

MODULAR MEASURING SYSTEM

Quick Set[™] is a retoolable modular system that can be assembled in three different gauging configurations:

- horizontal and vertical for multidi-

mensional and geometric checking of shaft-like parts;

 chuck for multidimensional and geometric checking on parts that cannot be referenced horizontally with vees or held between centers, such as bushings, bearings, pistons and cylindrical parts that are manufactured with a flange.

Its flexibility guarantees quick retooling without any special tools, using shop-floor components available off the shelf.

The narrow 12 mm (.47") width of all components allows a large number of measuring sections on a short part surface. Several measuring assemblies can be mounted on the base to carry on diameter, distance and geometric measurements.

Part support options allow static as well as dynamic inspection.

It can accomodate any measuring gauge with clamping diameter 8 mm or 3/8", such as TESTAR Red Crown™ and Quick probe™, Quick Read™ compact electronic display unit, Quick Digit™ electronic digital indicator.

PART WEIGHT AND DIMENSIONS REFERENCE TABLE							
GAUGE CONFIGURATION	Measurable Diameter	Max. Non-measurable Diameter	Max. Measurable Length	WEIGHT			
Quick Set-Horizontal	5 – 160 mm (.02" – 6.30")	260 mm (10.24")	700 mm (27.56")	up to 14 kg			
Quick Set-Vertical	5 – 160 mm (.02" – 6.30")	260 mm (10.24")	520 mm (20.47")	up to 8 kg			
Quick Set-Chuck	5 – 160 mm (.02" – 6.30")	260 mm (10.24")	250 mm (9.84")	-			



Quick Set - Horizontal

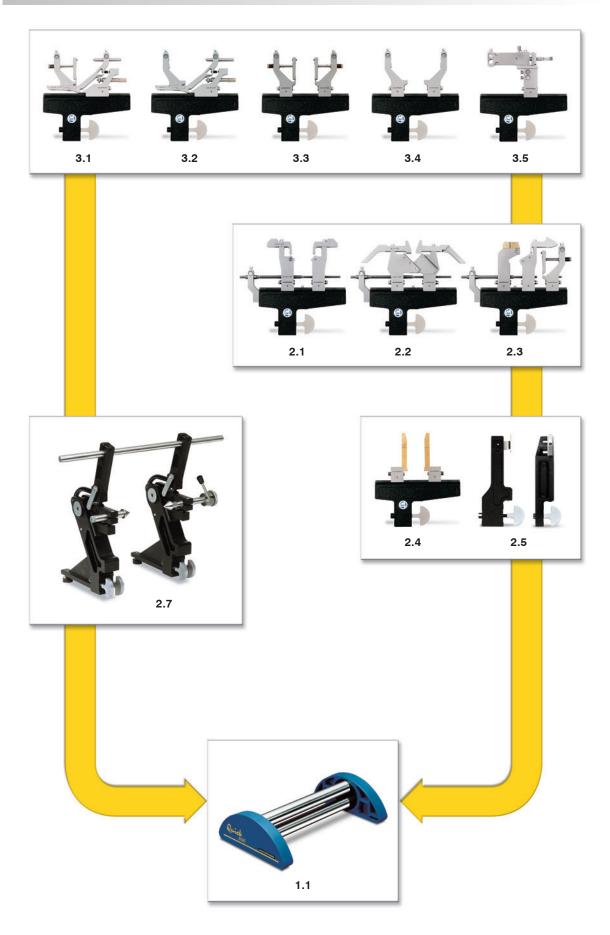


Quick Set - Vertical

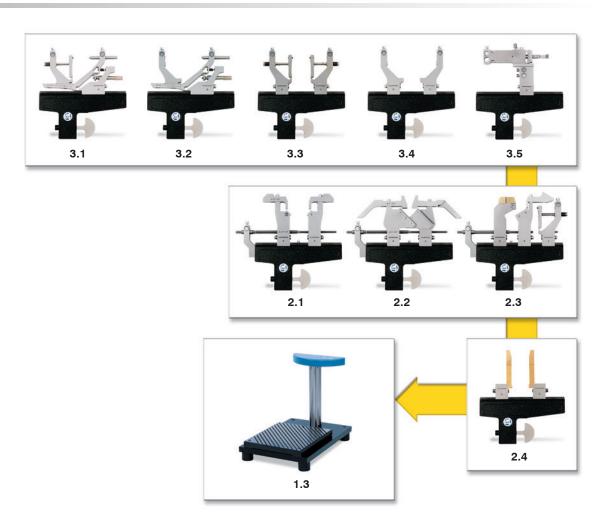


Quick Set - Chuck

QUICK SET - HORIZONTAL



QUICK SET - CHUCK



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5. WRENCH SET

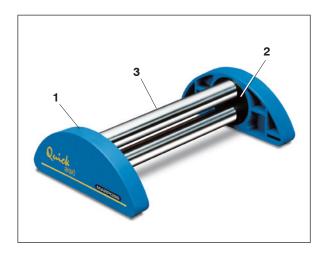
6. Instruction manual

7. QUICK SET CONFIGURATOR PROGRAM

1 - Base structure assembly

30 mm diameter stainless steel bars assure rigidity and exact positioning of the bench gauge elements. The bar system allows easy retooling and size expansion of the bench. The bars are fixed to the support by means of a screwed clamp fitted inside the support.

1.1 Base structure assembly for Quick Set-Horizontal

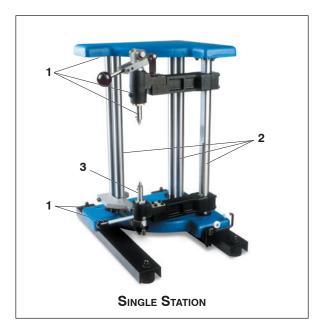


			Веисн	BENCH WITH			
BARS	BARS LENGTH		Max. part length with 2 introducing axial limiters		Max. part length with 1 introducing axial limiter and 1 measuring axial limiter		art length
(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)
200	7.87"	100	3.94"	70	2.76"	80	3.15"
300	11.81"	200	7.87"	170	6.69"	180	7.08"
400	15.75"	300	11.81"	270	10.63"	280	11.02"
500	19.69"	400	15.75"	370	14.57"	380	14.96"
600	23.62"	500	19.69"	470	18.50"	480	18.89"
800	31.50"	700	27.56"	670	26.38"	680	26.77"

The base structure assembly includes bars, support feet and clamping devices.

Ref.	DESCRIPTION	ORDER CODE
1	SUPPORT FEET (PAIR)	2924017005
2	CLAMPING DEVICES (PAIR)	2924017115
	BARS L = 200 mm (PAIR)	2924017010
	BARS L = 300 mm (PAIR)	2924017020
3	BARS L = 400 mm (PAIR)	2924017030
	BARS L = 500 mm (PAIR)	2924017040
	BARS L = 600 mm (PAIR)	2924017050
	BARS L = 800 mm (PAIR)	2924017070

1.2 Base structure assembly for Quick Set-Vertical





		QUICK SET-VERTICAL							
Bars	LENGTH	Part length with lower center support L=12 mm Part length with lower center support L					L=37 mm		
		М	in.	Max.		. Min.		Max.	
(mm)	(Inch)	(mm)	(Inch)	(mm)	(Inch)	(mm)	(Inch)	(mm)	(Inch)
500	19.69"	24	0.94"	220	8.66"	5	0.20"	200	7.87"
600	23.62"	24	0.94"	320	12.60"	5	0.20"	300	11.81"
700 (*)	27.56"	24	0.94"	420	16.54"	5	0.20"	400	15.75"
800 (*)	31.50"	24	0.94"	520	20.47"	5	0.20"	500	19.69"

^(*) Only for dual station.

Max. part weight: 6 kg for the single station, 8 kg for the dual station.

The base structure assembly is composed of base, bars, lower center support and centers. The upper center support is supplied with the base.

Ref.	DESCRIPTION	ORDER CODE
1	SINGLE STATION BASE	3024025501
	DUAL STATION BASE	3024025001
	BARS L = 500 mm	3024025025
2	BARS L = 600 mm	3024025026
	BARS L = 700 mm	3024025027
	BARS L = 800 mm	3024025028
3	LOWER CENTER SUPPORT L = 12 mm	3024025220
	LOWER CENTER SUPPORT L = 37 mm	3024025210
	UNIVERSAL CENTER	1024017753
	SHORT CENTER	1024017755
	SUPPORT BRACKET WITH	2924025255
	BACK HOLES FOR TOOL	2924025255
	RETOOLING TOOL (ONLY FOR BRACKET WITH BACK HOLES)	2924025050

1.3 Base structure assembly for Quick Set-Chuck



The base structure assembly is composed of bars, support feet, clamping devices, serrated referencing surface and support plate.

Ref.	DESCRIPTION	ORDER CODE	
1	SUPPORT FEET (PAIR)	2924017005	
2	CLAMPING DEVICES (PAIR)	2924017115	
3	BARS L = 300 mm (PAIR)	2924017880	
4	SERRATED REFERENCING PLATE (220 x 250 mm)	2924017885	
4	CHROMED SERRATED REFERENCING PLATE (220 x 250 mm, HRC 68)	2924017886	
5	SUPPORT PLATE	2924017890	
	(INCLUSIVE OF RUBBER FEET)	2924017090	

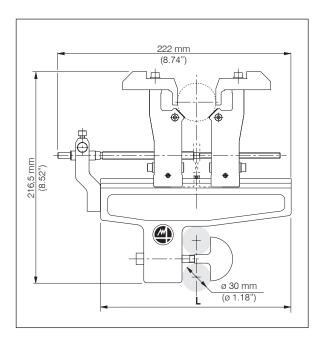


2 - PART SUPPORT AND REFERENCE

2.1 FRONTAL "V" ASSEMBLY



ASSEMBLY WIDTH: 12 mm (.47")
VERSION WITH SELF-CENTERING SCREW



The frontal "V" accurately defines the measuring mechanical axis of the part. The assembly is available in two versions:

- with self-centering screw, for fast and frequent retooling;
- without self-centering screw, for economical part positioning.

Two assemblies are normally required to support the part.

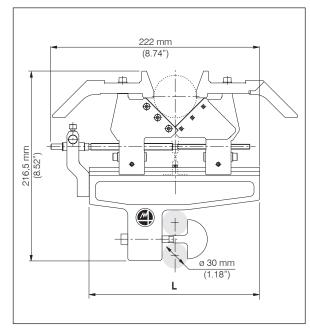
The assembly is composed of one support bracket and one frontal "V".

		SUPPORT BRACKET			FRONTAL "V"	
	Leng (mm)	TH L (inch)	ORDER CODE	(mm)	NGE (inch)	ORDER CODE
				5 - 10	.19"39"	3024017633
				10 - 15	.39"59"	3024017643
ASSEMBLY WITH	200	7.87"	3024017540	15 - 24	.59"94"	3024017653
SELF-CENTERING SCREW	200	7.07	3024017340	24 - 40	.94" - 1.57"	3024017663
				40 - 70	1.57" - 2.76"	3024017673
				55 - 100	2.16" - 3.94"	3024017693
				5 - 10	.19"39"	3024017632
				10 - 15	.39"59"	3024017642
	200	7.87"	3024017000	15 - 24	.59"94"	3024017652
ASSEMBLY WITHOUT SELF-CENTERING	200	7.07	3024017000	24 - 40	.94" - 1.57"	3024017662
SCREW				40 - 70	1.57" - 2.76"	3024017672
				55 - 100	2.16" - 3.94"	3024017692
	250	9.84"	3024017050	100 - 150	3.94" - 5.91"	3024017695

DESCRIPTION	ORDER CODE
OPTIONAL GUIDE FOR VEE RANGE 55–100 mm (IT HAS TO BE USED WHEN ONTO THE SAME SUPPORT BRACKET OF THE VEE , TWO SINGLE TRANSMISSIONS ARE ASSEMBLED TO CHECK THE DIAMETER (55–100 mm))	2924017695

2.2 CROSSED "V" ASSEMBLY





The crossed "V" is used for very frequent retooling and when a large retooling range is needed. The assembly is available in two versions:

- with self-centering screw, for fast and frequent retooling;
- without self-centering screw, for economical part positioning.

Two assemblies are normally required to support the part.

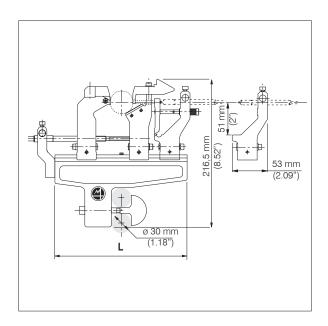
The assembly is composed of one support bracket and one crossed "V".

	SUPPORT BRACKET			Crossed "V"		
LENGTH L (mm) (inch)		ORDER CODE	(mm)	NGE (inch)	ORDER CODE	
ASSEMBLY WITH SELF-CENTERING SCREW	200	7.87"	3024017540	5 - 100	.19" - 3.94"	3024017553
ASSEMBLY WITHOUT SELF-CENTERING SCREW	200	7.87"	3024017000	5 - 100	.19" - 3.94"	3024017552

2.3 Measuring "V" Assembly



Assembly width: 12 mm (.47")
Version with self-centering screw



The measuring "V" is used when both part reference and part diameter measurement have to be carried on in the same section. The measurement is performed by using a special contact for measuring "V" mounted on a single transmission unit or on a direct probe unit (see 4.2 Contacts for Measuring "V").

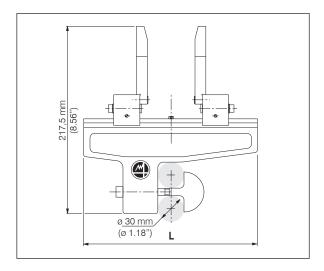
The assembly is composed of one support bracket, one measuring "V", and one single transmission unit or one direct probe unit. The special contact for measuring "V" and the probe to be mounted in the transmission unit or in the direct probe unit must be ordered separately (see section Transducers and Measurement Transmissions).

	SUPPORT BRACKET			Measuring "V"		
	(mm)	GTH L (inch)	ORDER CODE	(mm)	NGE (inch)	ORDER CODE
Assembly with self-centering screw	200	7.87"	3024017540	5 - 35	.19" - 1.38"	3024017524
AND SINGLE TRANSMISSION OR DIRECT PROBE UNIT				35 - 65	1.38" - 2.56"	3024017526
Assembly without self-centering screw,	200	7.87"	3024017000	5 - 35	.19" - 1.38"	3024017520
WITH SINGLE TRANSMISSION OR DIRECT PROBE UNIT				35 - 65	1.38" - 2.56"	3024017522

PROBE SUPPORT	CLAMPING Ø FOR PROBE	ORDER CODE
OLIOU E TRANSMISSION LINUT	8 mm	3024017155
SINGLE TRANSMISSION UNIT	3/8"	3024017157
DIDECT DDODE HAIT	8 mm	3024017145
DIRECT PROBE UNIT	3/8"	3024017147

2.4 PART RADIAL LIMITERS ASSEMBLY





The part radial limiters limit the part radial movement and allows correct part introduction in the bench. Two versions are available:

- steel limiter;
- brass limiter for parts with low hardness.

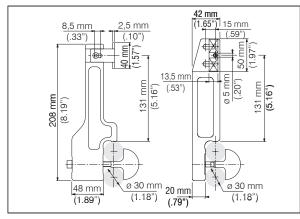
The assembly is composed of one support bracket and one pair of radial limiters.

	SUPPORT BRACKET				
Assembly with	LENG (mm)	ORDER CODE			
RADIAL LIMITERS	200	(inch) 7.87"	3024017000		
	250	9.84"	3024017050		

Description	Order Code
STEEL RADIAL LIMITERS (PAIR)	3024017200
BRASS RADIAL LIMITERS (PAIR)	3024017210

2.5 PART AXIAL LIMITERS





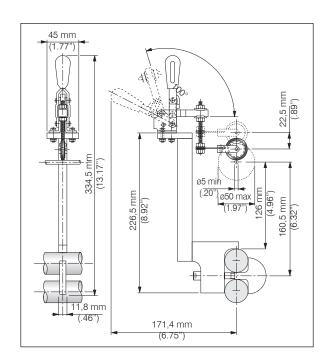
The part axial limiter limits the part axial movement and allows correct part positioning in the bench. Two versions are available:

- Introducing axial limiter to limit part position;
- Measuring axial limiter used both to limit part position and as mechanical reference for a distance measurement carried on by a shoulder transmission unit (see 3. Part Measuring Assembly).

DESCRIPTION	Order Code
INTRODUCING AXIAL LIMITER	3024017214
MEASURING AXIAL LIMITER	3024017218

2.6 PART PUSHER





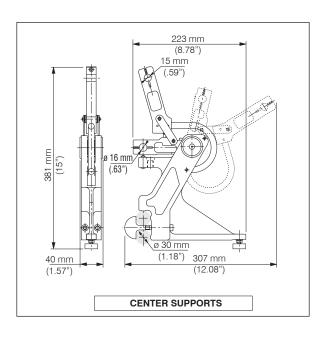
The part pusher guarantees the contact between the part and the "V" supports. It is particularly suitable for parts with weight lower than 200 gr.

• Suitable for part diameters from 5 to 50 mm (.19" - 1.97")

Description	Order Code
PART PUSHER	3024017980

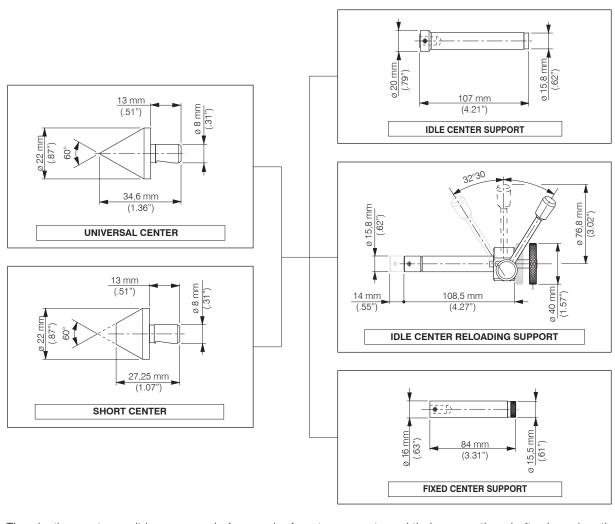
2.7 PIVOTING CENTERS UNIT





This unit is needed when the part to be measured is provided with centers holes. The part is loaded on the centers and then introduced into the measuring station.

It is recommended for small parts [max. part weight 3 kg and max. flywheel overall diameter 170 mm (6.69")]. Dampers are available to avoid impacts during part positioning in the measuring station.



The pivoting centers unit is composed of one pair of center supports and their connecting shaft, whose length depends on the length of the bars of the base structure assembly.

The centers, their supports and the dampers must be ordered separately. To order the base structure assembly see 1. Base structure assembly.

	CENTER SUPPORTS (PAIR)				CONNECTING	SHAFT FOR CENT	ER SUPPORTS
Base Bar (mm)	RS LENGTH L (inch)	Max Pai (mm)	RT LENGTH (inch)	ORDER CODE	Leng (mm)	TH L (inch)	ORDER CODE
200	7.87"	80	3.15"		360	14.17"	1024017369
300	11.81"	180	7.08"		460	18.11"	1024017371
400	15.75"	280	11.02"	3024017355	560	22.04"	1024017373
500	19.69"	380	14.96"		660	25.98"	1024017375
600	23.62"	480	18.89"	-	760	29.92"	1024017377
800	31.50"	680	26.77"		960	37.79"	1024017379

DESCRIPTION	ORDER CODE
FIXED CENTER SUPPORT	1024017567
IDLE CENTER SUPPORT	3024017325
IDLE CENTER RELOADING SUPPORT	3024017315
UNIVERSAL CENTER	1024017753
SHORT CENTER	1024017755
DAMPER (FOR MAX. PART WEIGHT 3 kg)	44331AC108

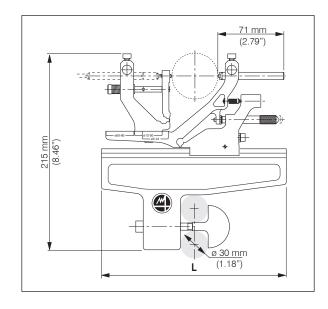
N.B.

With this unit diameter, ovality and distance measurements only can be carried on. For measurements such as perpendicularity, T.I.R., concentricity, etc., that are referred to the centers axis, please contact your nearest Marposs office.

3 - PART MEASURING ASSEMBLY

3.1 ASSEMBLY WITH SELF-CENTERING UNIT WITH TRANSMISSION





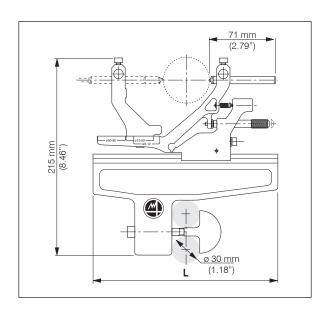
The self-centering unit with transmission is used to carry out diameter measurements only. It can accommodate both pencil probes and dial indicators with diameter 8 mm or 3/8". The probe is not in direct contact with the part and is therefore preserved from radial impact by part loading/unloading.

The assembly is composed of one support bracket and one self-centering unit with transmission. The probe and the two contacts to be mounted on the unit must be ordered separately (see 4. Contacts and Armsets and section Transducers and measurement transmissions).

SUPPORT BRACKET		SELF-CENTERING UNIT WITH TRANSMISSION			ON	
(mm)	ith L (inch)	ORDER CODE	RANGE (inch)		CLAMPING Ø FOR PROBE	ORDER CODE
200	7.87"	3024017000	5 - 80	.20" - 3.15"	8 mm	3024017460
200	7.07	3024017000	3 - 80	.20 - 3.15	3/8"	3024017462

3.2 ASSEMBLY WITH SELF-CENTERING UNIT WITH DIRECT PROBE





The self-centering unit with direct probe is used to carry out diameter measurements only. It can accomodate both pencil probes and dial indicators with diameter 8 mm or 3/8".

The assembly is composed of one support bracket and one self-centering unit with direct probe. The probe and the contact to be mounted on the unit must be ordered separately (see 4. Contacts and Armsets and section TRANSDUCERS AND MEASUREMENT TRANSMISSIONS).

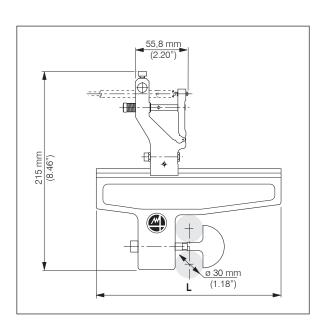
	SUPPORT BRACKET		Self-Centering Un		T WITH DIRECT PRO	BE
LENG	тн L	ORDER CODE RAN		RANGE		ORDER CODE
(mm)	(inch)	ORDER CODE	(mm)	(inch)	FOR PROBE	ORDER GODE
200	7.87"	3024017000	5 80	20" 3 15"	8 mm	3024017470
200	7.57	3024017000	5 - 80 .20" - 3.15"		3/8"	3024017472

3.3 Assembly with Single Transmission Unit

Working range of one single transmission unit 1.150 mm/.0452"



Assembly width: 12 mm (.47")



The single transmission unit is used to carry out both diameter and form measurements. It can accomodate both pencil probes and dial indicators with diameter 8 mm or 3/8". The probe is not in direct contact with the part and is therefore preserved during part loading/unloading.

The assembly with only one transmission unit is particularly used for T.I.R. measurements.

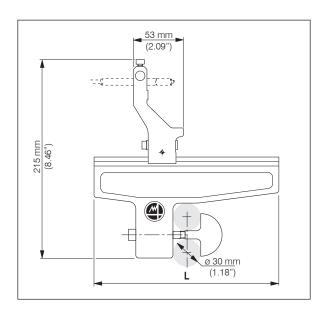
The assembly is composed of one support bracket (L=200 mm or 250 mm) and one or two single transmission units. The probe and the contact to be mounted on the unit must be ordered separately (see 4. Contacts and Armsets and section Transducers and measurement transmissions).

	SUPPORT BRACKET				
Lend	атн L	RA	NGE	ORDER CODE	
(mm)	(inch)	(mm)	(inch)	ORDER CODE	
200	7.87"	3 - 118	.12" - 4.64"	3024017000	
250	9.84"	3 - 160	.12" - 6.30"	3024017050	

PROBE SUPPORT	Clamping Ø for Probe	ORDER CODE
	8 mm	3024017155
SINGLE TRANSMISSION UNIT	3/8"	3024017157

3.4 ASSEMBLY WITH DIRECT PROBE UNIT





The direct probe unit is used to carry out both diameter and form measurements. It can accomodate both pencil probes and dial indicators with diameter 8 mm or 3/8".

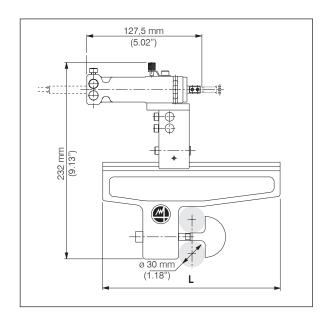
The assembly is composed of one support bracket (L=200 mm or 250 mm) and one or two direct probe units. The probe to be mounted on the unit must be orderd separately (see section Transducers and Measurement Transmissions).

SUPPORT BRACKET					
LENG	тн L	RA	ORDER CODE		
(mm)	(inch)	(mm)	(inch)	GIIDEN GODE	
200	7.87"	3 - 118	.12" - 4.64"	3024017000	
250	9.84"	3 - 160	.12" - 6.30"	3024017050	

PROBE SUPPORT	CLAMPING Ø FOR PROBE	ORDER CODE
	8 mm	3024017145
DIRECT PROBE UNIT	3/8"	3024017147

3.5 ASSEMBLY WITH SHOULDER TRANSMISSION UNIT





To carry out distance measurements. It can accommodate both pencil probes and dial indicators with diameter 8 mm or 3/8". The probe is not in direct contact with the part and is therefore preserved during part loading/unloading. Distance measurements can be carried out by using two assemblies or one assembly and a measuring axial limiter.

The assembly is composed of one support bracket and one shoulder transmission unit. The armset and the contact to be mounted on the unit must be ordered separately (see 4. Contact and Armsets).

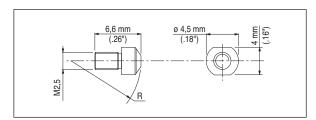
SUPPORT BRACKET				
LENG	тн L	ORDER CODE		
(mm)	(inch)	CHISEN COSE		
200	7.87"	3024017000		
250	9.84"	3024017050		

	CLAMPING Ø FOR PROBE	ORDER CODE
SHOULDER TRANSMISSION UNIT	8 mm	3024017330
	3/8"	3024017331

4 - CONTACTS AND ARMSETS

All contacts and extensions to be fitted on Quick Set components must be M 2,5. Contacts 4-48 UNF are listed as accessory to 3/8" pencil probes and dial indicators.

4.1 STANDARD CONTACTS

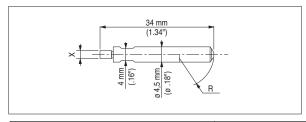


To be used with:

- Self centering unit with transmission (Q.ty = 2)
- Self centering unit with direct probe (Q.ty = 1)
- Single transmission unit (Q.ty = 1)

RADIUS R		MATERIAL	ORDER CODE
(mm)	(inch)		J.1.5_1.1 5 5 5 5
10	.39"	CARBIDE	3392401702
50	1.97"	CARBIDE	3392401705
100	3.94"	CARBIDE	3392401706
10	.39"	DIAMOND	3392401722
50	1.97"	DIAMOND	3392401725
100	3.94"	DIAMOND	3392401726

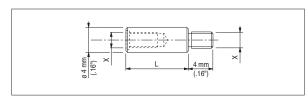
4.2 Contacts for Measuring "V"



Special carbide contact to be mounted on the single transmission unit or directly on the probe.

RAD	ius R	THREAD X	ORDER CODE
(mm)	(inch)	THREAD A	ORDER CODE
10	.39"	M 2,5	3392401701
50	1.97"	M 2,5	3392401720
100	3.94"	M 2,5	3392401721

4.3 CONTACT EXTENSIONS



Available with thread M 2.5 or 4-48 UNF. It can be used:

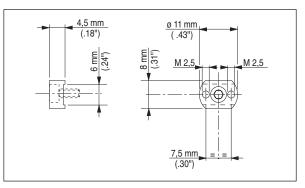
- With self-centering unit
- With single transmission unit
- With direct probe unit
- With dial indicators

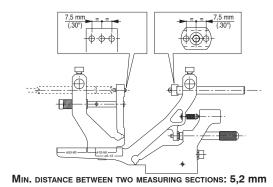
(mm)	L (inch)	THREAD X	ORDER CODE
10	.39"	M 2.5	1024017105
15	.59"	M 2.5	1024017106
20	.79"	M 2.5	1024017107
25	.98"	M 2.5	1024017108
30	1.18"	M 2.5	1024017109
10	.39"	4 - 48 UNF	1024017115
15	.59"	4 - 48 UNF	1024017116
20	.79"	4 - 48 UNF	1024017117
25	.98"	4 - 48 UNF	1024017118
30	1.18"	4 - 48 UNF	1024017119

4.4 OFF-SET ARMS

4.4.1 Armset for Self-Centering Unit with Transmission

It is needed to carry on measurements very close to each other and close to a shoulder (min. 3 mm) by offsetting the contact.

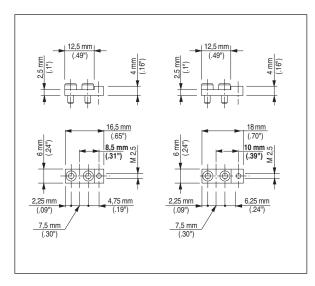


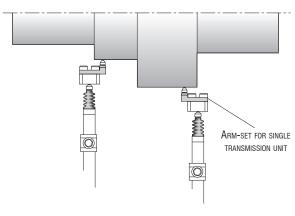


Armset + fixing screw	Order Code	
	2924017405	

4.4.2 Armset for Single Transmission Unit

For contact off-set when measurements close to each other must be carried on.

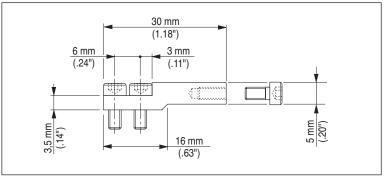




Min. distance between two measuring sections: 5,2 mm

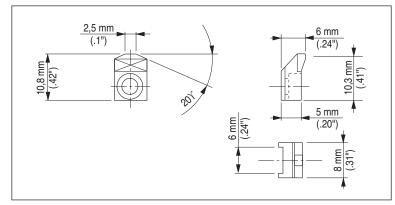
	OFF-SET L		ORDER CODE
ADMOST I SIMINO CODEM	(mm)	(inch)	ORDER CODE
Armset + fixing screw	8.5 10	.33" .39"	2924017150 2924017151

4.5 CONTACTS AND ARMSETS FOR SHOULDER TRANSMISSION UNIT



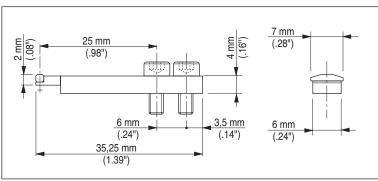
ARMSET

It is the interface for the mounting of the contact on the unit.



CONTACT

Available with carbide or diamond tip.



ARMSET FOR GROOVES

It is equipped with a carbide contact and must be directly mounted on the unit

Description	ORDER CODE
ARMSET	2924017302
CARBIDE CONTACT	3292401702
DIAMOND CONTACT	3292401712
ARMSET FOR GROOVES	3292401705

5 - Wrench Set



For bench assembly and set-up.

DESCRIPTION	Order Code
WRENCH SET	2924017990

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

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