED	REQUIRED FOR ASSEMBLY
FM46195029	246x246 (9,68"x9,68")	46 (1,81")	25 (0,98")	150x150 (5,90"x 3,93")	4	 No. 4 Male pin M16 Ø24
FM46195030	296x296 (11,65"x11,65")	46 (1,81")	25 (0,98")	200x200 (7,87"x 7,87")	4	



PALLET ASSEMBLY EXAMPLE



PALLET ASSEMBLY EXAMPLE



PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS



COATED PIN SPACER

FastMill coated pins are used to ensure precise alignment between the pallet and the workpieces. Assembled with FastMill Spacers, they offer the ability to raise the workpiece allowing the CNC to reach all the work areas freely.



Related extractor adapter at pag.13

M4 COATED PIN AND SPACER

CODE	DESCRIPTION	DIMENSION	HEIGHT	WEIGHT
FM46194014	Spacer	Ø 13,5 (0,53")	10 (0,39")	0,01 Kg
FM46194114	Coated Pin	Ø 6 (0,23")	7,25 (0,28")	0,01 Kg
FM46191706	Plug alignment	Ø 4 (0,15")	7,25 (0,28")	0,01 Kg

M6 COATED PIN AND SPACER

CODE	DESCRIPTION	SCREW	ØA	ØB	HEIGHT
FM46194115	Coated Pin	M6	10 (0,39")	-	
FM46194110	Coated Pin	M6	11 (0,43")	-	
FM46194011	Spacer	M6	-	22 (0,86")	8 (0,31")
FM46194012	Spacer	M6	-	22 (0,86")	12 (0,47")
FM46194013	Spacer	M6	-	22 (0,86")	16 (0,62")

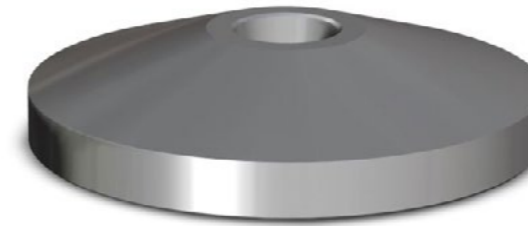
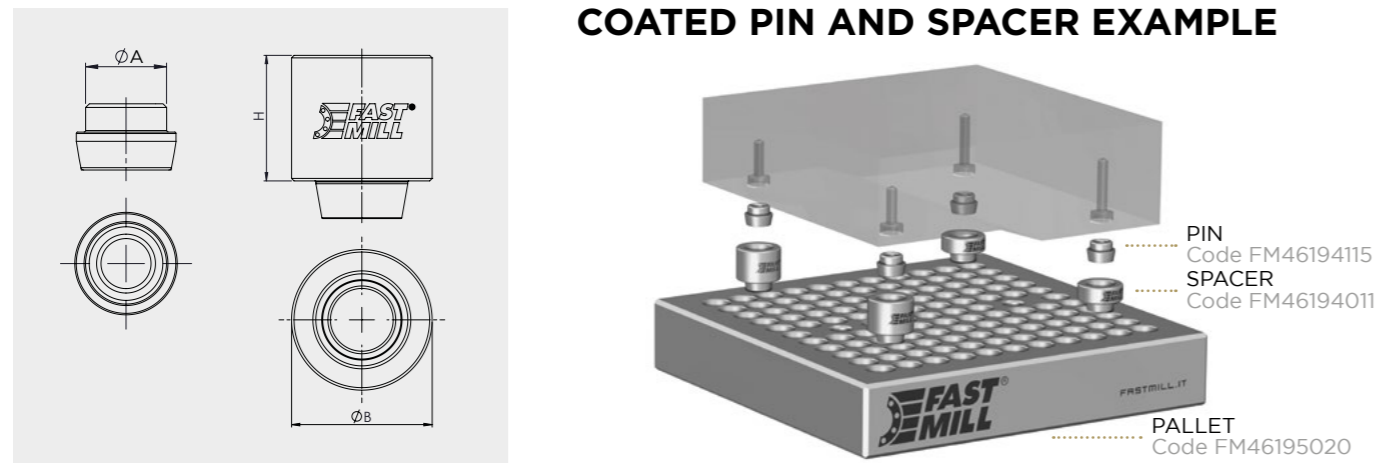
M8 COATED PIN AND SPACER

CODE	DESCRIPTION	SCREW	ØA	ØB	HEIGHT
FM46194125	Coated Pin	M8	12 (0,47")	-	
FM46194120	Coated Pin	M8	14 (0,55")	-	
FM46194021	Spacer	M8	-	25 (0,98")	10 (0,39")
FM46194022	Spacer	M8	-	25 (0,98")	15 (0,59")
FM46194023	Spacer	M8	-	25 (0,98")	20 (0,78")

M10 COATED PIN AND SPACER

CODE	DESCRIPTION	SCREW	ØA	ØB	HEIGHT
FM46194135	Coated Pin	M10	14 (0,55")	-	
FM46194130	Coated Pin	M10	16 (0,62")	-	
FM46194031	Spacer	M10	-	28 (1,10")	15 (0,59")
FM46194032	Spacer	M10	-	28 (1,10")	25 (0,98")
FM46194033	Spacer	M10	-	28 (1,10")	35 (1,37")

COATED PIN AND SPACER EXAMPLE



ADAPTER FOR Ø90 MODULE

Adapter for module offers the possibility to fix small workpieces directly on the modules by using mini range pins and spacers. It guarantees a fast and flexible workpiece change.

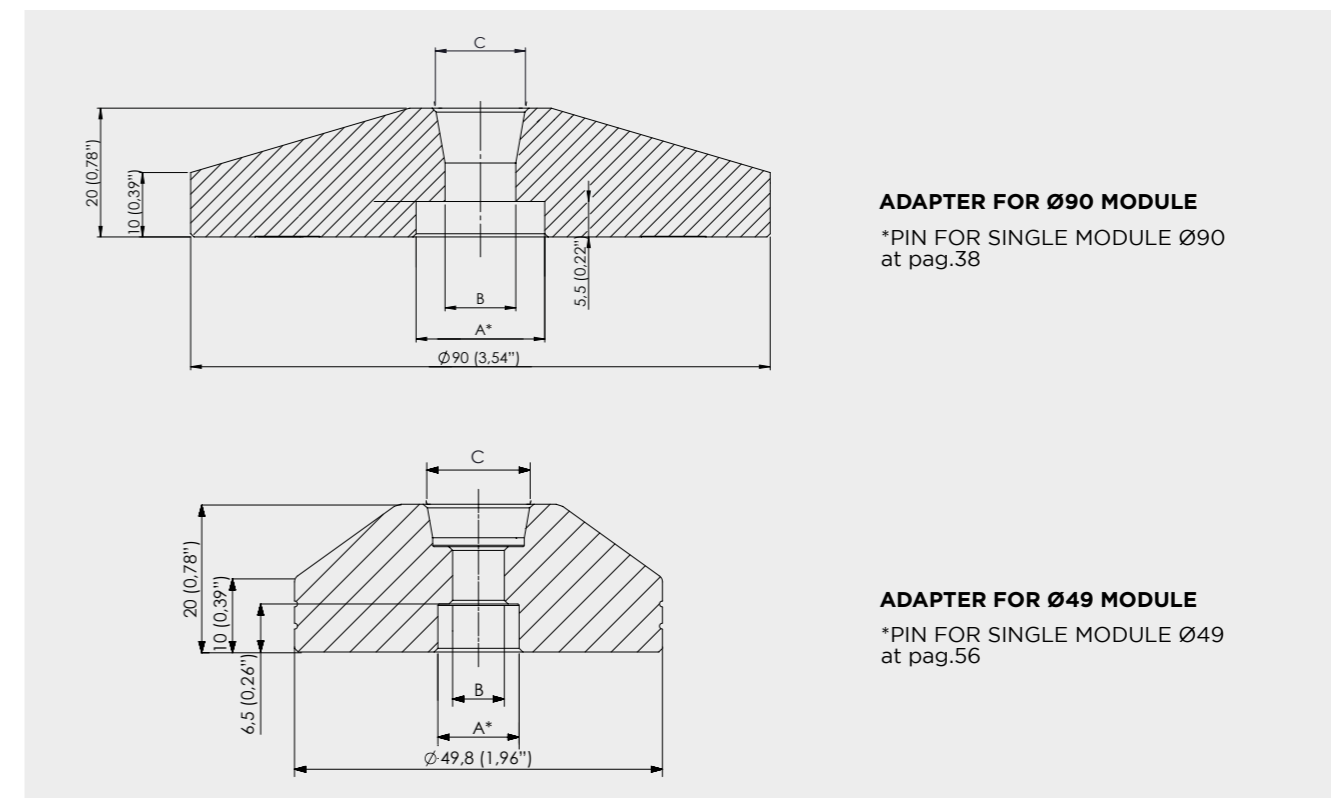
CODE	DESCRIPTION	A	B	C	WEIGHT
FM46194000	Adapter for module	Ø 20 (0,78")	Ø 11 (0,43")	COATED PIN AND SPACER M6	0,5 kg (1,10 lbs)
FM46194003	Adapter for module	Ø 20 (0,78")	Ø 13 (0,51")	COATED PIN AND SPACER M8	0,5 kg (1,10 lbs)
FM46194006	Adapter for module	Ø 20 (0,78")	Ø 15 (0,59")	COATED PIN AND SPACER M10	0,5 kg (1,10 lbs)



ADAPTER FOR Ø49 MODULE

The adapter is an accessory that expands the range of use of FastMill modules. It allows you to use the Mini Range components mounted on top of the D49 module thanks to its interface. Useful for clamping where space on the workpiece is extremely limited.

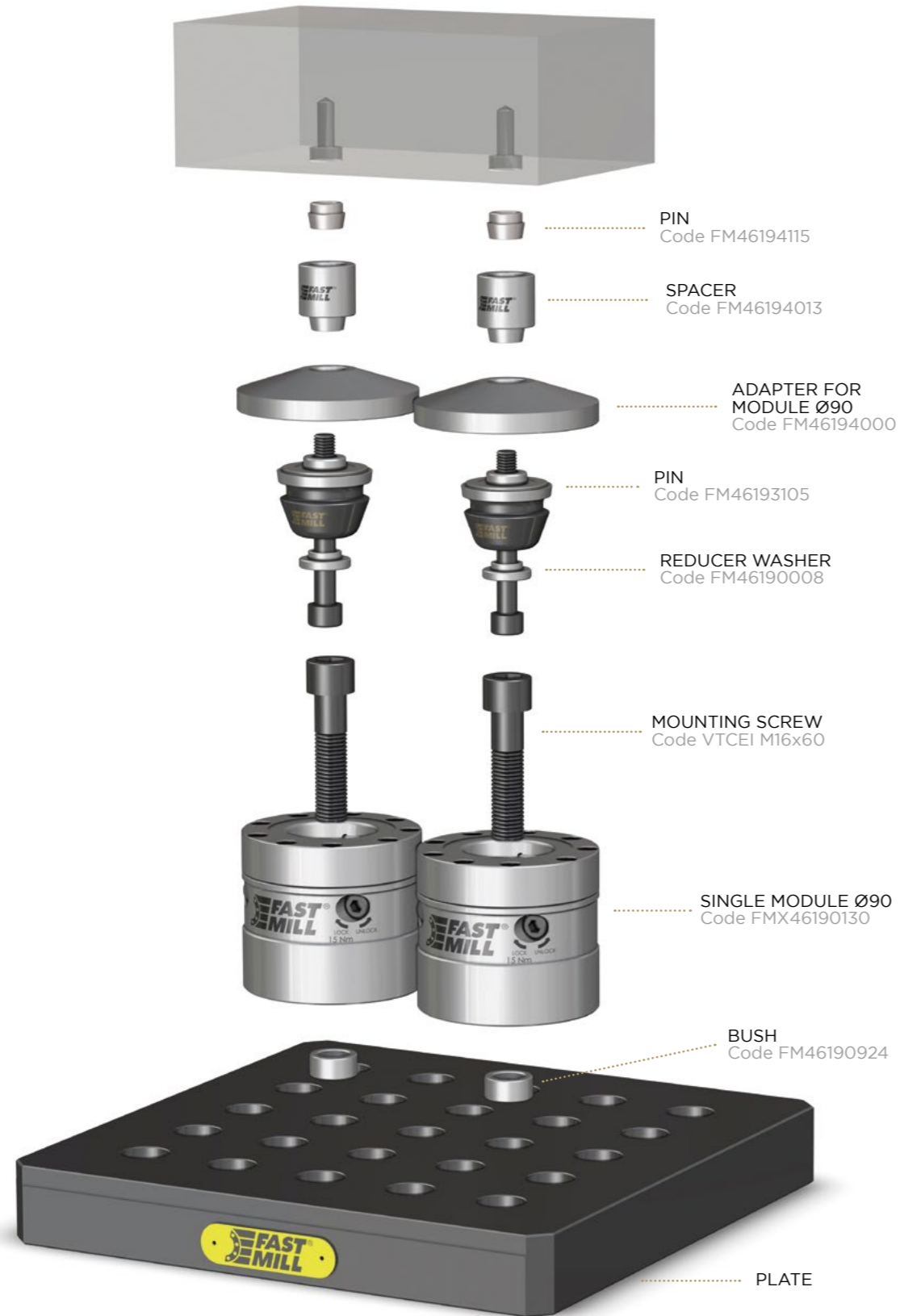
CODE	DESCRIPTION	A	B	C	WEIGHT
FM46194100	Adapter for 49 module	Ø 11 (0,43")	Ø 7 (0,28")	COATED PIN AND SPACER M6	0,5 kg (1,10 lbs)
FM46194103	Adapter for 49 module	Ø 14 (0,55")	Ø 8,5 (0,33")	COATED PIN AND SPACER M8	0,5 kg (1,10 lbs)
FM46194106	Adapter for 49 module	Ø 16 (0,63")	Ø 11 (0,43")	COATED PIN AND SPACER M10	0,5 kg (1,10 lbs)



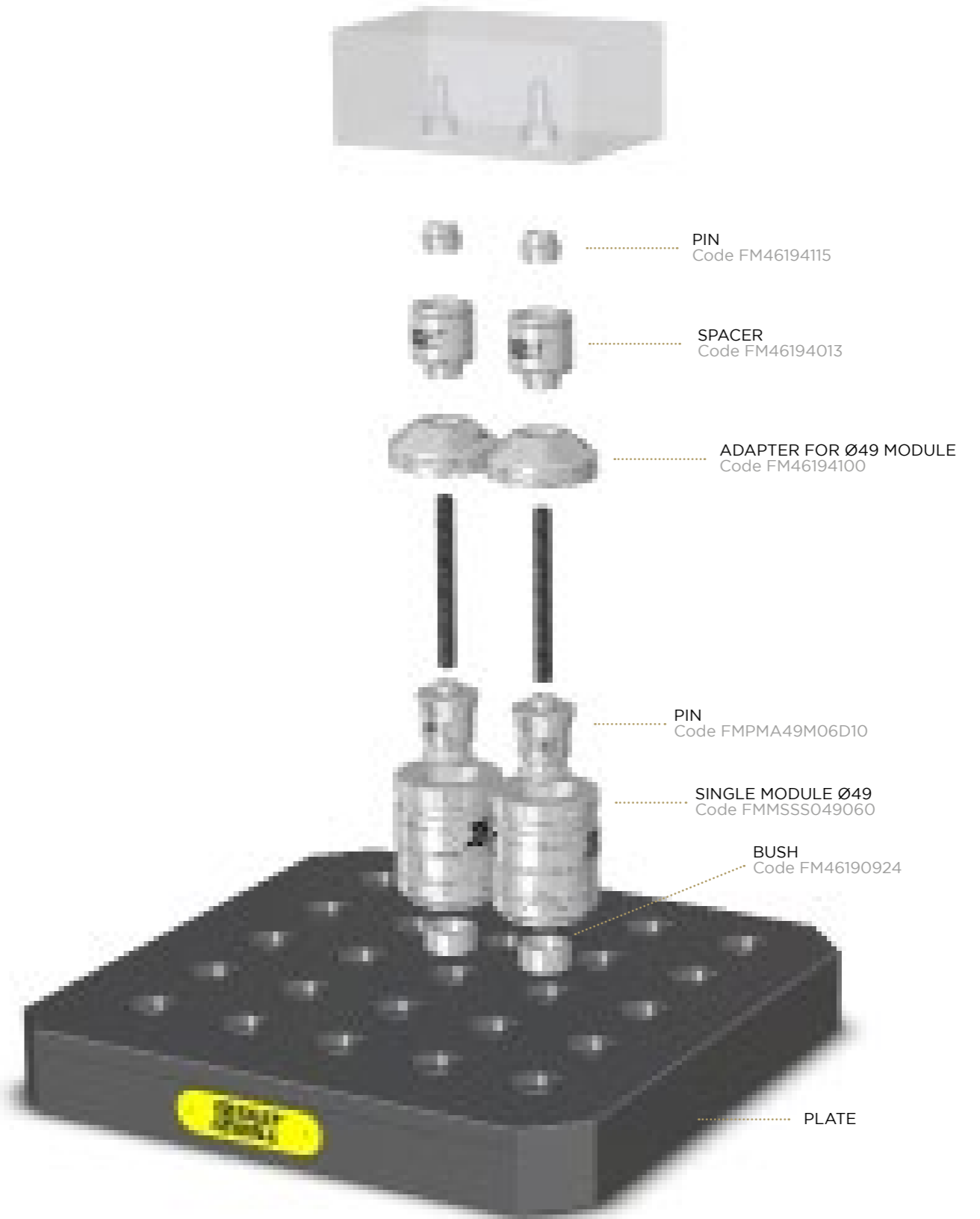
ADAPTER FOR Ø90 MODULE
*PIN FOR SINGLE MODULE Ø90 at pag.38

ADAPTER FOR Ø49 MODULE
*PIN FOR SINGLE MODULE Ø49 at pag.56

ADAPTER FOR MODULE ASSEMBLY EXAMPLE

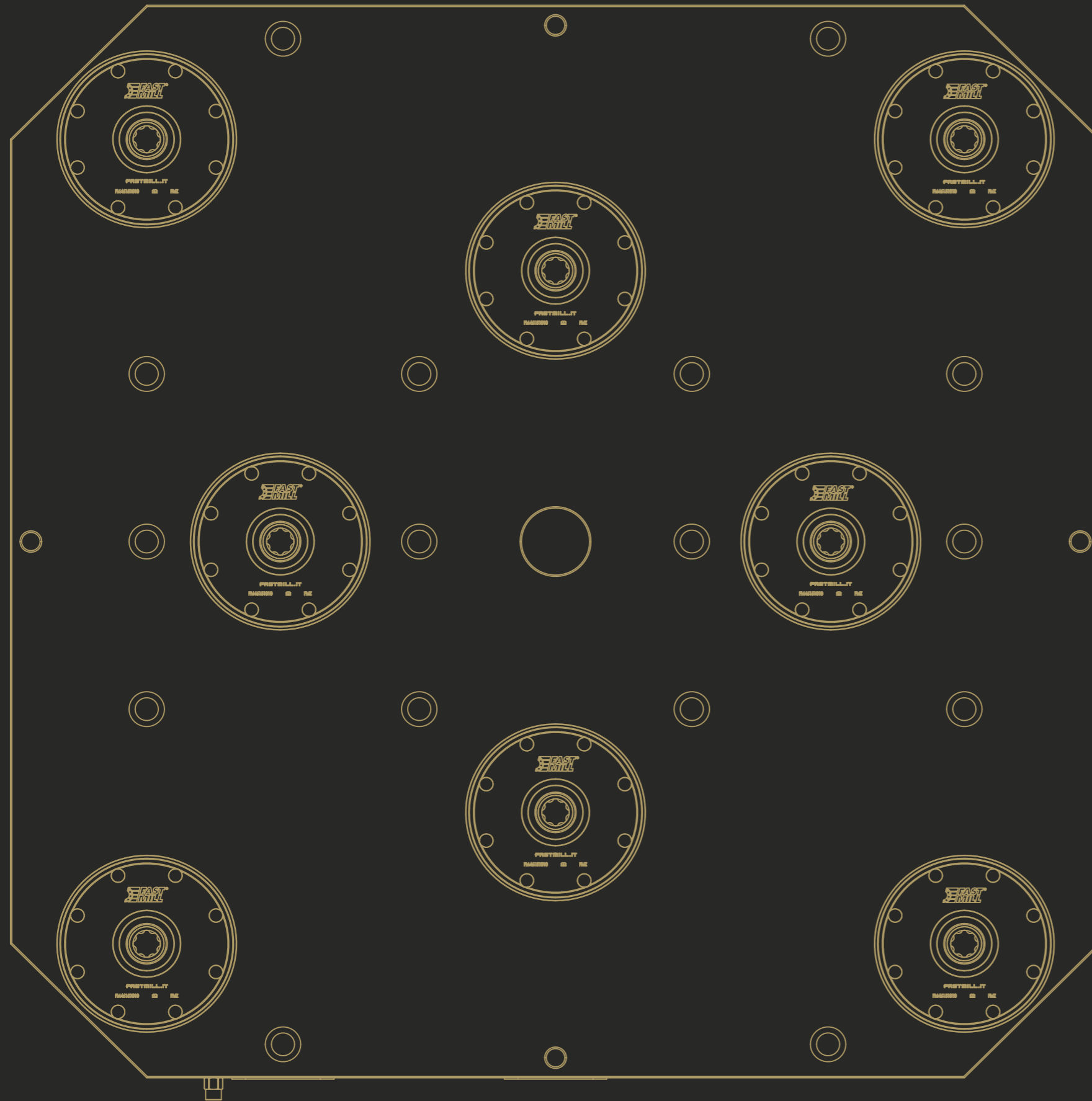


SET UP EXAMPLE



PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
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FASTMILL ZERO

CLAMPS
FASTMILL ZERO
MINI RANGE
VERTICAL CLAMPING
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MODULES AND PINS D49
MODULES AND PINS D90
PLATES AND BUSHES

CLAMPS
FASTMILL ZERO
MINI RANGE
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MAGNETIC
THIRD POINT
RISERS
SPACERS
MODULES AND PINS D49
MODULES AND PINS D90
PLATES AND BUSHES



FASTMILL ZERO PNEUMATIC MODULE

FastMill Zero pneumatic modules are designed to maximize the idea of automation. They guarantee very high precision and repeatability, combined with a clamping force capable of avoiding vibrations during machining. Able to verify the complete tightening of each module, it meets the maximum safety requirements.

CODE	DESCRIPTION	Ø	HEIGHT	WEIGHT
FM46151010	FMZ pneumatic module	129 (5,07")	40 (1,57")	2 (4,40 lbs)

TECHNICAL INFORMATION	
Clamping force (by springs)	12500 N (2,800 lbs)
Repetitive accuracy	≤ 0,005 mm (0,00019")
Pneumatic pressure for opening	6 bar (87 psi)
Max. axial load	1000 kg (2,200 lbs)



CALIBRATION RING FOR VERTICAL ADJUSTMENT

Calibration ring allows the assembly of the FastMill Zero pneumatic module aligned to the work table. This configuration allows you to optimize the space on the work table while maintaining maximum flexibility.

CODE	DESCRIPTION	Ø	HEIGHT
FM46152010	Calibration ring for vertical adjustment	128 (5,03")	2 (0,07")



PLATE WITH PNEUMATIC FASTMILL ZERO

FastMill Zero plates offer the possibility to automate the quick change of the workpieces. Simple to install, they are designed to cover all work areas, reducing downtime and maximizing production.

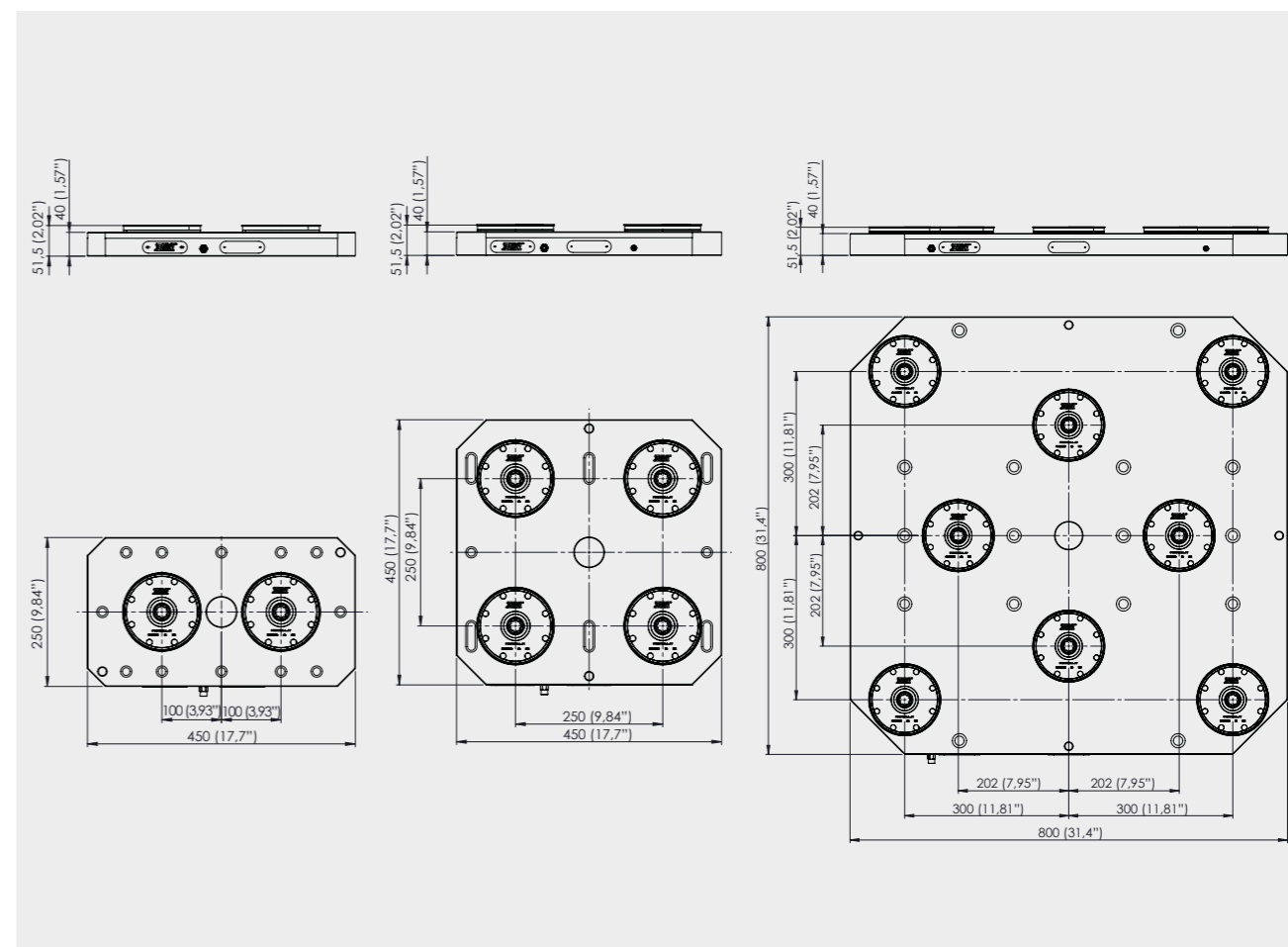
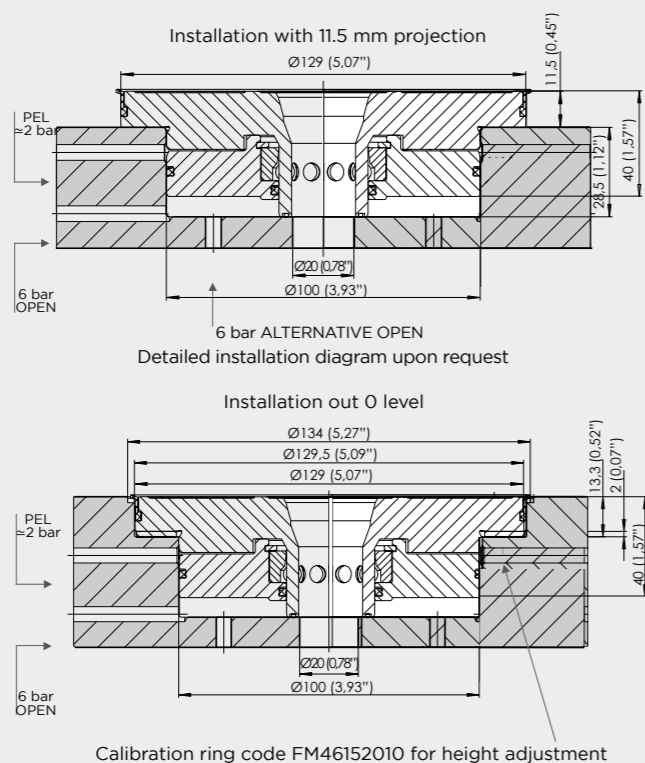


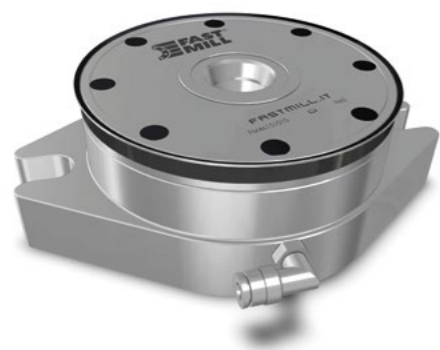
Covers for FastMill Zero are aluminum plugs, which protect the clamping seat when the modules are not used.

CODE	DESCRIPTION	# FMZ	DIMENSION	HEIGHT	WEIGHT
FM46155010	Plate with pneumatic FMZ	2	450X250 (17,71"X9,84")	40 (1,57")	33,9 (74,7 lbs)
FM46155020	Plate with pneumatic FMZ	4	450X450 (17,71"X17X71")	40 (1,57")	60,8 (134 lbs)
FM46155030	Plate with pneumatic FMZ	6	800X400 (31,4"X15,74")	40 (1,57")	92,8 (204,5 lbs)
FM46155040	Plate with pneumatic FMZ	8	800X800 (31,4"X31,4")	40 (1,57")	194,0 (427,6 lbs)
-	Custom Plate	-	-	40 (1,57")	-

CODE	DESCRIPTION	Ø	HEIGHT
FM46154020	Cover for FMZ	30 (1,18")	32 (1,25")

PIN M12 AND M16 FOR FMZ EXAMPLE

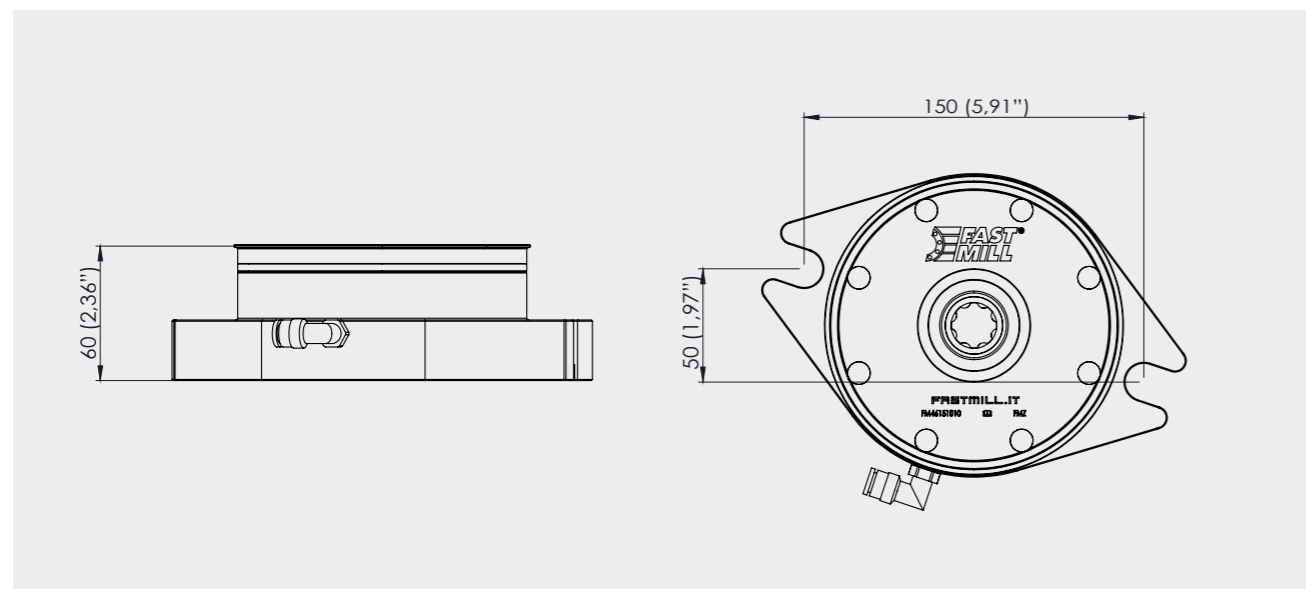




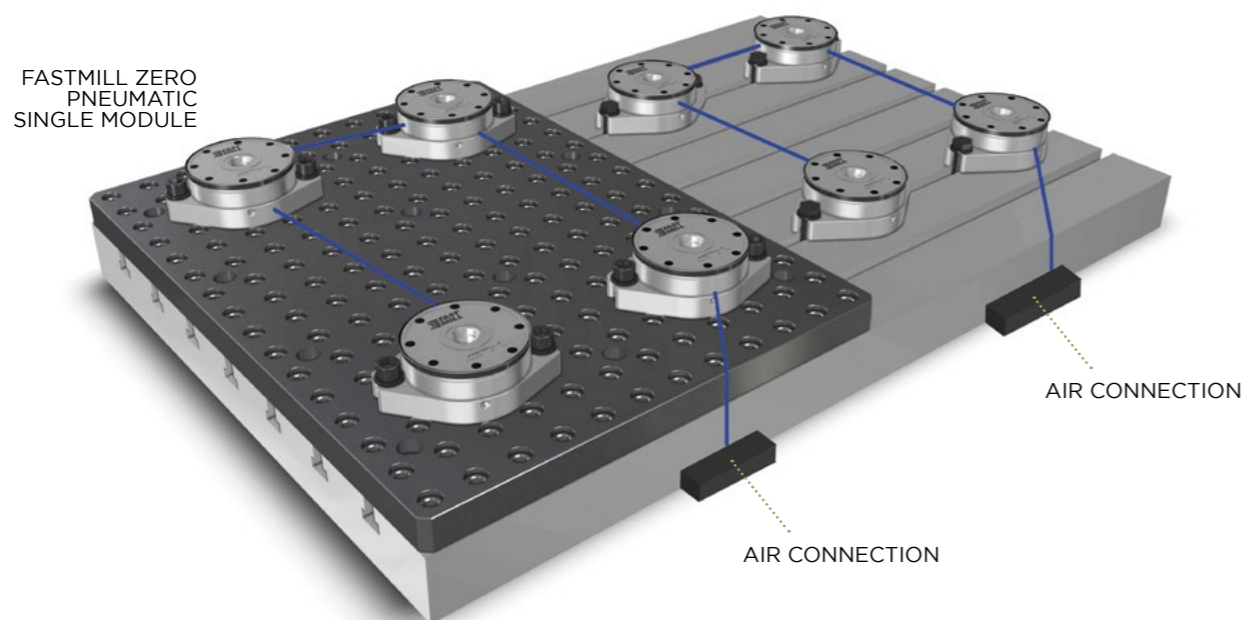
FASTMILL ZERO PNEUMATIC SINGLE MODULE FOR ASSEMBLY ON PLATE

The FastMill Zero single module offers the possibility of clamping workpieces using a pneumatic system, this module allows for different placements on the table. Ideal for fixing pieces with highly variable geometries or for positioning in hard-to-reach areas

CODE	DESCRIPTION	Ø	HEIGHT	WEIGHT
FM46156010	FMZ pneumatic single module	129 (5,07")	60 (2,36")	7,3 (16 lbs)



FASTMILL ZERO PNEUMATIC SINGLE MODULE FOR ASSEMBLY ON PLATE EXAMPLE



PIN M12 AND M16 FOR FASTMILL ZERO

The screwing of the centering, compensating and clamping pin of the FMZ series can be done both, from above (with M12 screw) or from below (with M12 stud screw).

Centering pin (**FM46153010 - FM46153070**)
Clamping and centering pin (X-, Y-positioning), required for set-up. Includes one M12x30 DIN912 screw (strength class 10.9) and one M12x25 DIN939 stud screw (strength class 10.9).

Compensating pin (two-parts) (**FM46153020**)
Clamping and locating pin used for radial alignment when two or more clampers are used for the same fixture. Required for multiple clamping fixture. Includes one M12x30 DIN912 screw (strength class 10.9) and one M12x25 DIN939 stud screw (strength class 10.9).

Clamping pin (**FM46153030**)
Clamping pin without alignment. Used for clamping when three or more clampers are used for the same fixture. Required with three or more clampers. Includes one M12x30 screw (strength class 10.9) and one M12x25 (DIN938) stud screw (strength class 10.9)

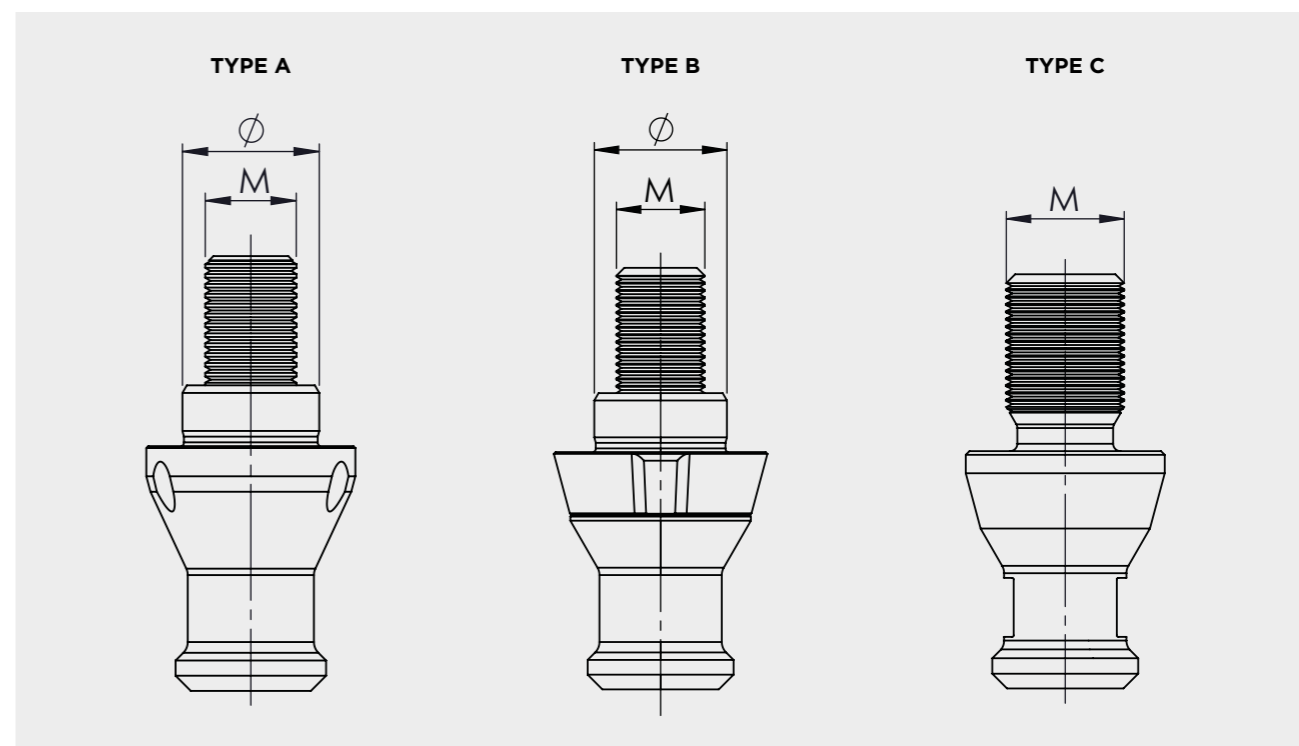
Integral Pin M16 type C (**FM46153060**)
Clamping and locating pin used for clamping when three or more clampers are used for one fixture.

M12 PIN FOR FMZ

CODE	DESCRIPTION	M	Ø	TYPE
FM46153010	Pin M12 for FMZ	M12	18 (0,70")	A
FM46153020	Pin M12 for FMZ	M12	18 (0,70")	B
FM46153030	Pin M12 for FMZ	M12	-	C
FM46153070	Pin M12 for FMZ	M12	20 (0,78")	A

M16 PIN FOR FMZ

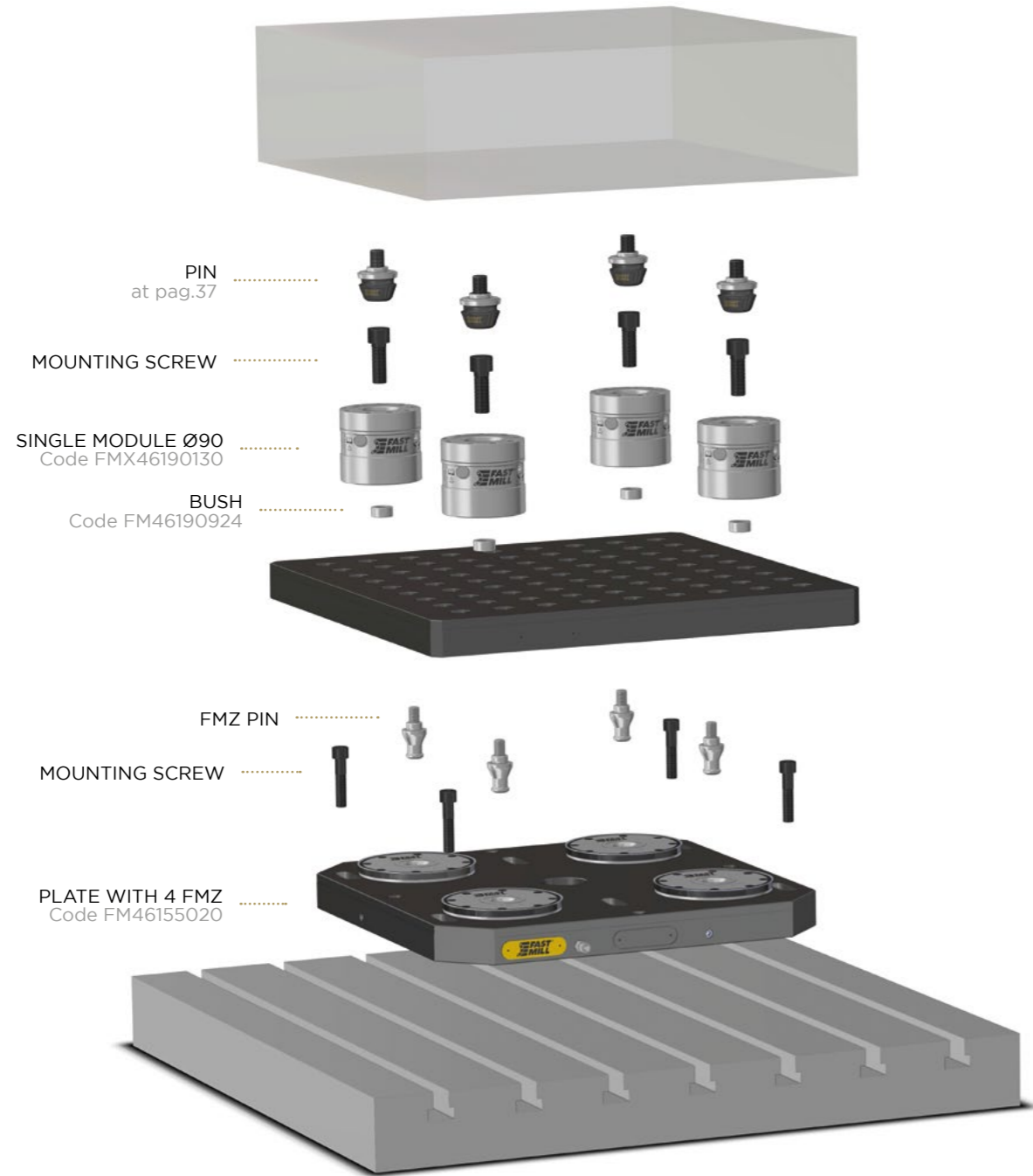
CODE	DESCRIPTION	M	Ø	TIPO
FM46153080	Pin M16 for FMZ	M16	20	A
FM46153060	Pin M16 for FMZ	M16	-	C



PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

PLATES AND BUSHES
 MODULES AND PINS D90
 MODULES AND PINS D49
 SPACERS
 RISERS
 THIRD POINT
 MAGNETIC
 VERTICAL CLAMPING
 MINI RANGE
 FASTMILL ZERO
 CLAMPS

PLATE WITH 4 FMZ MODULES ASSEMBLY EXAMPLE

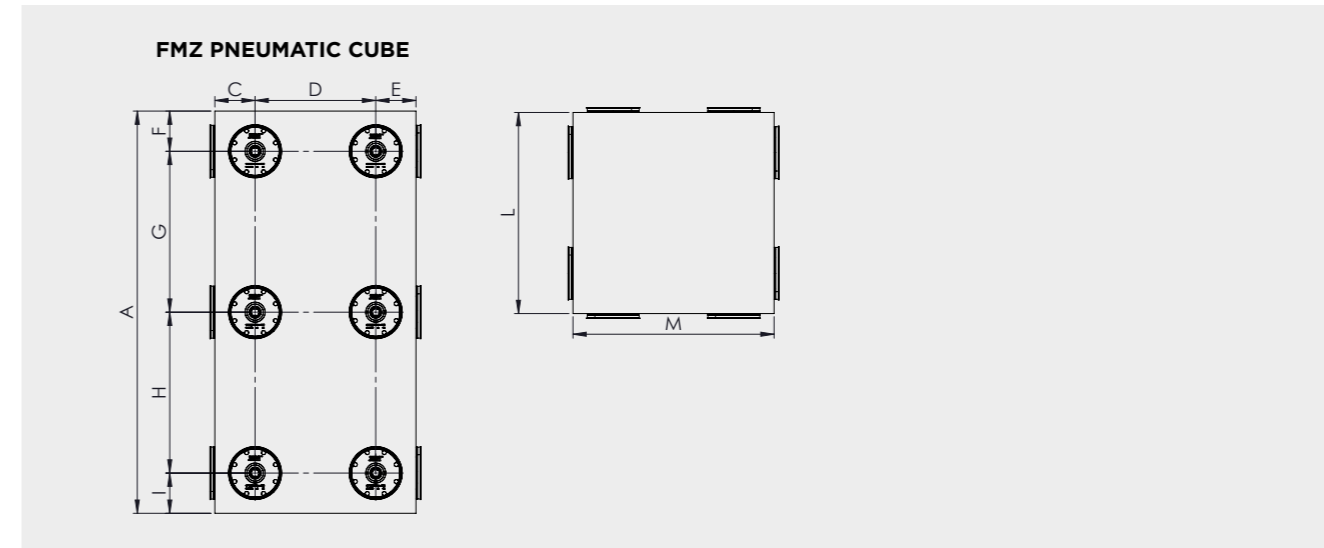


FASTMILL ZERO PNEUMATIC CUBE

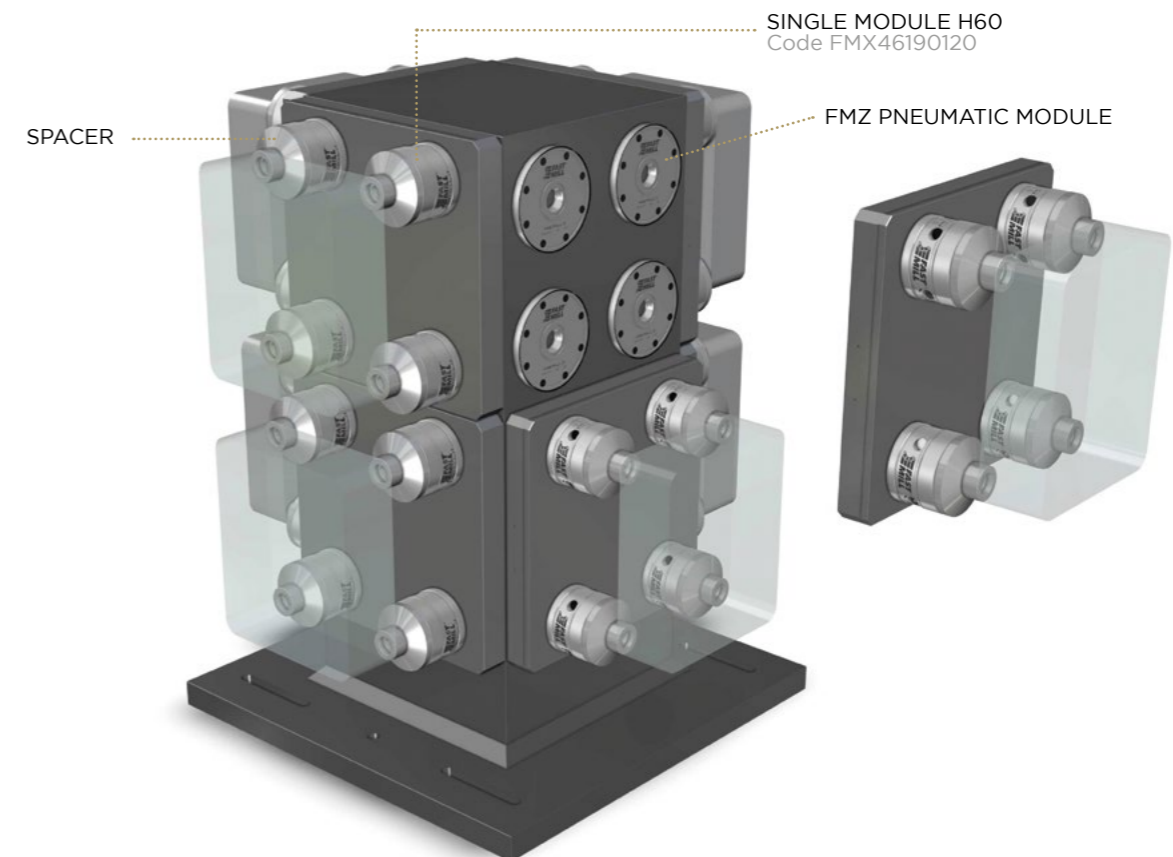
FastMill Zero pneumatic cubes are made to customer specifications and can have one to four faces with inserted pneumatic modules. The base can be fixed on T-slots or by modules.

ON DEMAND

Alternative dimensions or custom solutions on demand



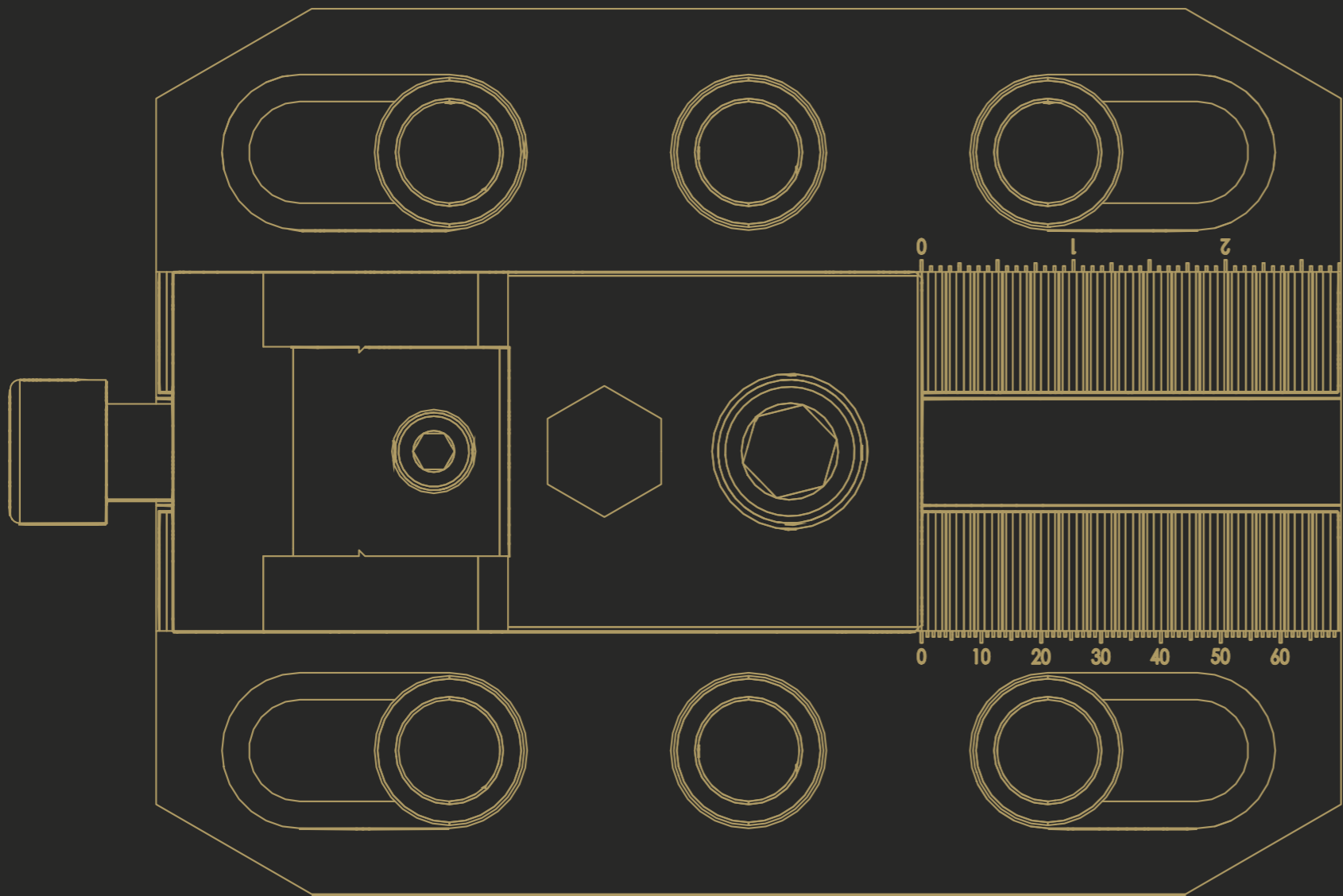
SETUP EXAMPLE



PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
CLAMPS

CLAMPS
FASTMILL ZERO
MINI RANGE
VERTICAL CLAMPING
MAGNETIC
THIRD POINT
RISERS
SPACERS
MODULES AND PINS D49
MODULES AND PINS D90
PLATES AND BUSHES



CLAMPS

CLAMPS
FASTMILL ZERO
MINI RANGE
VERTICAL CLAMPING
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THIRD POINT
RISERS
SPACERS
MODULES AND PINS D49
MODULES AND PINS D90
PLATES AND BUSHES

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 SPACERS
 RISERS
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 FASTMILL ZERO
 CLAMPS



MODULAR CLAMP

Useful for pre-process operations, the FastMill Modular Clamp allows you to fix pieces of various sizes with maximum rigidity and practicality. Simple to install and to handle with just a few operations, the FastMill modular clamp allows the operator to start machining on the workpiece.

CODE	DESCRIPTION	DIMENSION	HEIGHT	WEIGHT
FM51991700	Modular clamp	198x148 (7,79"x5,82")	136 (5,35")	11,8 (26 lbs)

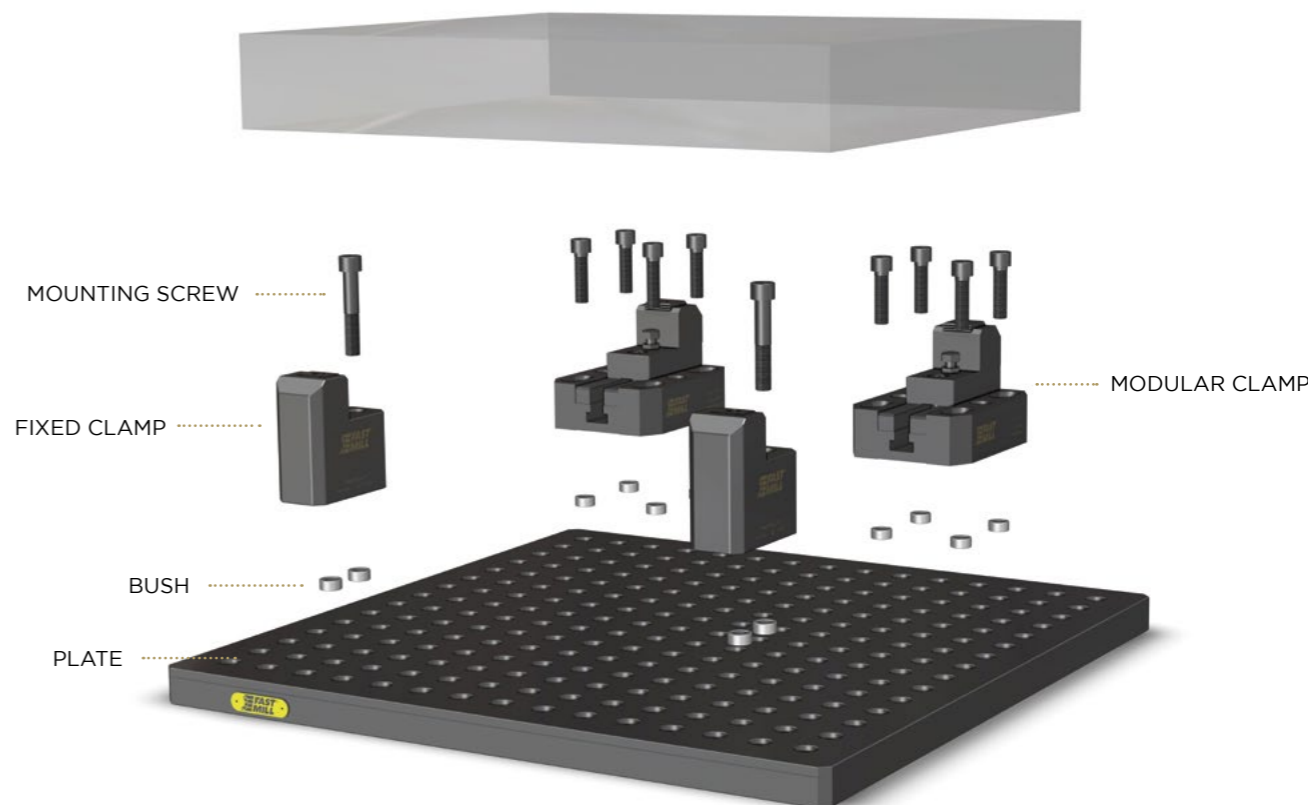


FIXED CLAMP

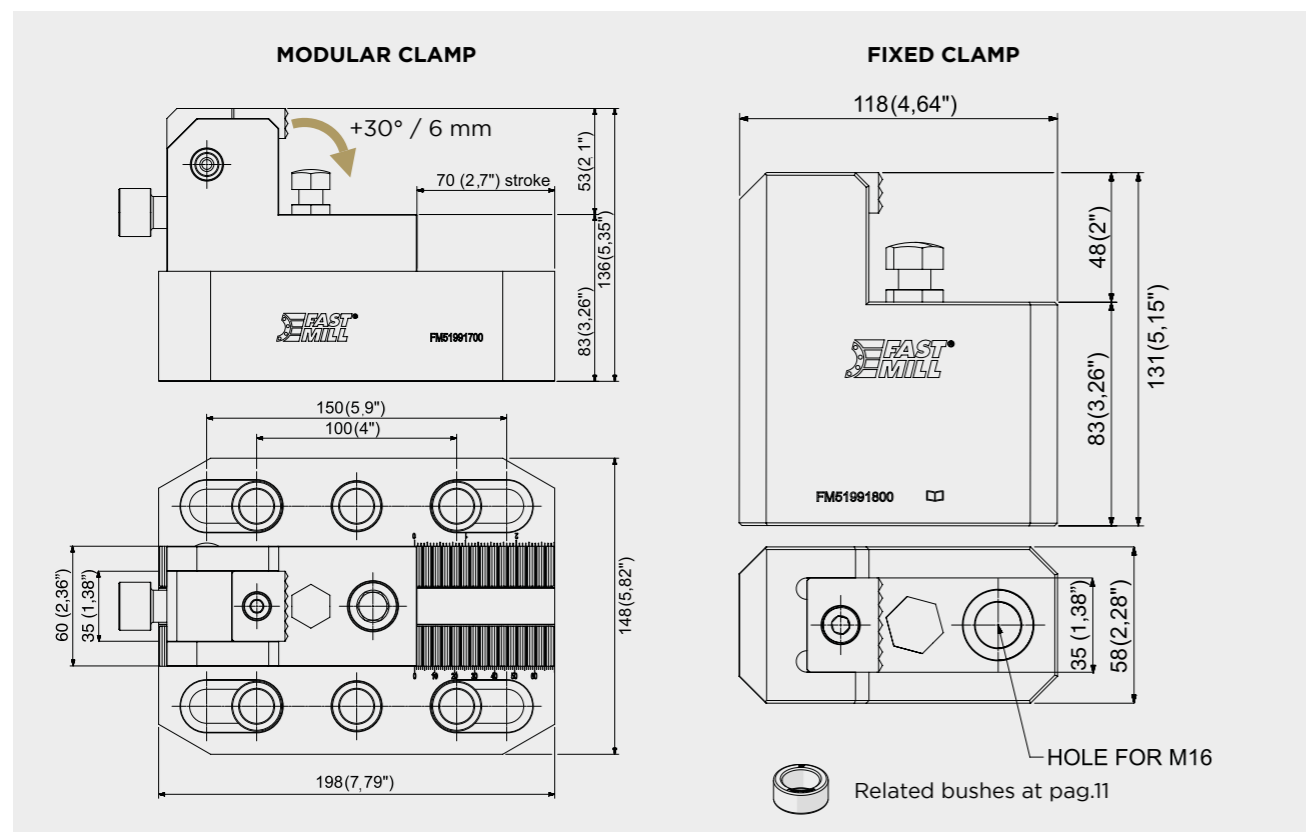
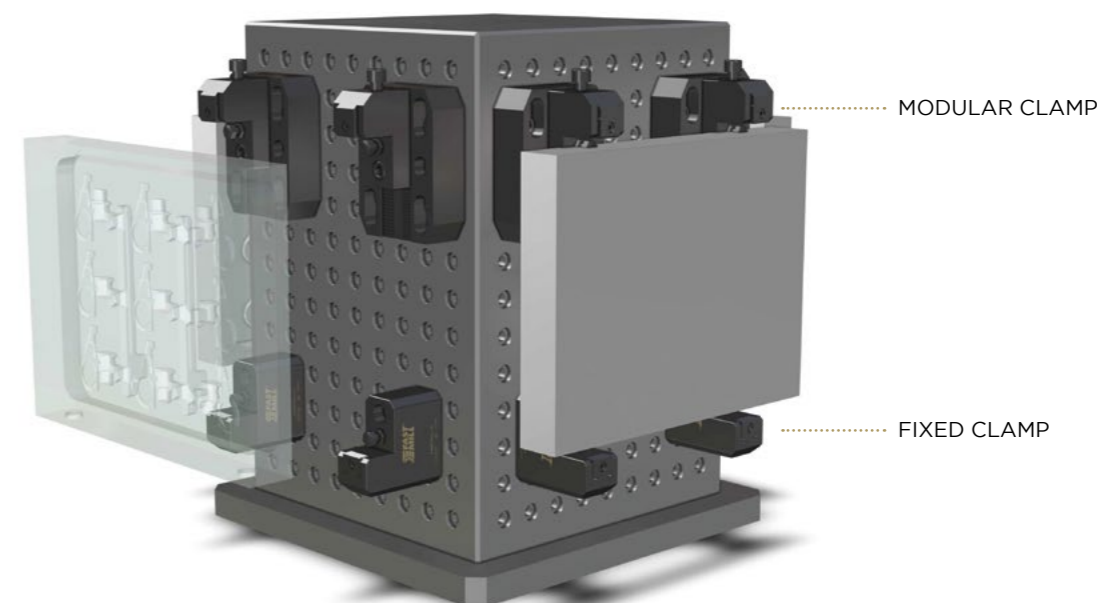
FastMill Fixed Clamp are used in tandem with our Modular Clamp to support workpiece clamping. Versatile and functional, they can also act as reference points when the operator needs to position several workpieces at the same X-Y coordinates.

CODE	DESCRIPTION	DIMENSION	HEIGHT	WEIGHT
FM51991800	Fixed clamp	60x125 (2,36"x4,92")	131 (5,15")	5,8 (12,7 lbs)

CLAMPS ASSEMBLY EXAMPLE



CLAMPS ASSEMBLY EXAMPLE





SELF-CENTERING MECHANICAL VICE Ø120

Fixing: compatible with zero points on the market or directly on the mechanical table.
 Operation: kinematics driven by double screw with trapezoidal thread right and left.

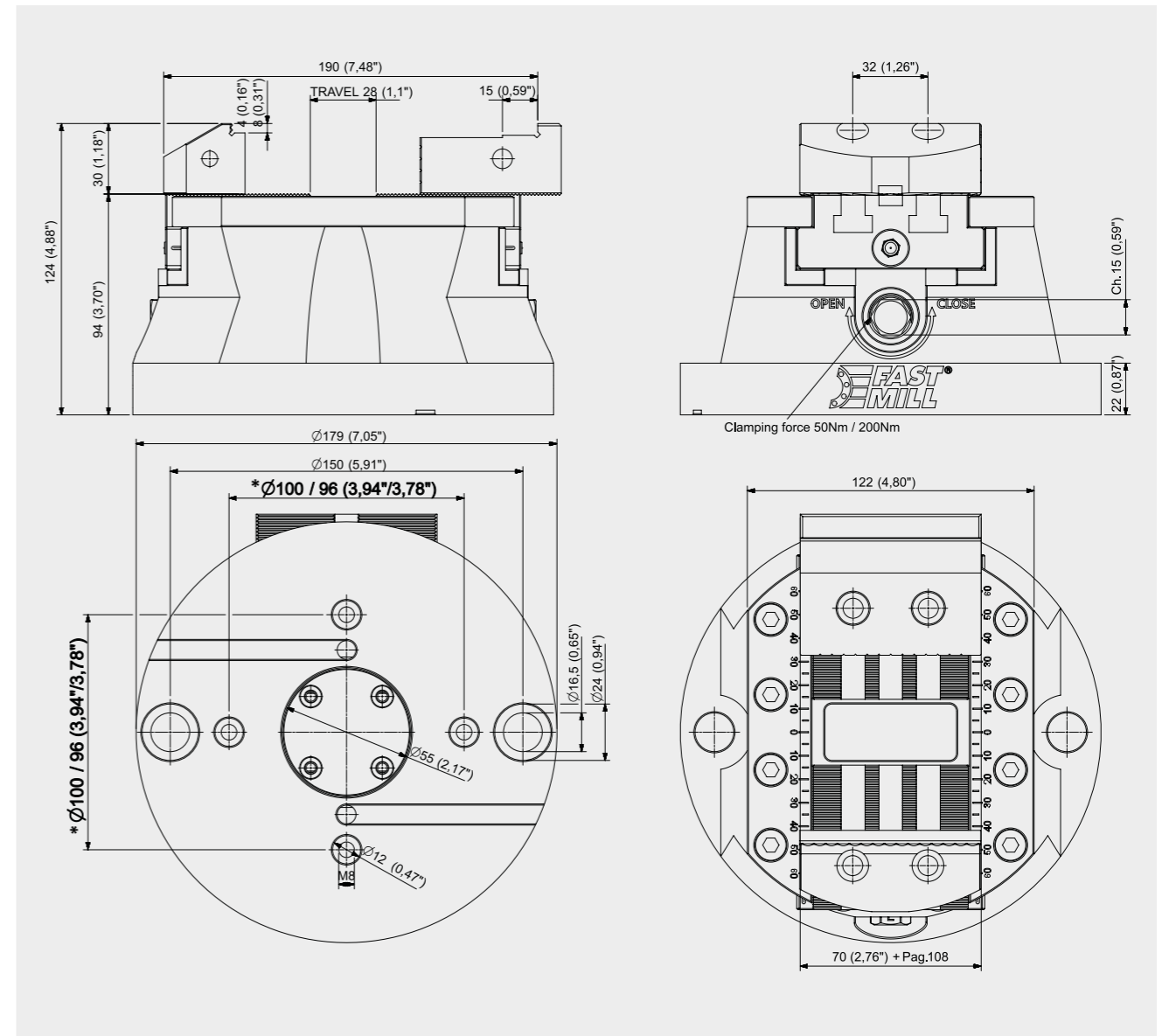
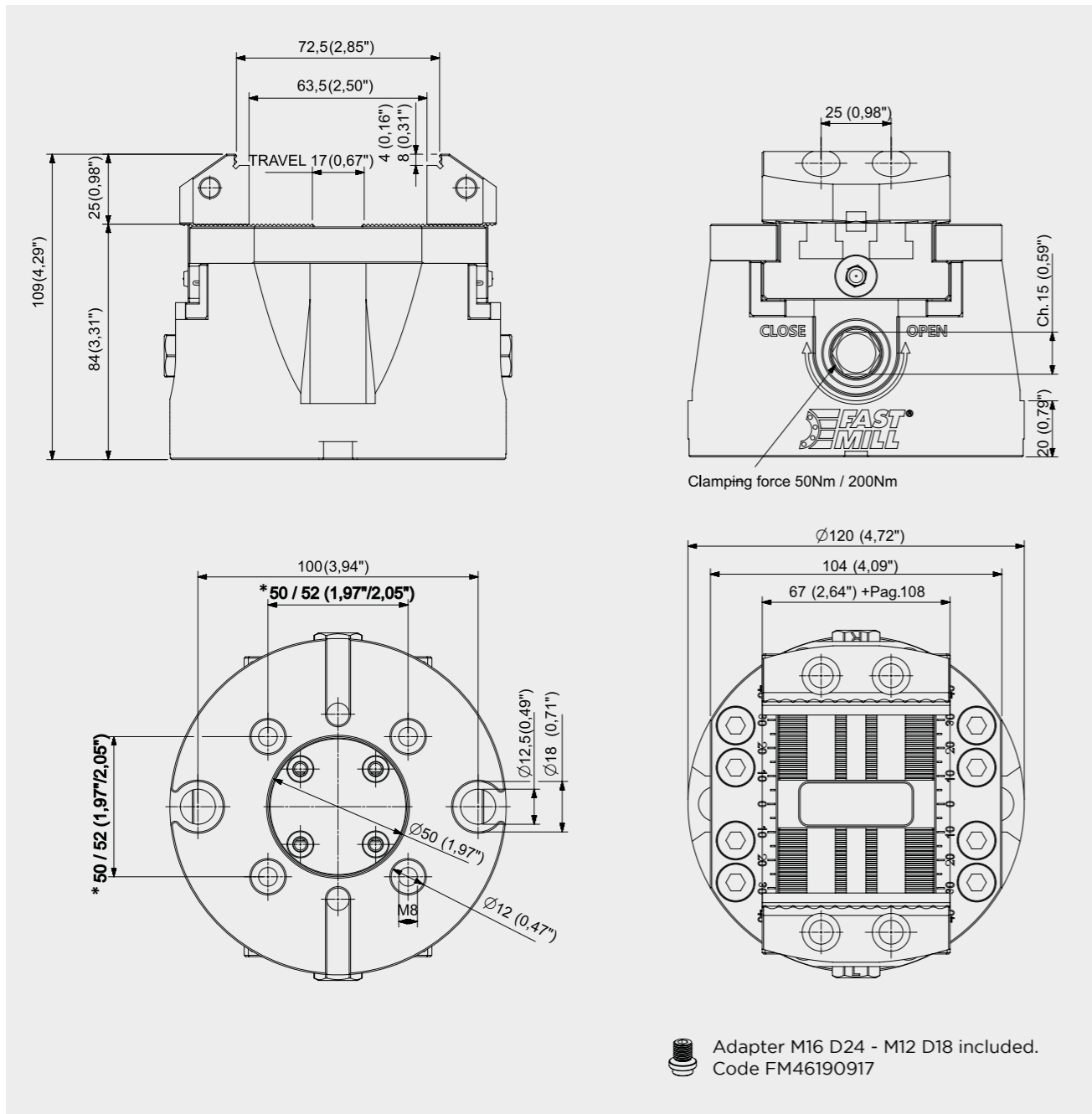


SELF-CENTERING MECHANICAL VICE Ø160

Fixing: compatible with zero points on the market or directly on the mechanical table.
 Operation: kinematics driven by double screw with trapezoidal thread right and left.

CODE	DESCRIPTION	STROKE PER JOKE	PITCH*	CLAMPING FORCE	WEIGHT
FM51900201	Self-centering mechanical vice	8.5 (0,33")	50 (1,97")	15 kN	3.75 Kg (8,27 lbs)
FM51900211	Self-centering mechanical vice	8.5 (0,33")	52 (2,05")	15 kN	3.75 Kg (8,27 lbs)

CODE	DESCRIPTION	STROKE PER JOKE	PITCH*	CLAMPING FORCE	WEIGHT
FM51900202	Self-centering mechanical vice	28 (1,10")	100 (3,94")	20 kN	9 Kg (19,84 lbs)
FM51900213	Self-centering mechanical vice	28 (1,10")	96 (3,78")	20 kN	9 Kg (19,84 lbs)



CLAMPS
 FASTMILL ZERO
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 MAGNETIC
 THIRD POINT
 RISERS
 SPACERS
 MODULES AND PINS D49
 MODULES AND PINS D90
 PLATES AND BUSHES

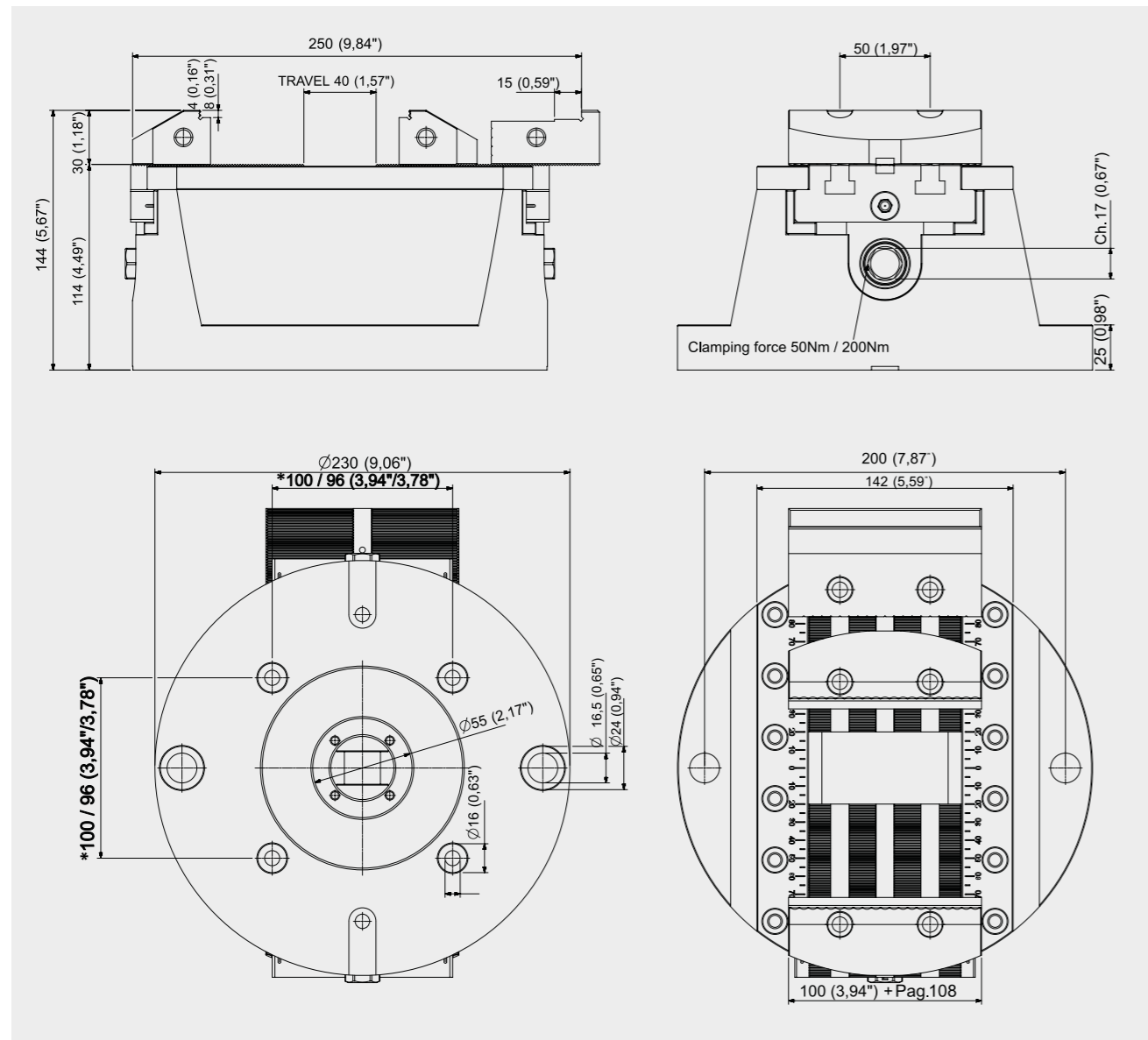
CLAMPS
 FASTMILL ZERO
 MINI RANGE
 VERTICAL CLAMPING
 MAGNETIC
 THIRD POINT
 RISERS
 SPACERS
 MODULES AND PINS D49
 MODULES AND PINS D90
 PLATES AND BUSHES



SELF-CENTERING MECHANICAL VICE Ø230

Fixing: compatible with zero points on the market or directly on the mechanical table.
 Operation: kinematics driven by double screw with trapezoidal thread right and left.

CODE	DESCRIPTION	STROKE PER JOKE	PITCH*	CLAMPING FORCE	WEIGHT
FM51900203	Self-centering mechanical vice	40 (1,57")	100 (3,94")	28 kN	15 Kg (33,07 lbs)
FM51900212	Self-centering mechanical vice	40 (1,57")	96 (3,78")	28 kN	15 Kg (33,07 lbs)



MECHANICAL VICE WITH FIXED JAW Ø120

Fixing: compatible with zero points on the market or directly on the mechanical table.
 Operation: kinematics driven by double screw with trapezoidal thread right and left.

CODE	DESCRIPTION	STROKE PER JOKE	PITCH	CLAMPING FORCE	WEIGHT
FM51900101	Mechanical vice with fixed jaw Ø120	11,5 (0,42")	50 (1,97")	17 kN	3,94 Kg (8,69 lbs)
FM51900111	Mechanical vice with fixed jaw Ø120	11,5 (0,42")	52 (2,05")	17 kN	3,94 Kg (8,69 lbs)



MECHANICAL VICE WITH FIXED JAW Ø160

Fixing: compatible with zero points on the market or directly on the mechanical table.
 Operation: kinematics driven by double screw with trapezoidal thread right and left.

CODE	DESCRIPTION	STROKE PER JOKE	PITCH	CLAMPING FORCE	WEIGHT
FM51900102	Mechanical vice with fixed jaw Ø160	15 (0,59")	100 (3,94")	20 kN	7,38 Kg (16,27 lbs)
FM51900112	Mechanical vice with fixed jaw Ø160	15 (0,59")	96 (3,78")	20 kN	7,38 Kg (16,27 lbs)



MECHANICAL VICE WITH FIXED JAW Ø230

Fixing: compatible with zero points on the market or directly on the mechanical table.
 Operation: kinematics driven by double screw with trapezoidal thread right and left.

CODE	DESCRIPTION	STROKE PER JOKE	PITCH	CLAMPING FORCE	WEIGHT
FM51900103	Mechanical vice with fixed jaw Ø230	20 (0,78")	100 (3,94")	28 kN	16,03 Kg (35,34 lbs)
FM51900113	Mechanical vice with fixed jaw Ø230	20 (0,78")	96 (3,78")	28 kN	16,03 Kg (35,34 lbs)

CLAMPS
 FASTMILL ZERO
 MINI RANGE
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 MODULES AND PINS D90
 PLATES AND BUSHES

CLAMPS
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 MODULES AND PINS D90
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MODULES AND PINS D90
PLATES AND BUSHES

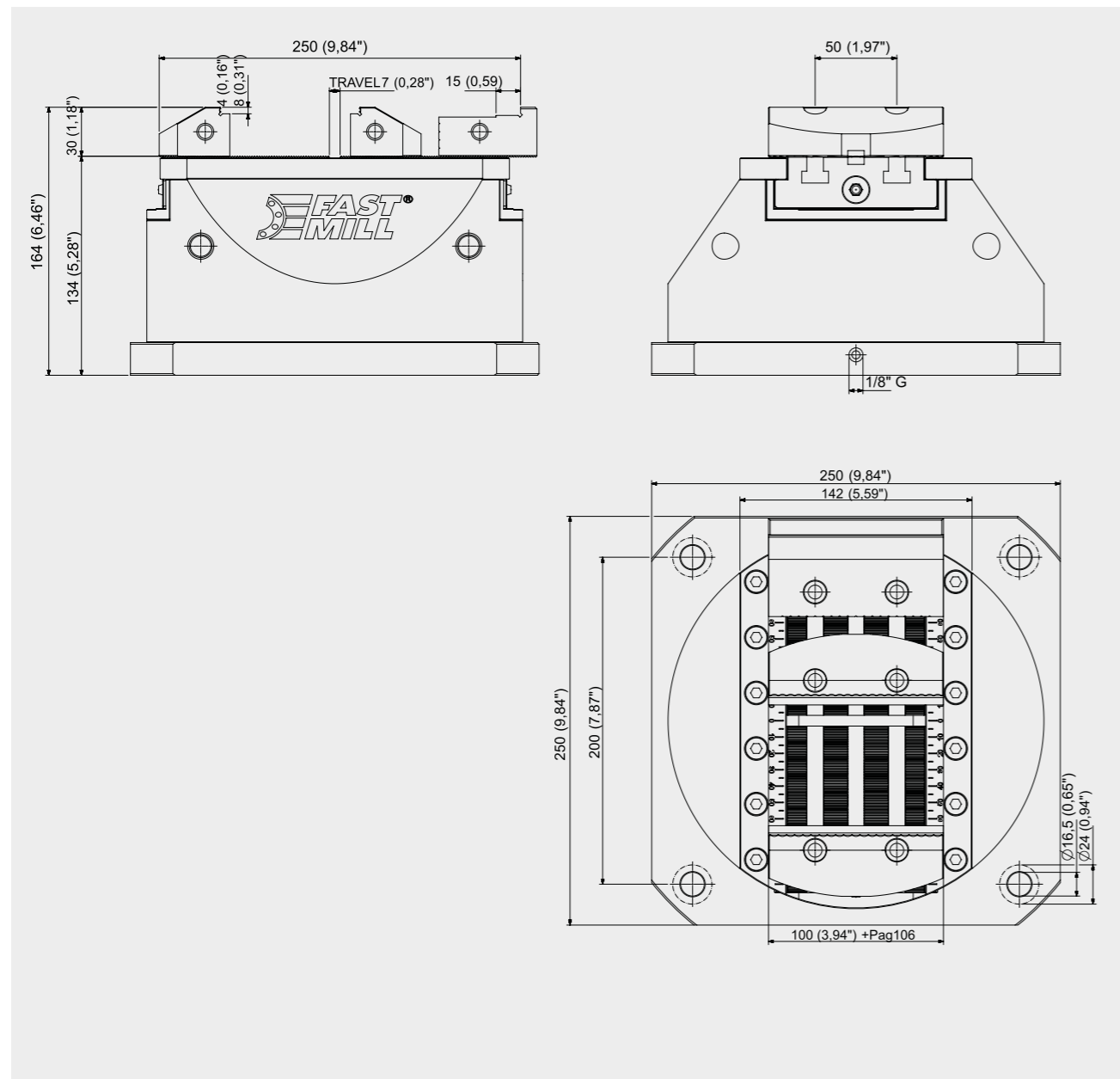
CLAMPS
FASTMILL ZERO
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THIRD POINT
RISERS
SPACERS
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MODULES AND PINS D49
PLATES AND BUSHES

PNEUMATIC VICE Ø230

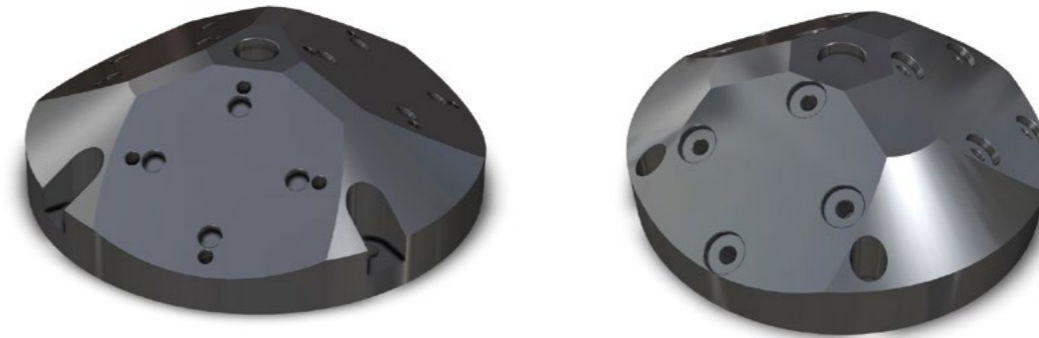


Fixing: compatible with zero points on the market or directly on the mechanical table.
Operation: kinematics toggles actuated by a pneumatic cylinder with min. 8 bar max. 9 bar.

CODE	DESCRIPTION	STROKE PER JOKE	CLAMPING FORCE	WEIGHT
FM51900301	Pneumatic vice	7 (0.27")	≥8 kN	20 Kg (44,09 lbs)

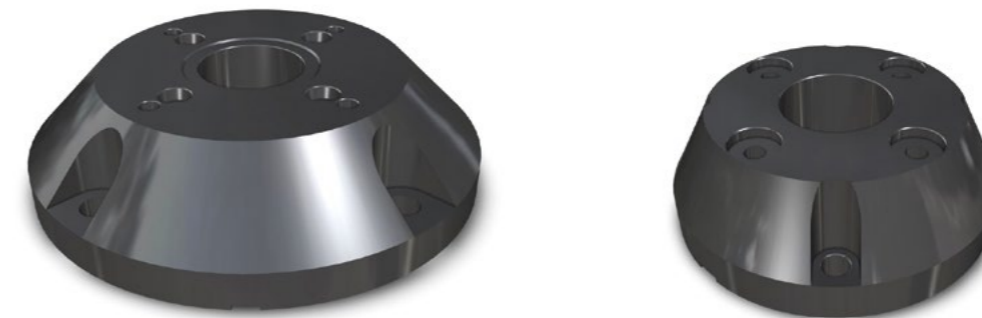


BASE PYRAMIDALE



CODE	DESCRIPTION	DIAMETER	HEIGHT	PITCH	USE WITH VICE	MATERIAL	WEIGHT
FM51909901	Base pyramidale	330 (12,99")	108 (4,25")	100 (3,94")	Ø160 (6,29")	Aluminum	27 Kg (59,52 lbs)
FM51909991	Base pyramidale	348 (13,70")	108 (4,25")	96 (3,78")	Ø160 (6,29")	Aluminum	27 Kg (59,52 lbs)
FM51909902	Base pyramidale	270 (10,62")	108 (4,25")	50 (1,97")	Ø120 (4,72")	Aluminum	18 Kg (39,68 lbs)
FM51909992	Base pyramidale	270 (10,62")	108 (4,25")	52 (2,05")	Ø120 (4,72")	Aluminum	18 Kg (39,68 lbs)

EXTRABASE

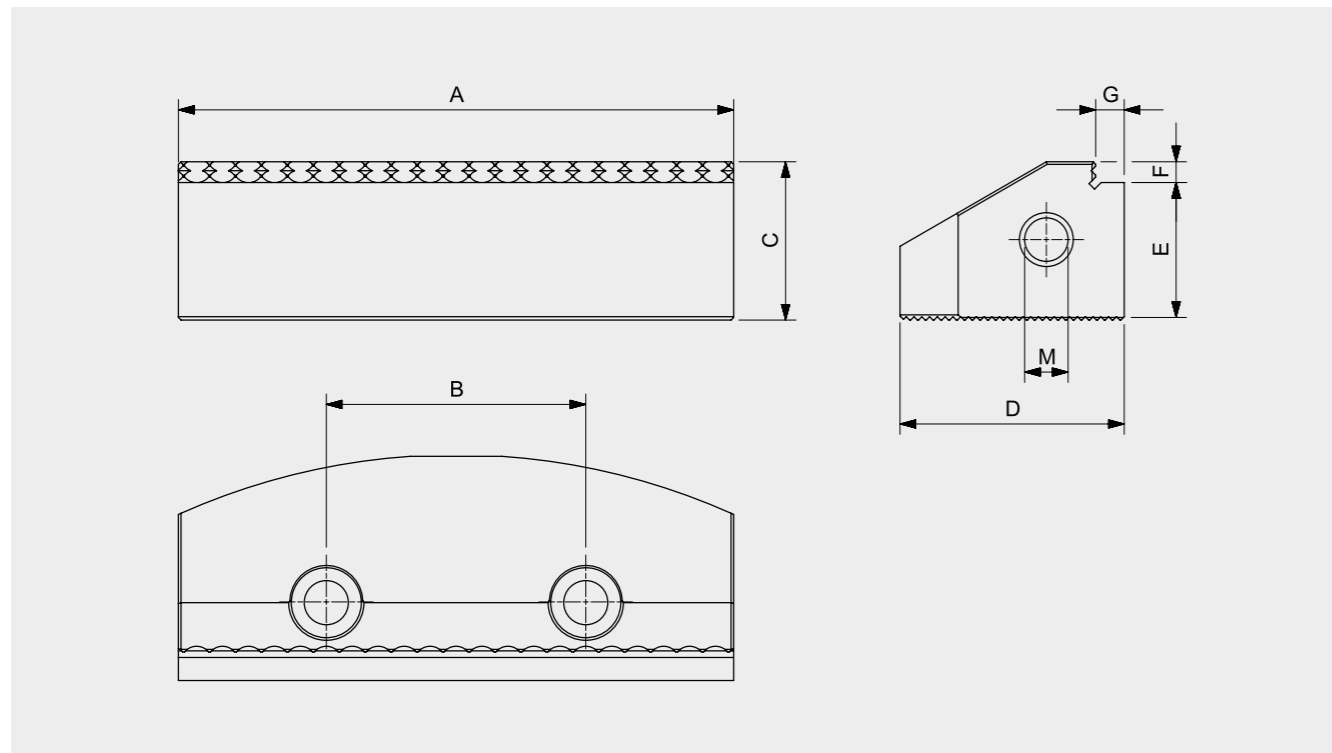


CODE	DESCRIPTION	DIAMETER	HEIGHT	PITCH	USE WITH VICE	MATERIAL	WEIGHT
FM51909903	Extrabase	200 (7,87")	60 (2,36")	100 (3,94")	Ø160 (6,29")	Aluminum	4 Kg (8,82 lbs)
FM51909993	Extrabase	238 (9,37")	60 (2,36")	96 (3,78")	Ø160 (6,29")	Aluminum	4 Kg (8,82 lbs)
FM51909904	Extrabase	160 (6,29")	60 (2,36")	50 (1,97")	Ø120 (4,72")	Aluminum	3 Kg (6,61 lbs)
FM51909994	Extrabase	160 (6,29")	60 (2,36")	52 (2,05")	Ø120 (4,72")	Aluminum	3 Kg (6,61 lbs)



**STANDARD JAWS
ROUGHING / FINISHING**

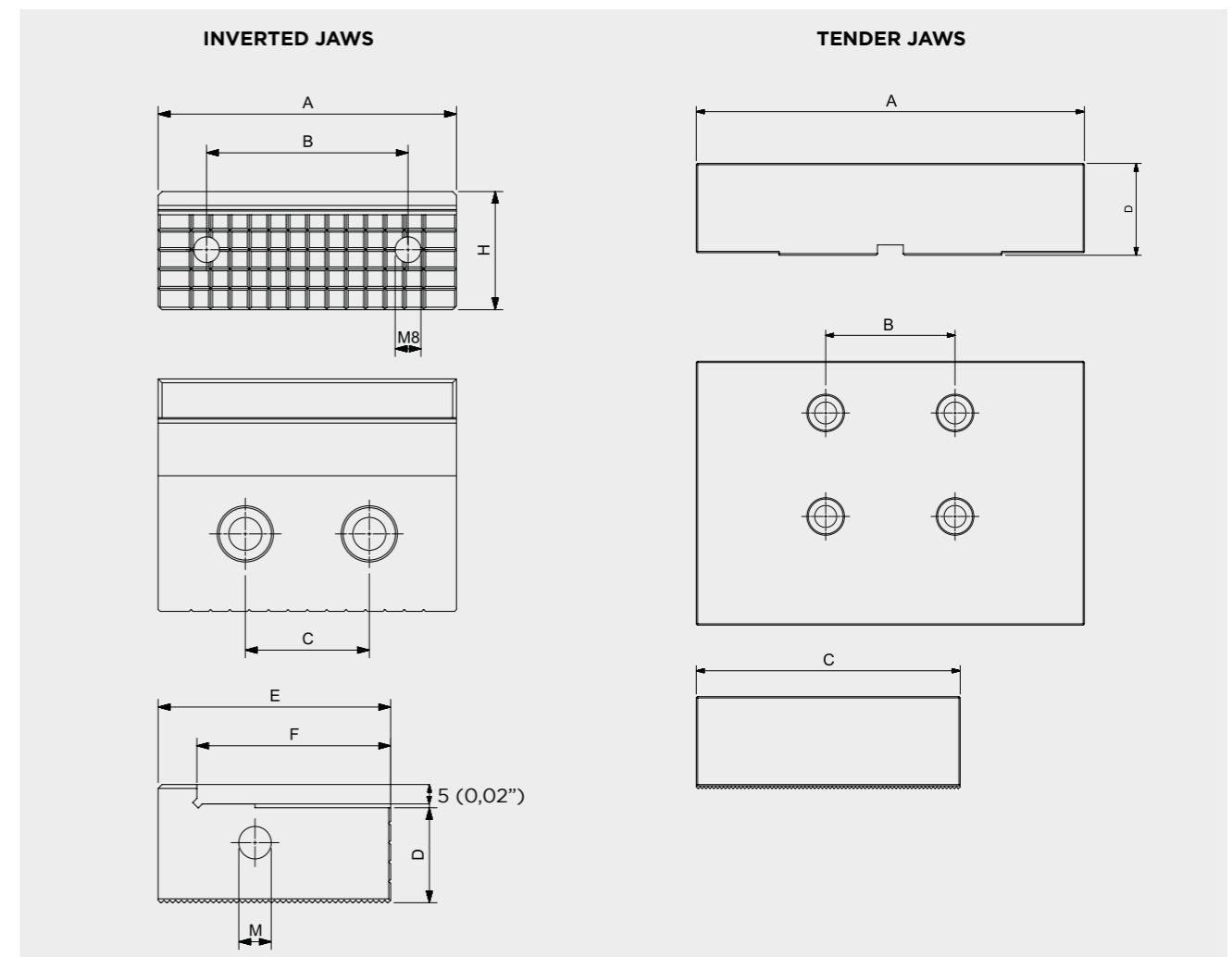
CODE	DESCRIPTION	DIMENSIONS							
		A	B	C	D	E	F	G	M
FM51909905/55	Step chamfer jaw R-F	67 (2,63")	25 (0,98")	25,5 (1")	25 (0,98")	21,5 (0,84")	4 (0,15")	4,5 (0,17")	M8
FM51909906/56	Step chamfer jaw R-F	67 (2,63")	25 (0,98")	25,5 (1")	25 (0,98")	15,5 (0,61")	8 (0,31")	4,5 (0,17")	M8
FM51909907/57	Step chamfer jaw R-F	77 (3")	32 (1,25")	30,5 (1,2")	35 (1,37")	26,5 (1,04")	4 (0,15")	5,5 (0,21")	M10
FM51909908/58	Step chamfer jaw R-F	77 (3")	32 (1,25")	30,5 (1,2")	35 (1,37")	20,5 (0,8")	8 (0,31")	5,5 (0,21")	M10
FM51909909/59	Step chamfer jaw R-F	107 (4,21")	32 (1,25")	30,5 (1,2")	35 (1,37")	26,5 (1,04")	4 (0,15")	5,5 (0,21")	M10
FM51909910/60	Step chamfer jaw R-F	107 (4,21")	32 (1,25")	30,5 (1,2")	35 (1,37")	20,5 (0,8")	8 (0,31")	5,5 (0,21")	M10
FM51909911/61	Step chamfer jaw R-F	127 (5")	32 (1,25")	30,5 (1,2")	35 (1,37")	26,5 (1,04")	4 (0,15")	5,5 (0,21")	M10
FM51909912/62	Step chamfer jaw R-F	127 (5")	32 (1,25")	30,5 (1,2")	35 (1,37")	20,5 (0,8")	8 (0,31")	5,5 (0,21")	M10
FM51909913/63	Step chamfer jaw R-F	107 (4,21")	50 (1,96")	30,5 (1,2")	35 (1,37")	26,5 (1,04")	4 (0,15")	5,5 (0,21")	M10
FM51909914/64	Step chamfer jaw R-F	107 (4,21")	50 (1,96")	30,5 (1,2")	35 (1,37")	20,5 (0,8")	8 (0,31")	5,5 (0,21")	M10
FM51909915/65	Step chamfer jaw R-F	127 (5")	50 (1,96")	30,5 (1,2")	35 (1,37")	26,5 (1,04")	4 (0,15")	5,5 (0,21")	M10
FM51909916/66	Step chamfer jaw R-F	127 (5")	50 (1,96")	30,5 (1,2")	35 (1,37")	20,5 (0,8")	8 (0,31")	5,5 (0,21")	M10
FM51909917/67	Step chamfer jaw R-F	157 (6,18")	50 (1,96")	30,5 (1,2")	35 (1,37")	26,5 (1,04")	4 (0,15")	5,5 (0,21")	M10
FM51909918/68	Step chamfer jaw R-F	157 (6,18")	50 (1,96")	30,5 (1,2")	35 (1,37")	20,5 (0,8")	8 (0,31")	5,5 (0,21")	M10



**INVERTED JAWS - OPTIONAL
TENDER JAWS - OPTIONAL**

CODE	DESCRIPTION	DIMENSIONS							
		A	B	C	D	E	F	M	H
FM51909919	Inverted jaw	60 (2,36")		25 (0,98")	20,5 (0,8")	45 (1,77")	35 (1,37")	M8	25,5 (1")
FM51909920	Inverted jaw	70 (2,75")	52 (2,04")	32 (1,25")	25,5 (1")	60 (2,36")	50 (1,96")	M10	30,5 (1,2")
FM51909921	Inverted jaw	100 (3,93")	75 (2,95")	50 (1,96")	25,5 (1")	60 (2,36")	50 (1,96")	M11	30,5 (1,2")
FM51909922	Inverted jaw	120 (4,72")	52 (2,04")	32 (1,25")	25,5 (1")	60 (2,36")	50 (1,96")	M12	30,5 (1,2")
FM51909923	Inverted jaw	150 (5,9")	75 (2,95")	50 (1,96")	25,5 (1")	60 (2,36")	50 (1,96")	M13	30,5 (1,2")

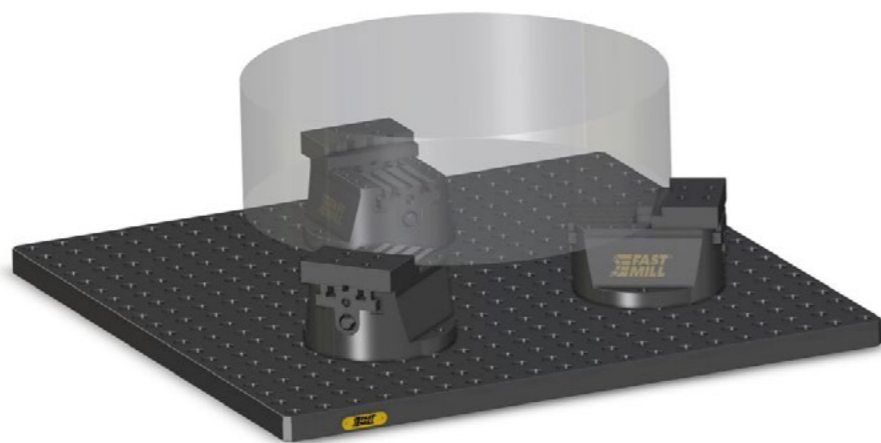
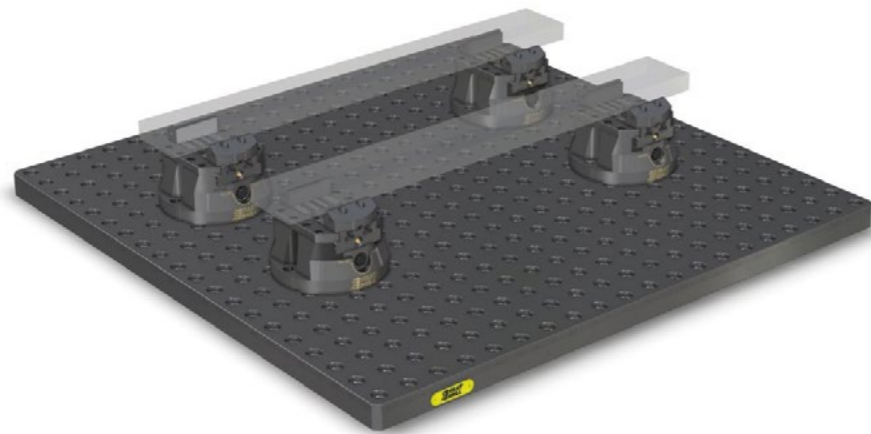
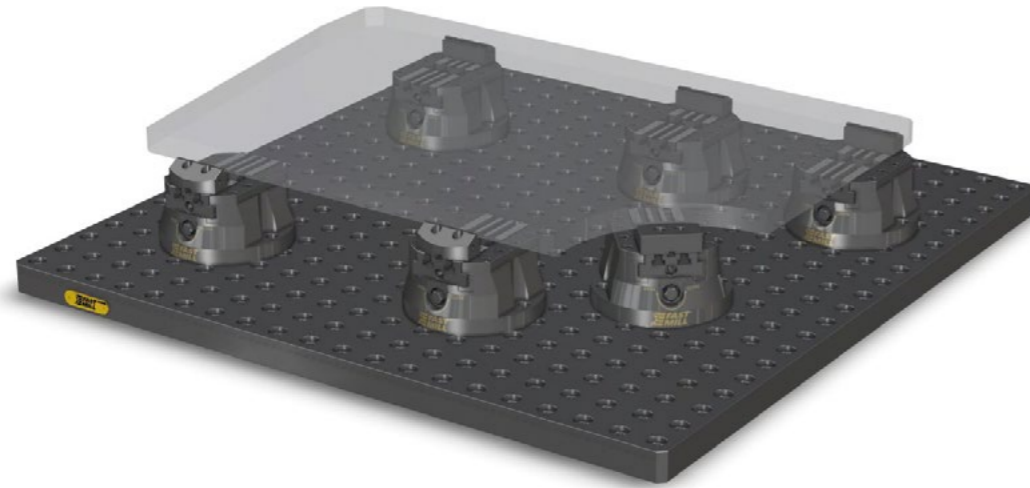
CODE	DESCRIPTION	DIMENSIONS			
		A	B	C	D
FM51909924	Tender jaw	60 (2,36")	25 (0,98")	54 (2,12")	25,5 (1")
FM51909925	Tender jaw	70 (2,75")	32 (1,25")	78 (3,07")	30,5 (1,2")
FM51909926	Tender jaw	100 (3,93")	50 (1,96")	102 (4,01")	30,5 (1,2")
FM51909927	Tender jaw	120 (4,72")	32 (1,25")	78 (3,07")	30,5 (1,2")
FM51909928	Tender jaw	150 (5,9")	50 (1,96")	102 (4,01")	30,5 (1,2")



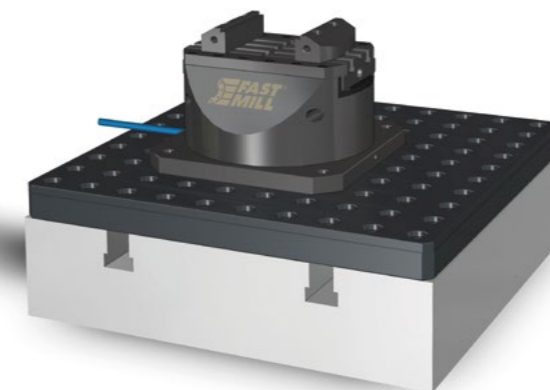
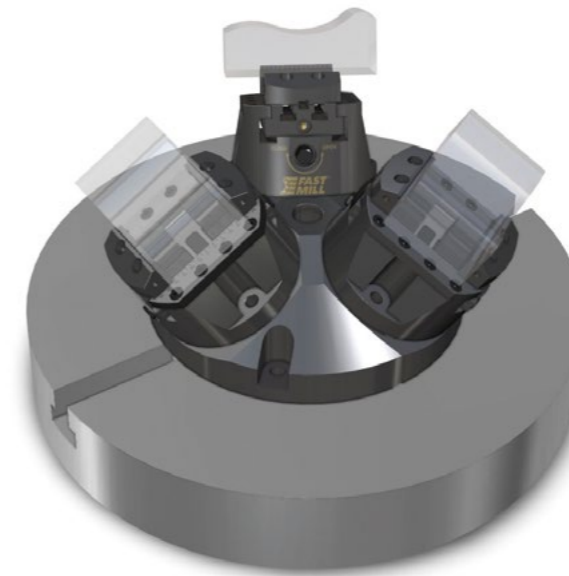
PLATES AND BUSHES
MODULES AND PINS D90
MODULES AND PINS D49
SPACERS
RISERS
THIRD POINT
MAGNETIC
VERTICAL CLAMPING
MINI RANGE
FASTMILL ZERO
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EXAMPLES OF COMPOSITIONS

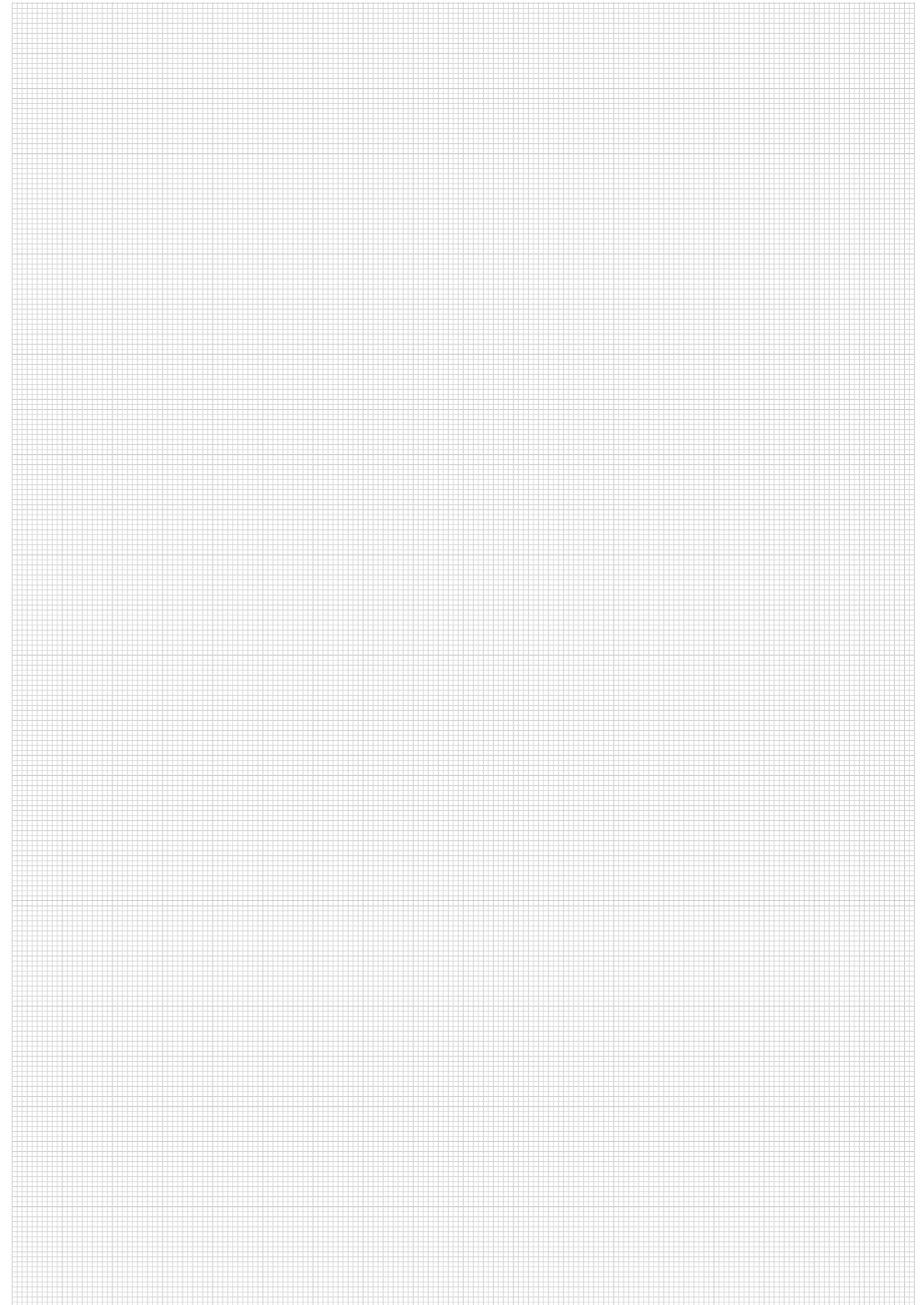
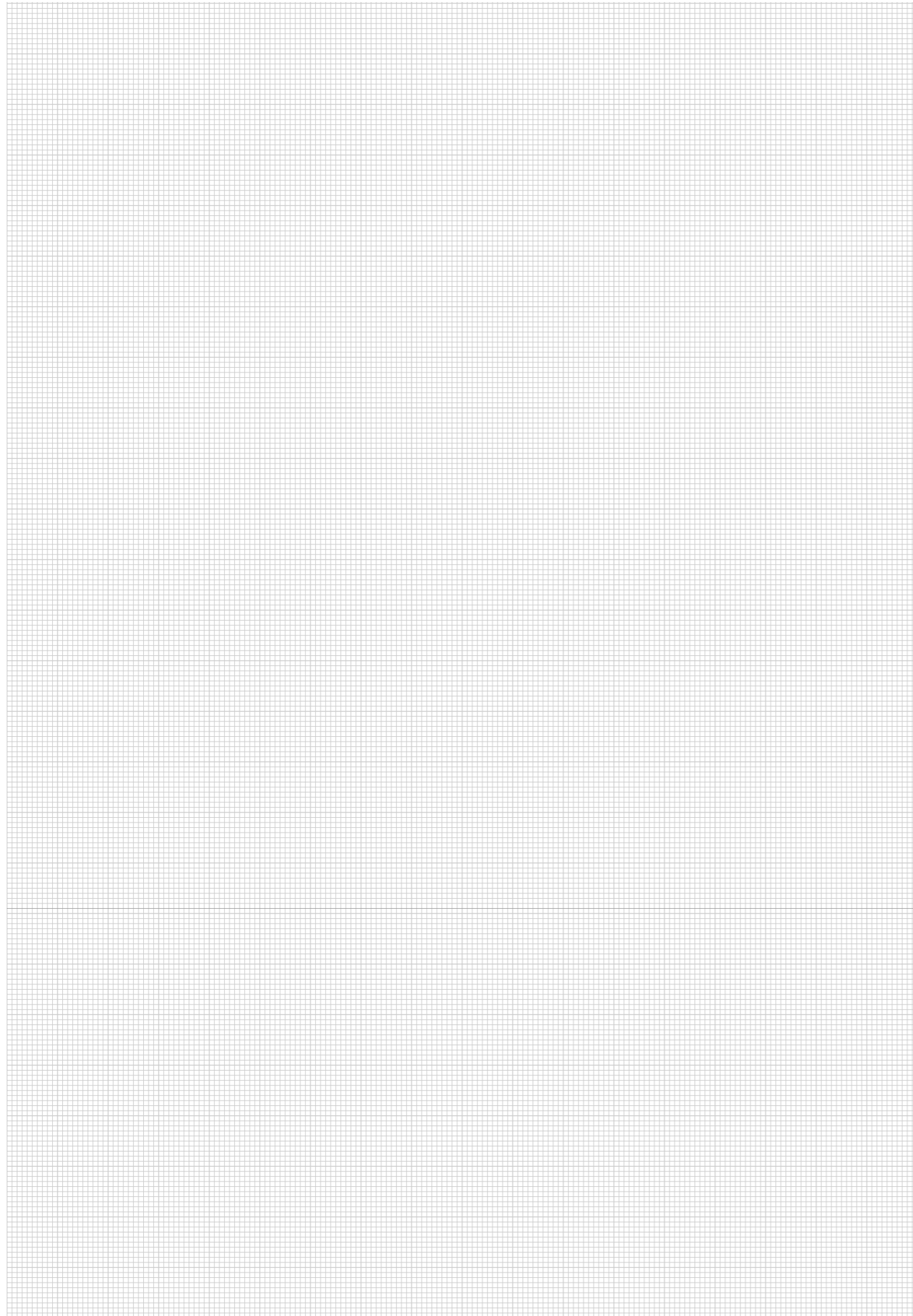


EXAMPLES OF COMPOSITIONS



CLAMPS
FASTMILL ZERO
MINI RANGE
VERTICAL CLAMPING
MAGNETIC
THIRD POINT
RISERS
SPACERS
MODULES AND PINS D49
MODULES AND PINS D90
PLATES AND BUSHES

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