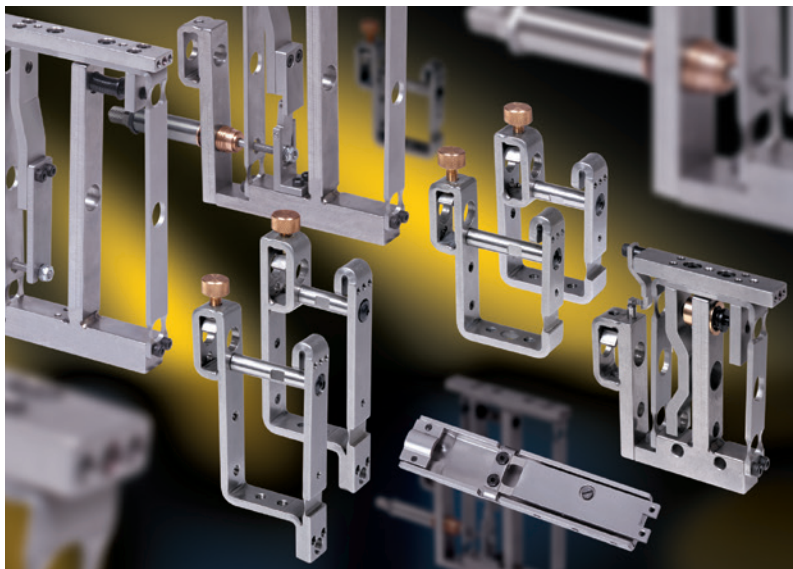




ADVANCED MEASURING ARMSET

AMA™ is a line of mechanical measuring devices developed to satisfy the requirements of the gauging market. Based on their versatility, fixture makers, gauge makers and engineering sources will produce the right solution for their applications, such as: inside and outside diameters, TIR, distances, pneumatic retraction and self-centering

measuring units.

The main feature of the product line is universal applicability and this is achieved by:

- 15 different designs
- 8 mm and 3/8" clamping diameter
- high precision and reliability
- compact design (12 mm thickness)
- variety of mounting options
- wide range of contact offsets

This product, manufactured of

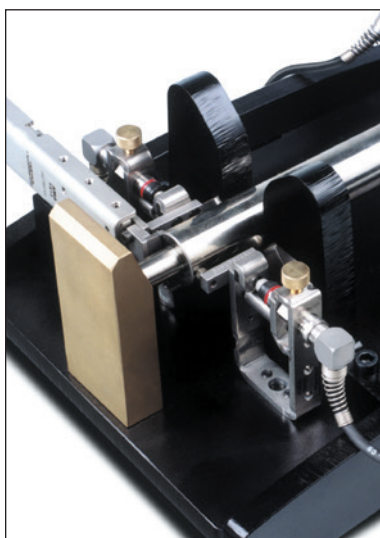
non-magnetic stainless steel, was developed as a result of TESTAR's long standing experience in the gauging field.

AMA™ will protect and extend the working life of gauging solutions.

They can be used with any pencil probe transducers, as well as mechanical and digital indicators. Pneumatic actuation, available on some models, allows contact retraction to eliminate interference with the workpiece during manual and automatic part loading and unloading.

A CD ROM disk, containing the .dxf drawing files of the AMA components, makes designing high quality applications an easy task, even for the beginner.

Offered by a world-wide market leader, the **AMA™ is a new and economical way of designing high quality solutions using Off The Shelf modular gauging components.**

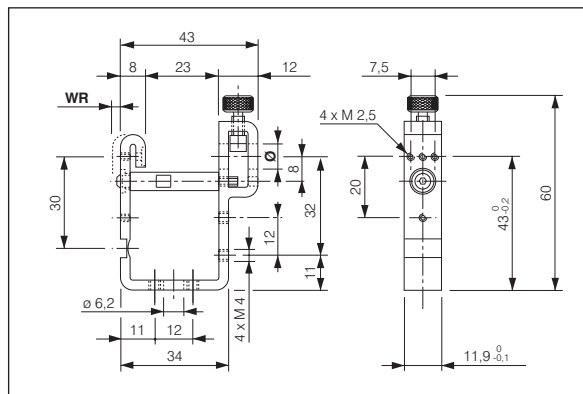


TB - TRANSMISSION BASIC DEVICE

TB10

Working Range (WR) 1.0 mm

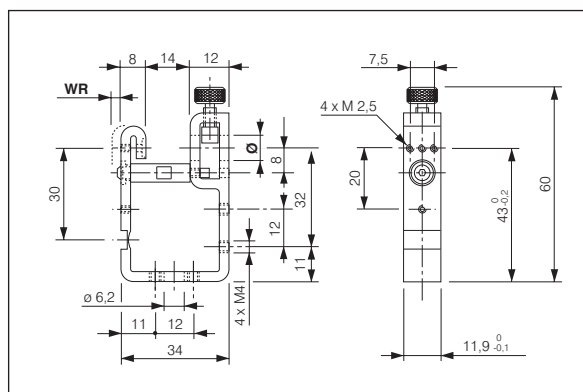
MODEL	ORDER CODE
ø 8 mm	2927364005
ø 3/8"	2927364035



TB10C

Working Range (WR) 1.0 mm

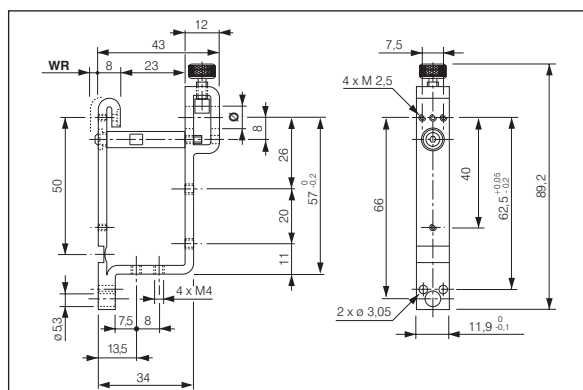
MODEL	ORDER CODE
ø 8 mm	2927364006
ø 3/8"	2927364036



TB16

Working Range (WR) 1.6 mm

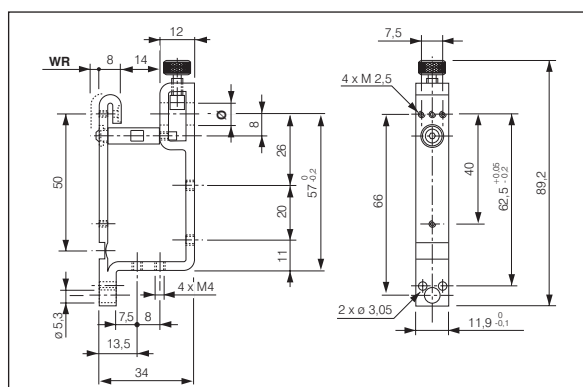
MODEL	ORDER CODE
ø 8 mm	2927364003
ø 3/8"	2927364033



TB16C

Working Range (WR) 1.6 mm

MODEL	ORDER CODE
ø 8 mm	2927364004
ø 3/8"	2927364034

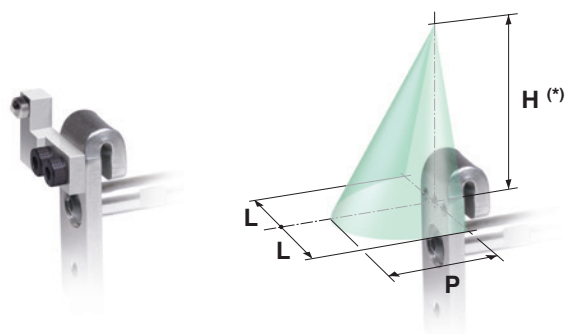


For ø 3/8" models: M2.5 → 4-48 UNF

CONTACT OFF-SET APPLICATION LIMITS

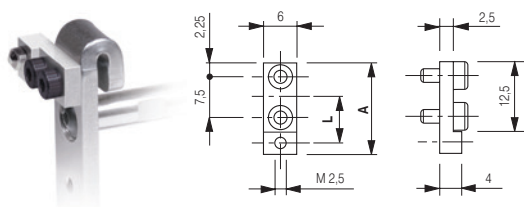
MODEL	H (*) (mm)	L (mm)	P (mm)
TB10	30	14	20
TB10C	30	14	20
TB16	50	14	20
TB16C	50	14	20

(*) With a vertical off-set the Arm Ratio changes:
mod. TB10 $[30 / (30 + h)]$ mod. TB16 $[50 / (50 + h)]$ with $h = 0 \div H$



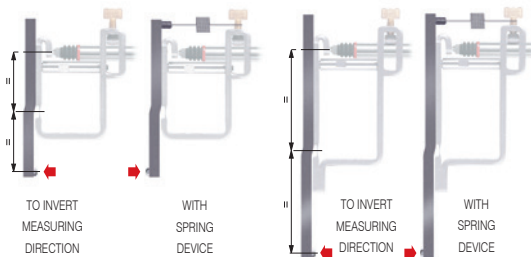
ACCESSORIES

OFF-SET ARMSET (ARM RATIO 1:1)



MODEL	A (mm)	OFF-SET L (mm)	ORDER CODE
TB10	M 2,5	16,5	2924017150
TB10C		18	2924017151
TB16	4-48 UNF	16,5	2924017152
TB16C		18	2924017153

STRAIGHT ARMSET (ARM RATIO 1:1)



MODEL	ORDER CODE
TB10	8 mm
TB10C	3/8"
TB16	8 mm
TB16C	3/8"

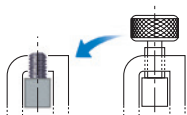
SPRING DEVICE

MODEL	ORDER CODE
TB10 - TB16	2027364001
TB10C - TB16C	2027364002

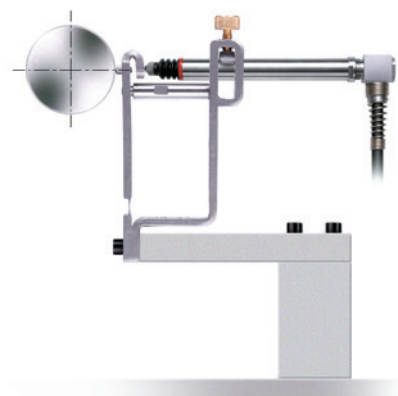
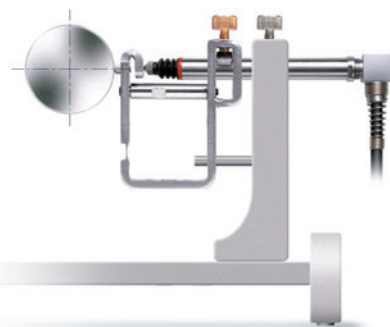
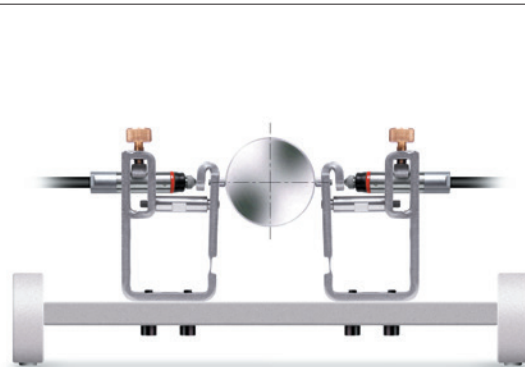


ALTERNATIVE CLAMPING DEVICE (alternative to standard clamping)

ORDER CODE
2027364000



APPLICATION EXAMPLES



DISPLACEMENT SENSORS

BORE GAUGES LINE

FORKS AND RING GAUGES

BENCH GAUGES

INDICATORS AND ELECTRONIC
DISPLAY UNITS

INTERFACE BOXES
FOR DATA ACQUISITION

SOFTWARE

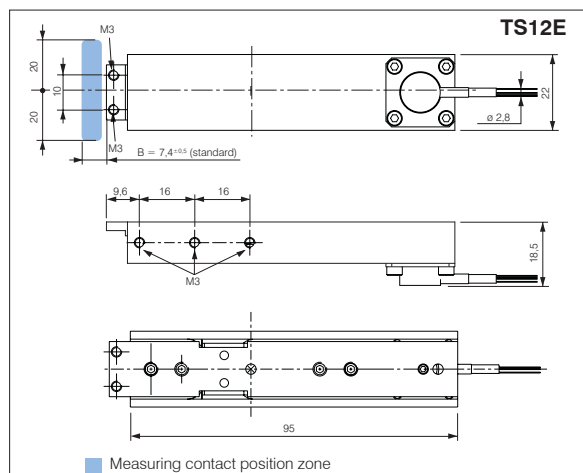
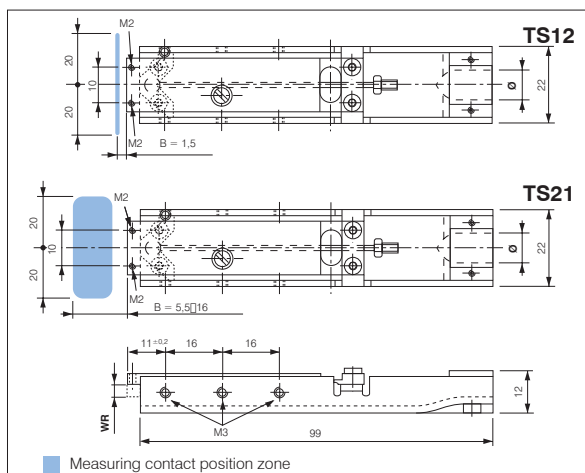
TS - TRANSMISSION SHOULDER DEVICE

TS12 - TS21



Note: with Red Crown probes featuring $\pm 0,5$ mm range the contact extension must be mounted (with M 2,5 thread code 1024017105 or 1024017106; with 4-48 UNF thread code 1024017115 or 1024017116).

TS12E

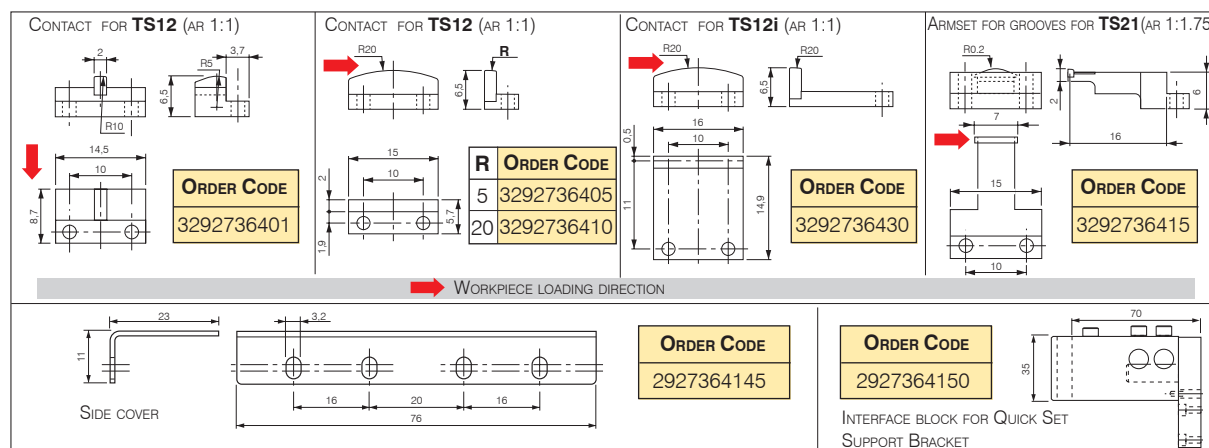


TECHNICAL DATA

WORKING RANGE	mm	1			1,2		1,8 ÷ 2,1	
Arm ratio		1			1		1,5 ÷ 1,75	
Transducer type		LVDT	HBT	HBT TESA	TRANSMISSION ONLY			
Clamping diameter	mm	-			8 mm	3/8 "	8 mm	3/8 "
Max sensitivity error		±0,5%			±2%			
Thermal drift	µm/°C	<0,25			<0,2			
Weight	g	80			80	82	80	82
Operating temperature	°C	-10/65			-10/65			
Repeatability (2,77σ)	µm	<=0,3			<=0,5			
Calibration specs.		(*)	(**)	(***)	-			
Sensitivity	mV/V/mm	230 ± 0,5	73,75 ± 0,5		-			
Protection degree		IP65			-			
Connector		Lumberg SV50/6			-			
ORDER CODE		3427364150	3427364050	3427364100	2927364100	2927364130	2927364101	2927364131

(*) 3.5355V RMS @7.5kHz with load 1M Ω //360pF (**) 3.5355V RMS @7.5kHz with load 2k Ω 0,1% (***) 3V RMS @13kHz with load 2k Ω 0,1%

ACCESSORIES



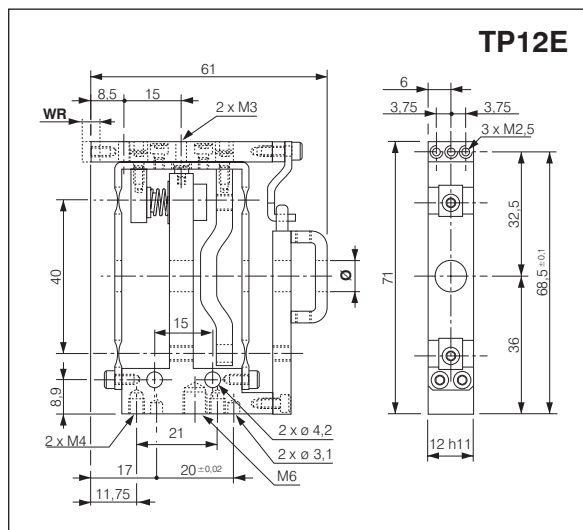
SOFTWARE	INTERFACE BOXES FOR DATA ACQUISITION	INDICATORS AND ELECTRONIC DISPLAY UNITS	BENCH GAUGES	FORKS AND RING GAUGES	BORE GAUGES LINE	DISPLACEMENT SENSORS
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TP12E (EXTERNAL CHECKS)

MODEL	ORDER CODE
ø 8 mm	2924051200
ø 3/8"	2924051202



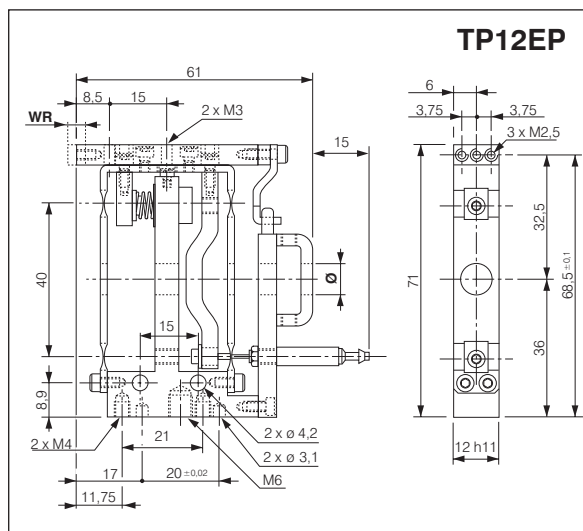
MODEL	ORDER CODE
ø 8 mm	2924051201
ø 3/8"	2924051203



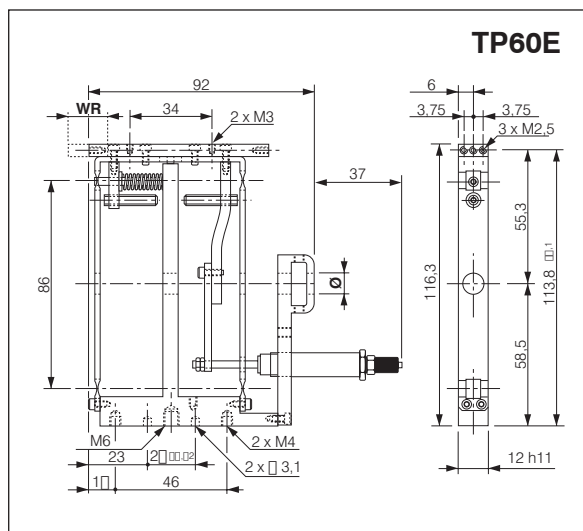
MODEL	ORDER CODE
ø 8 mm	3024051204
ø 3/8"	3024051206



MODEL	ORDER CODE
ø 8 mm	3024051205
ø 3/8"	3024051207



MODEL	ORDER CODE
ø 8 mm	2924051400
ø 3/8"	2924051430

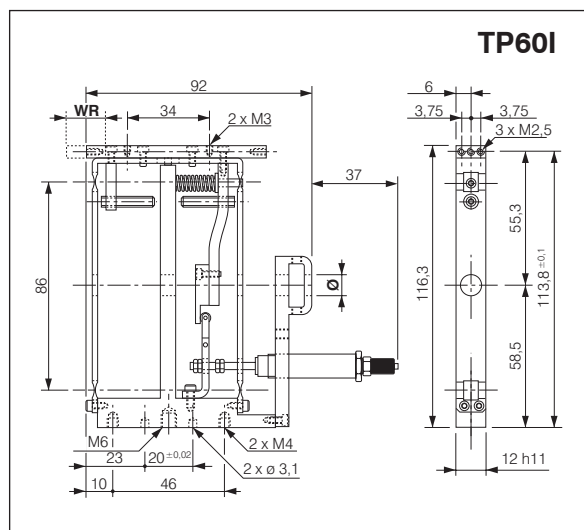


AMA - 5

TP60I

(INTERNAL CHECKS WITH PNEUMATIC RETRACTION)

MODEL	ORDER CODE
ø 8 mm	2924051401
ø 3/8"	2924051431



For ø 3/8" models: M2,5 → 4-48 UNF

WORKING RANGE (WR) 2.4 mm**TP12SE**

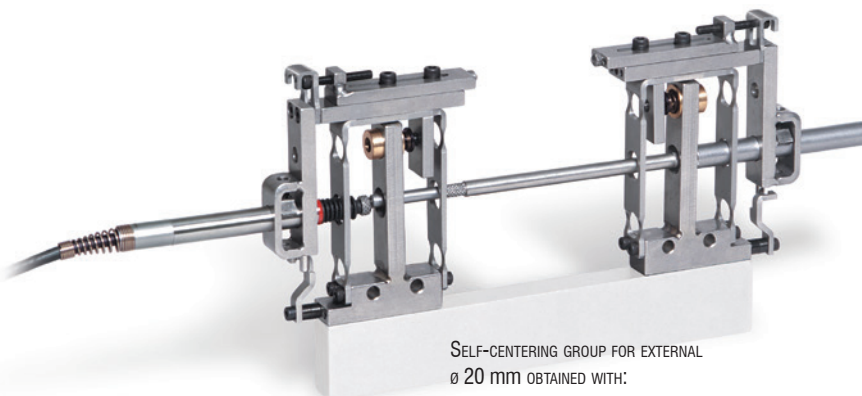
(ELEMENT FOR SELF-CENTERING GROUP FOR EXTERNAL CHECKS)

MODEL	ORDER CODE
ø 8 mm	2924051208
ø 3/8"	2924051209

TP12SI

(ELEMENT FOR SELF-CENTERING GROUP FOR INTERNAL CHECKS)

MODELLO	ORDER CODE
ø 8 mm	2924051228
ø 3/8"	2924051229

SELF-CENTERING GROUP FOR EXTERNAL
ø 20 mm OBTAINED WITH:

- TP12SE (Q.ty 2)
- Slide (Q.ty 2)
- Self-centering kit (Q.ty 1)
- 30 mm extension (Q.ty 1)

WORKING RANGE (WR) 12.0 mm**TP60SE**

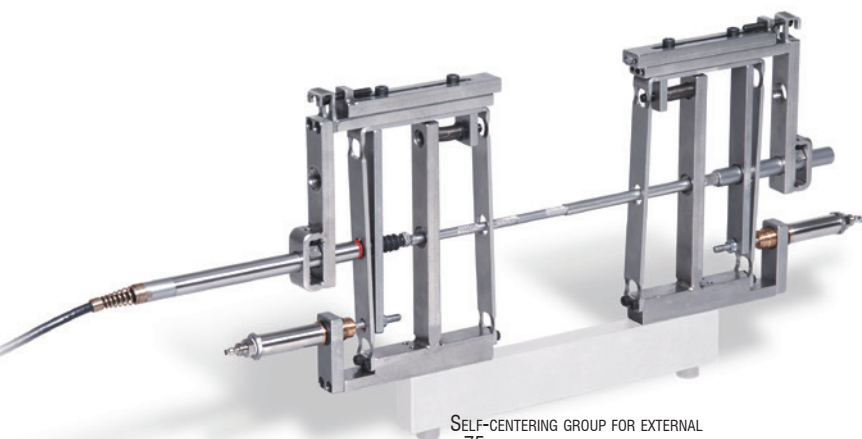
(ELEMENT FOR SELF-CENTERING GROUP FOR EXTERNAL CHECKS WITH PNEUMATIC RETRACTION)

MODELLO	ORDER CODE
ø 8 mm	2924051409
ø 3/8"	2924051407

TP60SI

(ELEMENT FOR SELF-CENTERING GROUP FOR INTERNAL CHECKS WITH PNEUMATIC RETRACTION)

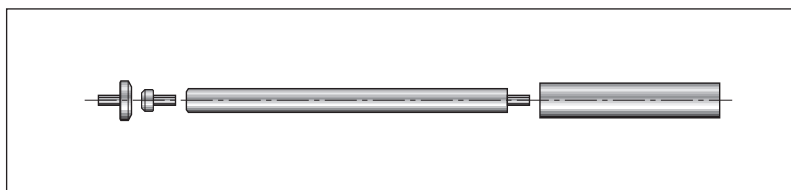
MODELLO	ORDER CODE
ø 8 mm	2924051406
ø 3/8"	2924051408

SELF-CENTERING GROUP FOR EXTERNAL
ø 75 mm OBTAINED WITH:

- TP60SE (Q.ty 2)
- Slide (Q.ty 2)
- Self-centering kit (Q.ty 1)
- 70 mm extension (Q.ty 1)

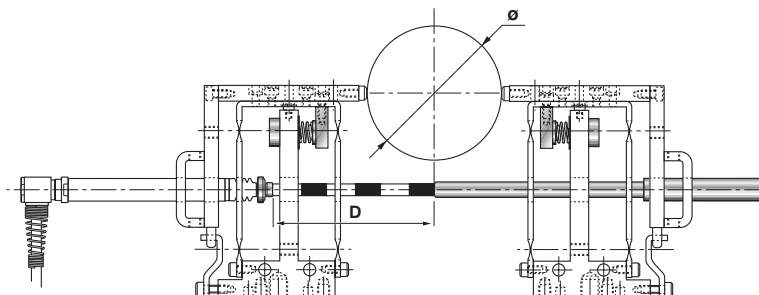
SELF-CENTERING KIT

MODEL	Ø	ORDER CODE
TP12	8 mm	2924051210
	3/8"	2924051213
TP60	8 mm	2924051410
	3/8"	2924051413



EXTENSIONS (D)

D	ORDER CODE
10 mm	1024017105
15 mm	1024017106
20 mm	1024017107
25 mm	1024017108
30 mm	1024017109
70 mm	1019750093
80 mm	1019750122

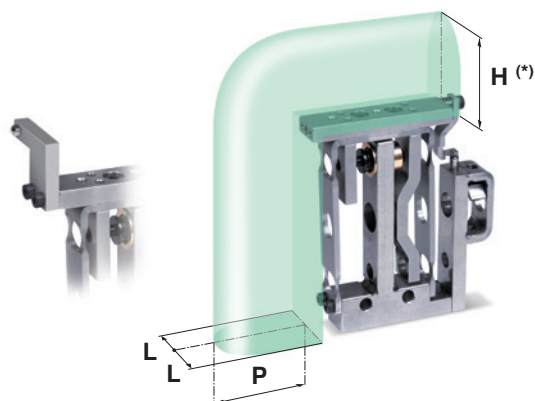


TP12	Ø (mm)	0-3	3-8	8-13	13-18	18-23	23-28	28-33	33-38	38-43	43-48	48-53	53-58
	D (mm)	10	15	20	25	30	35	40	45	50	55	60	65
TP60	Ø (mm)	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	-	-
	D (mm)	-	10	20	30	40	50	60	70	80	90	-	-

D should be obtained with the lowest number of extensions

CONTACTS OFF-SET APPLICATION LIMITS/ MEASURING PERFORMANCES

MODEL	H (*)	L	P	REPEAT.	SENSIT.
	(mm)	(mm)	(mm)	2,77σ (μm)	(max err. %)
TP12	40	14	40	<0,2	±1,5
TP60	90	14	50	<0,3	±1,5



(*) The Arm Ratio is 1:1 for any contact position.

ACCESSORIES

DESCRIZIONE	MODEL		H (*) MAX (mm)	S	ORDER CODE
SLIDE	TP12	M 2,5	20	4	2924051211
			40	6	2924051219
		4-48 UNF	20	4	2924051212
			40	6	2924051220
	TP60	M 2,5	90	6	2924051405
		4-48 UNF	90	6	2924051435

RETOOLING RANGE 0 ÷ 15 mm

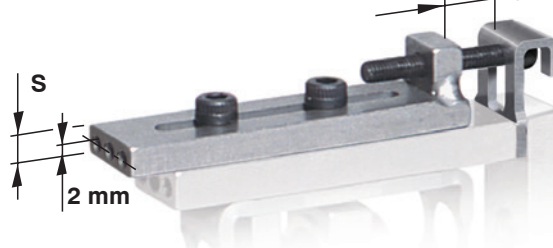
ARMSET	TP12	M 2.5	(A = 30 mm)	3192405120
		4-48 UNF		3192405123
	TP60	M 2.5	(A = 60 mm)	3192405140
		4-48 UNF		3192405143

ARMSET

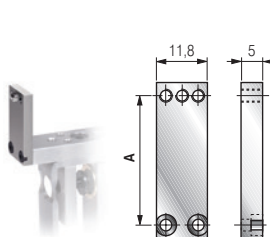
OFF-SET ARMSET	M 2,5	(8,5 mm)	2924017150
		(10 mm)	2924017151
	4-48 UNF	(8,5 mm)	2924017152
		(10 mm)	2924017153

OFF-SET ARMSET

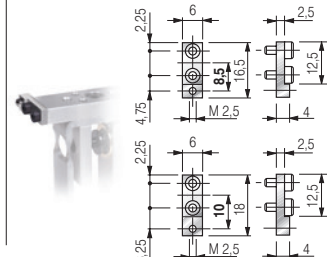
RETOOLING RANGE 0 ÷ 15 mm

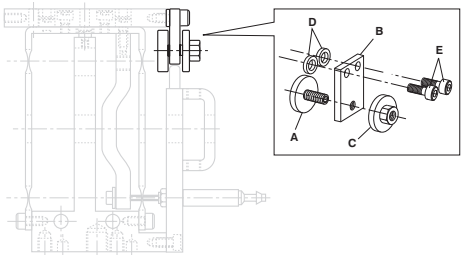


ARMSET



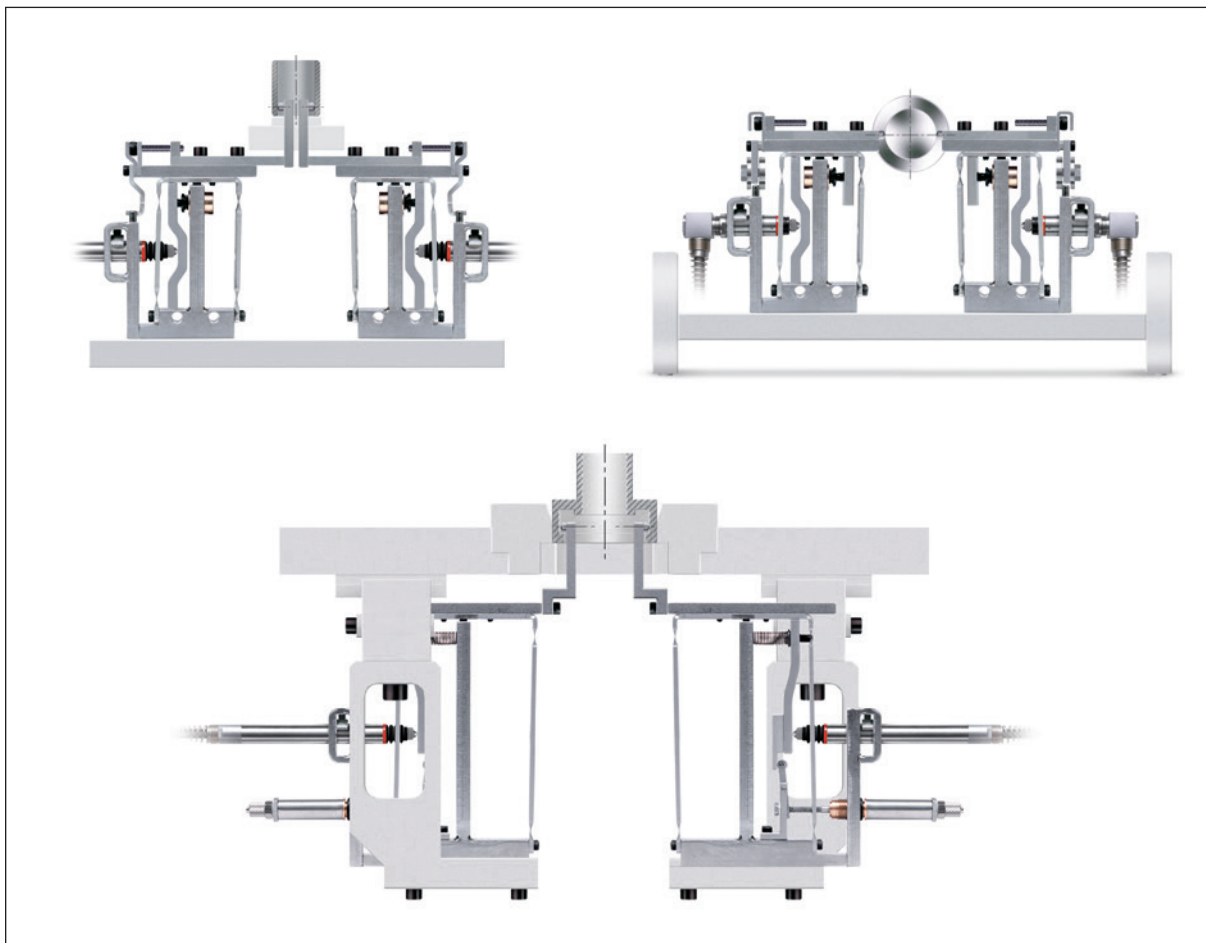
OFF-SET ARMSET



DESCRIPTION	MODEL	ORDER CODE	
PRETRAVEL/ OVERTRAVEL LIMITER	TP12 (any model)	2924051260	

Note: It must always be used when TP12 is equipped with Red Crown F05/H05 probes having a measuring range of $\pm 0,5$ mm.

APPLICATION EXAMPLES



DOCUMENTATION

DESCRIPTION	ORDER CODE
Support CD Rom - with .DXF drawings collection	CD-020.02

For a full list of address locations, please consult the Marposs official website

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