

# TESA TPS 300 / 500 / 1000 Motorised Setting Benches

These motorised benches are specially made for display setting as well as for calibrating 2-point or 3-point shop tools used to measure both internal and external dimensions up to 1000 mm.



### Benefit

A single bench can replace a wide number of setting standards such as gauge blocks or setting rings.

- ✓
- 0,001 mm
- 1,5 + L (mm)/300 μm
- 1 μm
- 10 N
- 100/240 AC – 1,5 A  
50/60 Hz
- RS 232
- +10 to +40°C
- 10 to +40°C
- ✓
- Shipping packaging
- Identification number
- Inspection report
- Declaration of conformity
- ≤1 μm

### Technical Data

No.	=	Int. dimensions mm/in	Ext. dimensions mm/in	mm	kg
02130001	TPS 300	1 ÷ 305 (0.04 ÷ 12)	40 ÷ 330 (1.6 ÷ 13)	610 x 300 x 270	50
02130002	TPS 500	1 ÷ 508 (0.04 ÷ 20)	40 ÷ 532 (1.6 ÷ 21)	820 x 300 x 300	75
02130003	TPS 1000	10 ÷ 1016 (0.4 ÷ 40)	40 ÷ 1040 (1.6 ÷ 41)	1330 x 340 x 300	300
<b>On request</b>	TPS 1500 mm				
<i>Provided with the following accessories:</i>					
Power supply 80 – 240 V, 50 – 60 Hz					
Rubber feet (3) acting as vibration inhibitors					
AL300003 adapter mounted on the mobile stop (order No. 02160027)					

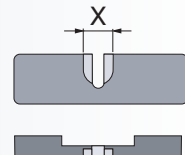
All given maximum permissible errors for a metrological characteristic (MPE) are valid for a temperature of 20° ±0,5° C and relative humidity of 50 ±5%.

**Optional Accessories**  
**For Bore Gauges**  
**- TESA Veribor**

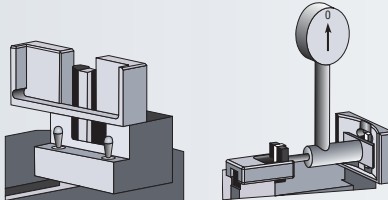


Application range 4,5 ÷ 50 mm

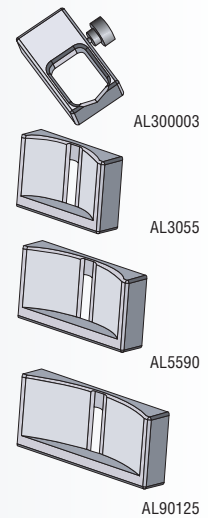
No	=	mm	
02160020	A7547	4,5 ÷ 6	Ø 4,5
02160021	A7548	6 ÷ 12,5	Ø 5,8
02160022	A7525	12 ÷ 25	Ø 9,5
02160023	A7559	25 ÷ 50	Ø 17,5



Application range 50 ÷ 550 mm



No	=	mm
02160024	AL3055	50 ÷ 150
02160025	AL5590	150 ÷ 300
02160026	AL90125	240 ÷ 550

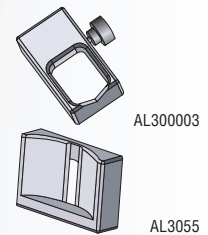


Each bench is supplied with AL300003 adapter.

**- Interapid**



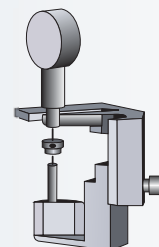
No	=	mm
02160024	AL3055	50 ÷ 200



Each bench is supplied with AL300003 adapter.

**- TESA YA**

No	=	mm
02160028	A7750-A7751-A7752	6 ÷ 12,5

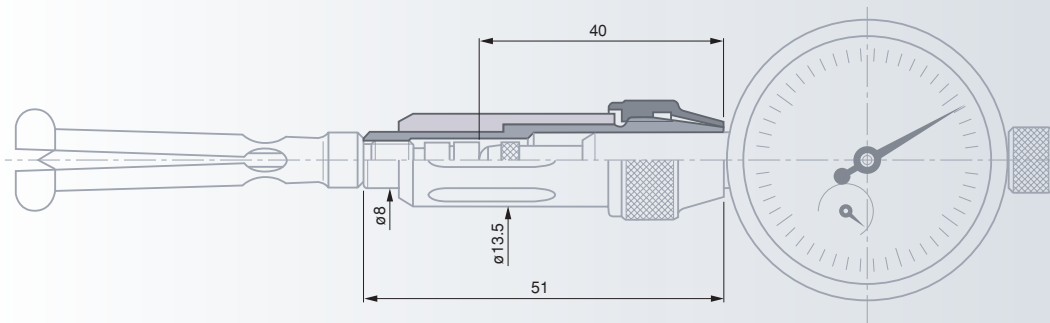
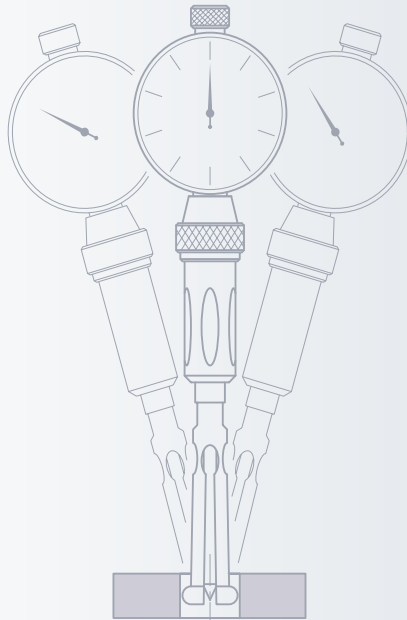


## TESA YA Bore Gauges

Specially designed for small bores from 0,47 up to 12,20 mm – Check bore sizes as well as form and shape errors through 2-point measurements – Excellent repeatability.

These bore gauges have an interchangeable measuring head housing a needle as well as a clamping shank with a 8 mm diameter fixing bore for a dial gauge or any other sensor.

- Probing heads with spherical faces for through bores.
- Probing heads with faces forming a rounded edge on their front face. Used to check blind bores or short centring shoulder.
- Probing heads for deeper bores.



### Handgrip



With mount for shop tools with a 8 h6 dia. clamping shank

### Measuring heads



See tables



See tables



Dull-chrome plated steel, hardened to  $\approx 1000$  HV 25

### Measuring needles



See tables



Steel hardened to  $\approx 800$  HV 25

### Setting rings



Nominal diameter  $\leq 1,5$  mm: with inserted ring in synthetic sapphire,  $>1,5$  mm: steel, hardened to  $\approx 780$  HV 25



Reliability of the engraved size:  $\pm 2s = 1 \mu\text{m}$



1  $\mu\text{m}$

## Complete Sets for Through Holes Measurement



Technical data: see page G-6



Complete set includes: 1 handle

No. 01540201.

Measuring heads, needles and setting rings as shown in the table below.

1 TESA YR dial gauge No. 01410212 (reading to 0,01 mm, 40 mm dial dia.).  
1 Extension for a 10 mm measuring insert with order No. 03540501.



Suited plastic case



Declaration of conformity



No



mm

01510000	0,47 ÷ 0,97
01510100	0,95 ÷ 2,45
01510200	2,30 ÷ 6,20
01510300	6,00 ÷ 12,20

## Single Components for Through Holes Measurement

No



mm



Measuring depth  
max. mm min. mm

No

No



mm

Measuring heads

Needles

Setting rings

01540401	0,47 ÷ 0,53	1,5	0,25	01540001	01540601	0,50
01540402	0,52 ÷ 0,58	1,8	0,27	01540001	01540602	0,55
01540403	0,57 ÷ 0,67	2,0	0,29	01540002	01540603	0,60
01540404	0,65 ÷ 0,77	2,5	0,31	01540002	01540604	0,70
01540405	0,75 ÷ 0,87	2,8	0,33	01540002	01540605	0,80
01540406	0,85 ÷ 0,97	3,0	0,35	01540002	01540606	0,90
01540407	0,95 ÷ 1,15	11	0,6	01540003	01540607	1,00
01540408	1,07 ÷ 1,25	11	0,6	01540003	01540608	1,10
01540409	1,17 ÷ 1,35	11	0,6	01540003	01540609	1,20
01540410	1,27 ÷ 1,45	11	0,6	01540003	01540610	1,30
01540411	1,37 ÷ 1,55	11	0,6	01540003	01540611	1,40
					01540612	1,50
01540412	1,50 ÷ 1,90	17	0,9	01540004	01540613	1,7
01540413	1,70 ÷ 2,15	17	0,9	01540004	01540614	2,00
01540414	2,05 ÷ 2,45	17	0,9	01540004	01540615	2,25
01540415	2,30 ÷ 2,75	22	1,2	01540005	01540616	2,50
01540416	2,65 ÷ 3,20	22	1,2	01540005	01540617	3,00
01540417	3,05 ÷ 3,50	22	1,2	01540005	01540618	3,25
01540418	3,35 ÷ 3,85	22	1,2	01540005	01540619	3,50
01540419	3,80 ÷ 4,30	22	1,2	01540005	01540620	4,00
01540420	4,20 ÷ 5,00	40	2,0	01540006	01540621	4,50
01540421	4,70 ÷ 5,50	40	2,0	01540006	01540622	5,00
01540422	5,30 ÷ 6,20	40	2,0	01540006	01540623	5,75
01540423	6,00 ÷ 6,80	40	2,0	01540006	01540624	6,50
01540424	6,60 ÷ 7,50	40	2,0	01540006	01540625	7,00
01540425	7,30 ÷ 8,15	40	2,0	01540006	01540626	7,75
01540426	8,00 ÷ 8,80	40	2,0	01540006	01540627	8,50
01540427	8,50 ÷ 9,40	50	2,0	01540006	01540628	9,00
01540428	9,15 ÷ 10,00	50	2,0	01540006	01540629	9,50
01540429	9,60 ÷ 10,80	50	3,3	01540007	01540630	10,00
01540430	10,65 ÷ 12,20	50	3,3	01540007	01540631	11,50



### Complete Sets for Measuring Blind Bores and Short Centring Shoulders



<b>01510400</b>	1,50 ÷ 2,45
<b>01510500</b>	2,30 ÷ 6,20
<b>01510600</b>	6,00 ÷ 12,20



Technical data: see page G-6

Complete set includes: 1 handle

No. 01540201.  
Measuring heads, needles and setting rings as shown in the table below.  
1 TESA YR dial gauge No. 01410212 (reading to 0,01 mm, 40 mm dial dia.).  
1 Extension for a 10 mm measuring insert with order No. 03540501.



Suited plastic case



Declaration of conformity

### Single Components for Measuring Blind Bores and Short Centring Shoulders



Measuring heads	mm	Measuring depth		Needles	Setting rings	mm
		max. mm	min. mm			
<b>01540501</b>	1,50 ÷ 1,90	17	0,3	01540009	01540613	1,75
<b>01540502</b>	1,70 ÷ 2,15	17	0,3	01540009	01540614	2,00
<b>01540503</b>	2,05 ÷ 2,45	17	0,3	01540009	01540615	2,25
<b>01540504</b>	2,30 ÷ 2,75	22	0,3	01540010	01540616	2,50
<b>01540505</b>	2,65 ÷ 3,20	22	0,3	01540010	01540617	3,00
<b>01540506</b>	3,05 ÷ 3,50	22	0,3	01540010	01540618	3,25
<b>01540507</b>	3,35 ÷ 3,85	22	0,2	01540010	01540619	3,50
<b>01540508</b>	3,80 ÷ 4,30	22	0,2	01540010	01540620	4,00
<b>01540509</b>	4,20 ÷ 5,00	40	0,5	01540011	01540621	4,50
<b>01540510</b>	4,70 ÷ 5,50	40	0,5	01540011	01540622	5,00
<b>01540511</b>	5,30 ÷ 6,20	40	0,5	01540011	01540623	5,75
<b>01540512</b>	6,00 ÷ 6,80	40	0,5	01540011	01540624	6,50
<b>01540513</b>	6,60 ÷ 7,50	40	0,5	01540011	01540625	7,00
<b>01540514</b>	7,30 ÷ 8,15	40	0,5	01540011	01540626	7,75
<b>01540515</b>	8,00 ÷ 8,80	40	0,5	01540011	01540627	8,50
<b>01540516</b>	8,50 ÷ 9,40	50	0,5	01540011	01540628	9,00
<b>01540517</b>	9,15 ÷ 10,00	50	0,5	01540011	01540629	9,50
<b>01540518</b>	9,60 ÷ 10,80	50	1,0	01540012	01540630	10,00
<b>01540519</b>	10,65 ÷ 12,20	50	1,0	01540012	01540631	11,50



Technical data: see page G-6

Complete set includes: 1 handle

No. 01540201.  
Measuring heads, needles and setting rings as shown in the table page G-9.  
One depth extension, 64 mm long, No. 01540101.  
1 TESA YR dial gauge No. 01410212 (reading to 0,01 mm, 40 mm dial dia.).  
1 Extension for a 10 mm dia. measuring insert with order No. 03540501.



Suited plastic case



Declaration of conformity

### Complete Set for Measuring Deeper Bores



<b>01510700</b>	4,25 ÷ 8,50
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Technical data: see page G-6

Complete set includes: 1 handle

No. 01540201.  
Measuring heads, needles and setting rings as shown in the table below.  
1 TESA YR dial gauge No. 01410212 (reading to 0,01 mm, 40 mm dial dia.).  
1 Extension for a 10 mm measuring insert with order No. 03540501.

Suited plastic case

Declaration of conformity

## Single Components for Deeper Bores

No	mm	Measuring depth		No	No	mm
		max. mm	min. mm			
<i>Measuring heads</i>			<i>Needles</i>		<i>Setting rings</i>	
<b>01540431</b>	4,22 ÷ 4,75	95*	1,7	<b>01540008</b>	<b>01540621</b>	4,50
<b>01540432</b>	4,73 ÷ 5,38	95*	1,7	<b>01540008</b>	<b>01540622</b>	5,00
<b>01540433</b>	5,36 ÷ 6,02	95*	1,7	<b>01540008</b>	<b>01540623</b>	5,75
<b>01540434</b>	6,00 ÷ 6,65	95*	1,7	<b>01540008</b>	<b>01540701</b>	6,50
<b>01540435</b>	6,63 ÷ 7,29	95*	1,7	<b>01540008</b>	<b>01540702</b>	7,00
<b>01540436</b>	7,27 ÷ 7,92	95*	1,7	<b>01540008</b>	<b>01540703</b>	7,75
<b>01540437</b>	7,90 ÷ 8,56	95*	1,7	<b>01540008</b>	<b>01540704</b>	8,50

\* Require the use of the 64 mm long depth extension (N° 01540101).

## Special Executions

Available upon request:

- Measuring heads with tungsten carbide tipped measuring faces.
- Measuring heads for uncommon inspection job.
- Measuring heads for through holes and deeper bores covering other application ranges.
- Tungsten carbide measuring needles.
- 125, 250, 500, 750 and 1000 mm depth extensions.



## Optional Accessories for TESA YA Bore Gauges

Measuring stand for stationary use.



Technical  
data: see  
page G-6



Declaration  
of conformity



**01639009** INTERAPID UA 30 measuring stand

*Must be equipped with:*

**01610201** UK 25 sliding arm

**01640000** UAZ 10 depth stop



## TESA VERIBOR Light Bore Gauge

Bore gauge with 2-point contact made to measure bores and form errors – Self-centring – Can equally be used with a dial gauge, precision indicator or any other sensor type having a 8 h6 dia. clamping shaft.



Measuring bolts and anvils in steel, hardened to 60 HRC  $\pm 2$  and 63 HRC  $\pm 3$ , respectively.

Mount for a sensor having a 8h6 dia. clamping shaft

2  $\mu\text{m}$

4  $\mu\text{m}$

Set including 1 single TESA VERIBOR Light plus 1 set of interchangeable fixed inserts covering the whole application range.

Wooden case

Declaration of conformity



05710090

TESA Veribor Light

mm

Bolt travel, mm

Measuring depth, mm

05710091

TESA Veribor Light

18 ÷ 35

1,30

176

05710092

TESA Veribor Light

35 ÷ 60

1,40

178

05710093

TESA Veribor Light

50 ÷ 150

1,40

178

05710093

TESA Veribor Light

18 ÷ 150

1,30 / 1,40

176 / 178

Dial gauge not included







## TESA VERIBOR Bore Gauges

Proven construction and high reliability over decades – Perform 2-point measurements of bores from 4,5 up to 550 mm – Detect form and shape errors – Gauge body with a 8 mm diameter fixing bore for a dial gauge, precision indicator or any other sensor.

- High repeatability through the circular reversing element inside the gauge, virtually free from clearance.
- Gauge body made of invar steel to prevent the measurement results from being affected by hand warmth transfer.
- Centring shoe to ensure a correct alignment of the gauge into the bore to be checked.
- Tungsten carbide ball tips for high resistance to wear.



### TESA VERIBOR without dial gauge

	
	mm
05710012	4,5 ÷ 6
05710013	6 ÷ 12,5
05710014	12 ÷ 25
05710015	25 ÷ 50
05710016	50 ÷ 150
05710018	50 ÷ 300
05710017	240 ÷ 550



See tables



Measuring bolts and anvils fitted with tungsten carbide ball tips



Mount for a sensor having a 8 h6 dia. clamping shaft



2 µm (VERIBOR alone)



± 2s = 0,5 µm (VERIBOR alone)



Set including 1 single TESA VERIBOR Light plus 1 set of interchangeable fixed inserts covering the whole application range.



Wooden case



Declaration of conformity



Full set including 1 single  
**TESA VERIBOR Light plus**  
 1 set of interchangeable fixed inserts covering the whole application range,  
 1 dial gauge as shown in the table opposite,  
 1 dial gauge guard.

Wooden case

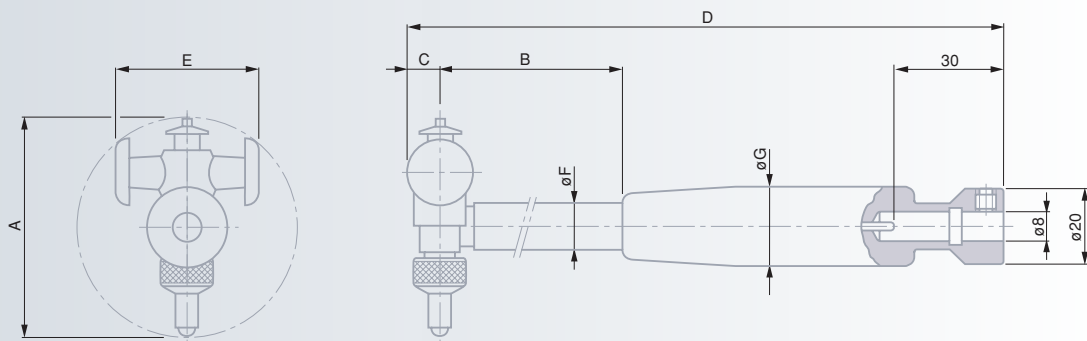
Declaration of conformity

## TESA VERIBOR with dial gauge

No		No		No		No		No	
05710054		05710061						mm	
05710055		05710062						4,5 ÷ 6	
05710056		05710063						6 ÷ 12,5	
				05710057		05710064		12 ÷ 25	
				05710058		05710065		25 ÷ 50	
				05710059		05710066		50 ÷ 150	
				05710060		05710067		50 ÷ 300	
								240 ÷ 550	

Provided with a TESA dial gauge

No	01412010	01412510	01412310	01412511
mm	40	40	58	58
mm	0,01	0,001	0,01	0,001



A mm	mm	B mm	C mm	D mm	E mm	F mm	G mm
4,5 ÷ 6	0,35	74	2	138	3,3	3,8	16
6 ÷ 12,5	0,5	93	2,6	156	4,3	4,9	16
12 ÷ 25	0,9	106	4,5	194	7,8	7,9	19
25 ÷ 50	1,3	140	6	228	16	8	19
50 ÷ 150	1,4	173	10	279	36	12	23
50 ÷ 300	1,4	173	10	279	36/66	12	23
240 ÷ 550	1,6	227	14	347	112	18	28

### Special Versions

Available on request:

- TESA VERIBOR for blind bores and centring shoulders.
- TESA VERIBOR elbow-shaped for hard-to-reach bores.
- Handtools for measuring the distance between two plan-parallel surfaces.
- Handtools for inspecting gear pitch diameters.

Optional Accessories for TESA VERIBOR Bore Gauges



**Set of extensions**

For extending the application range of VERIBOR No. 05710016, 05710058 and 05710065 up to 300 mm dia.



mm

**05740001**

Consisting of:

1 Centring shoe

3 Extensions 50 mm



**Depth extensions (not pictured)**

To be mounted on each tool shaft from diameters  $\geq 25$  to  $\leq 550$  mm for depth increase (Size B – Drawing on page G-13).



mm

**05760026** 250

**05760027** 500

**05760028** 750

**05760029** 1000

**Dial gauge guard**

Protects the dial gauge against shocks. Also prevents the dial from being inadvertently rotated.



mm

**05760012**  $\varnothing 40$

**05760013**  $\varnothing 58$



**Cable holder**

Used for the probe cable. To be mounted at the end of the gauge shaft.



**05760014**



**Clear/Memory switch**

Cancels any value captured through the electronic unit such as TESATRONIC, easily and quickly.



**05760025**



**Setting device**

Uses gauge blocks that serve as material measures (not included in delivery scope). Supplied in a wooden case.



mm

**05740004** 4,5 ÷ 300

**05740005** 160 ÷ 550



# INTERAPID Bore Gauges

Just wash the gauge with clean water – That's all!

Let you spare the time needed for dismounting and remounting the measuring head for maintenance, e.g. after use of the tool exposed to cooling agents.

- 2-Point bore gauge with centring device.
- Wide application range from 50 to 200 mm.
- Rugged construction to withstand harsh workshop conditions.
- Lightweight, well-balanced design to increase the bore gauge sensitivity and decrease operator's fatigue during the measurement operations.
- Shock resistant dial gauge case to protect the mechanism.



50 to 200 mm

2,54 mm probe travel

Measuring inserts fitted with tungsten carbide ball tips (6,36 mm dia.)

Two tungsten carbide tipped centring shoes, each with a 9,5 mm dia. ball tip

58 mm dial diameter

Precision to ± 1 graduation within the first pointer revolution

Hysteresis within a quarter of one graduation

Comes ready for measurement

Suited plastic case

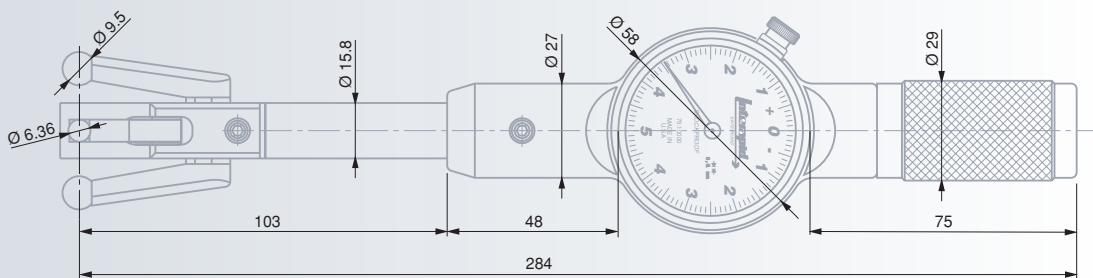
Declaration of conformity



No	mm	mm	Max. depth mm
07910000	0,01	50 ÷ 200	150
B3-18509	0,002	50 ÷ 200	150

### Extensions

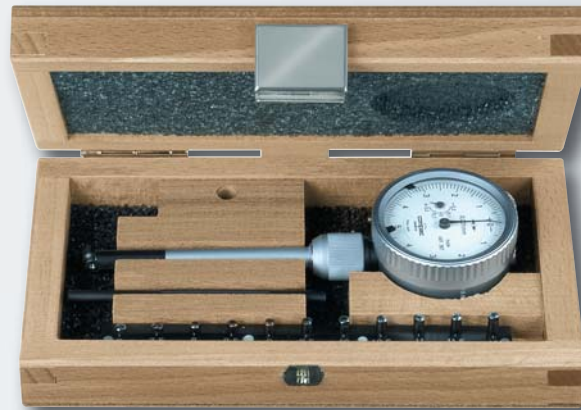
No	mm	in
X2-8515910	250	10
X2-8515914	350	14
X2-8515918	450	18
X2-8515924	600	24
X2-8515936	900	36
X2-8515972	1800	72



## TESA Bore Gauges

Perform 2-point measurement of diameters, shape and form errors – Self-centring and self-aligning into the bore – Release button on each bore gauge for activating the measuring bolt – Interchangeable dial gauges and contact pins.

### Bore gauges, Type IA00 or IA0 – Complete with Dial Gauge



See dial gauge table

Regular dial gauges with a release button for activating the measuring bolt

Wooden case

Identification number

Inspection report with a declaration of conformity

#### Metric readout

No	A				Measuring depth (mm)		N	min.	max.
					min.	max.			
S57100765	IA 00-365	0,002	3,75 ÷ 6,75	0,5	2	25/40	1	2,80	
S57100383	IA 00-367	0,001	3,75 ÷ 6,75	0,5	2	25/40	1	2,80	
S57200063	IA 0-365	0,002	6,75 ÷ 12,25	0,5	3	60	1	2,80	
S57200066	IA 0-367	0,001	6,75 ÷ 12,25	0,5	3	60	1	2,80	

#### Inch readout

No	A				Measuring depth (in)		N	min.	max.
					min.	max.			
S57100425	IA 00-365A	0.0001	0.150 ÷ .270	0.020	0.080	1/1 <sup>5</sup> / <sub>8</sub>	1	2,80	
On request	IA 00-367A	0.00005	0.150 ÷ .270	0.020	0.080	1/1 <sup>5</sup> / <sub>8</sub>	1	2,80	
S57200426	IA 0-365A	0.0001	0.270 ÷ .485	0.020	0.120	2 <sup>3</sup> / <sub>8</sub>	1	2,80	
S57200507	IA 0-367A	0.00005	0.270 ÷ .485	0.020	0.120	2 <sup>3</sup> / <sub>8</sub>	1	2,80	





3,75 ÷ 6,75 mm/  
0.150 ÷ 0.270 in

0,5 mm/0.020 in for  
each gauge body

1,5 µm  
(gauge body alone,  
w/o dial gauge)

Tungsten carbide  
contact pins

6 gauge  
bodies,  
interchangeable.  
2 depth stops.

Wooden case

Declaration  
of conformity



6,75 ÷ 12,25 mm/  
.0.270 ÷ 0.485 in

0,5 mm/0.020 in for  
each gauge body

1,5 µm  
(gauge body alone,  
w/o dial gauge)

Tungsten  
carbide  
contact pins

1 gauge  
body,  
1 set of contact  
pins, interchangeable.  
1 wrench for exchanging  
the contact pin.

Wooden case

Declaration  
of conformity



See  
dial gauge  
table

Regular  
dial gauges  
with a release  
button for activating  
the measuring bolt

Cardboard box

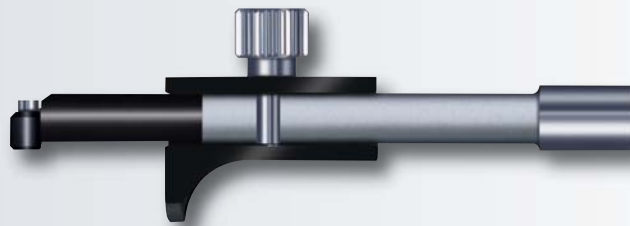
Identification  
number

Inspection  
report with a  
declaration  
of conformity

### Bore Gauges, Type IA00 – Without Dial Gauge

No	mm	mm	No	in	in
IA00	3,75 ÷ 6,75	0,5	IA00A	0.150 ÷ 0.270	0.020
Interchangeable gauge body (included in the delivery scope)					
No	A	mm	No	A	in
IA00011	IA00/1	3,75 ÷ 4,25	IA00A011	IA 00 A/1	0.150 ÷ 0.170
IA00012	IA00/2	4,25 ÷ 4,75	IA00A012	IA 00 A/2	0.170 ÷ 0.190
IA00013	IA00/3	4,75 ÷ 5,25	IA00A013	IA 00 A/3	0.190 ÷ 0.210
IA00014	IA00/4	5,25 ÷ 5,75	IA00A014	IA 00 A/4	0.210 ÷ 0.230
IA00015	IA00/5	5,75 ÷ 6,25	IA00A015	IA 00 A/5	0.230 ÷ 0.250
IA00016	IA00/6	6,25 ÷ 6,75	IA00A016	IA 00 A/6	0.250 ÷ 0.270

### Bore Gauges, Type IA0 – Without Dial Gauge



No	mm	mm	No	in	in
IA0	6,75 ÷ 12,25	0,5	IA0A	0.270 ÷ 0.485	0.020

#### Standard Accessories for Type IA0 or IA0A

No	=
IA019	Depth stop
IA020	Knurled knob

### Dial Gauges with a 40 mm Dial Diameter for Type IA00 or IA0

#### Metric readout

No	mm
IAP365	0,002
IAP367	0,001

#### Inch readout

No	in
IAP365A	0.0001
IAP367A	0.00005



### Bores Gauges, Type IA1 or IA2 – Complete with Dial Gauge



See dial gauge table



Regular dial gauges with a release button for activating the measuring bolt



Wooden case



Identification number



Inspection report with a declaration of conformity

#### Metric readout

No	A	mm	mm	mm	Depth (mm)		N	
					min.	max.	min.	max.
S57300077	IA 1-542	0,01	12 ÷ 25	1,2	5	90	1	3
S57300230	IA 1-555	0,002	12 ÷ 25	1,2	5	90	1	3
S57300064	IA 1-556	0,001	12 ÷ 25	1,2	5	90	1	3
S57400062	IA 2-542	0,01	20 ÷ 50	1,2	8	120	1	3
S57400748	IA 2-555	0,002	20 ÷ 50	1,2	8	120	1	3
S57400065	IA 2-556	0,001	20 ÷ 50	1,2	8	120	1	3

#### Inch readout

No	A	in	in	in	Depth (in)		N	
					min.	max.	min.	max.
S57300771	IA 1-543 A	0.0005	0.500 ÷ 1.00	0.048	0.200	3½	1	3
S57300427	IA 1-555 A	0.0001	0.500 ÷ 1.00	0.048	0.200	3½	1	3
S57400772	IA 2-543 A	0.0005	0.800 ÷ 2.00	0.048	0.320	4¾	1	3
S57400428	IA 2-555 A	0.0001	0.800 ÷ 2.00	0.048	0.320	4¾	1	3



12 ÷ 25 mm/  
0.500 ÷ 1.00 in

1,2 mm/0.048 in  
for each gauge  
body

1,5 µm  
(gauge body alone,  
w/o dial gauge)

Tungsten carbide  
contact pins

1 gauge body,  
1 set of  
contact pins

along with extensions,  
interchangeable.  
1 wrench for exchanging  
the contact pin.

Wooden case

Declaration  
of conformity



20 ÷ 50 mm/  
0.800 ÷ 2.00 in

1,2 mm/0.048 in  
for each gauge  
body

1,5 µm  
(gauge body alone,  
w/o dial gauge)

Tungsten carbide  
contact pins

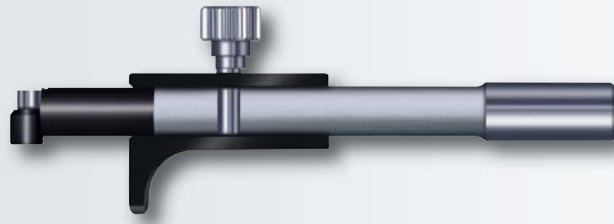
1 gauge body,  
1 set of  
contact pins

along with extensions,  
interchangeable.  
1 wrench for exchanging  
the contact pin.

Wooden case

Declaration  
of conformity

### Bore Gauges, Type IA1 – Without Dial Gauge



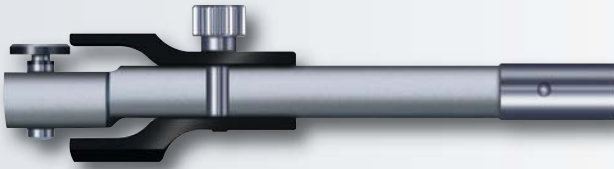
<b>No</b>		
<b>IA1</b>	12 ÷ 25	1,2

<b>No</b>		
<b>IA1A</b>	0.500 ÷ 1.00	0.048

#### Standard Accessories for Type IA1 or IA1A

<b>No</b>	
<b>IA123</b>	Depth stop
<b>IA124</b>	Knurled knob

### Bore Gauges, Type IA2 – Without Dial Gauge



<b>No</b>		
<b>IA2</b>	20 ÷ 50	1,2

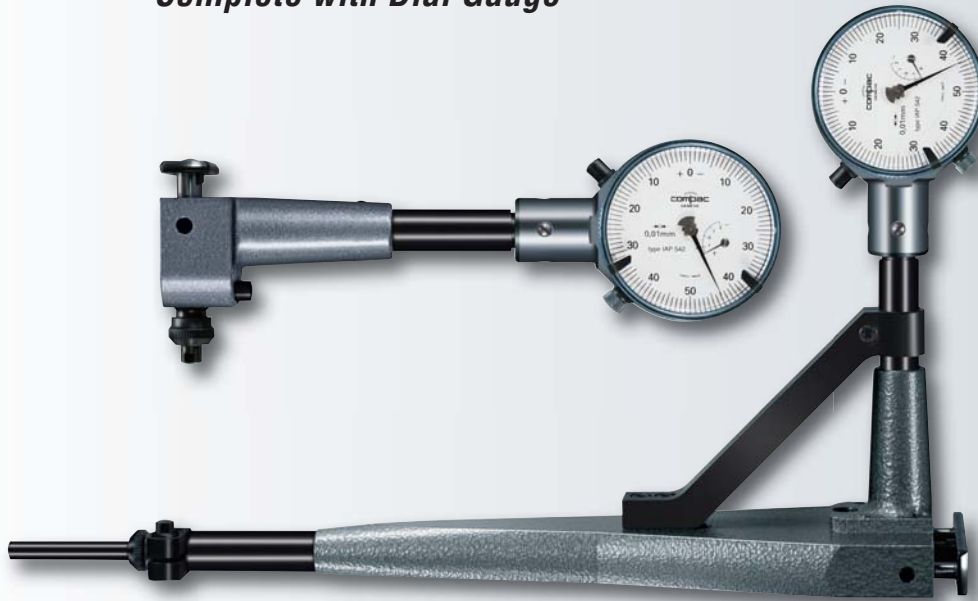
<b>No</b>		
<b>IA2A</b>	0.800 ÷ 2.00	0.048

#### Standard Accessories for IA2 or IA2A

<b>No</b>	
<b>IA229</b>	Depth stop, short
<b>IA230</b>	Depth stop, long
<b>IA231</b>	Knurled knob



### Bore Gauges, Type IA3, IA4 or IA6 – Complete with Dial Gauge



See dial gauge table

Regular dial gauges with a release button for activating the measuring bolt

Wooden case

Identification number

Inspection report with a declaration of conformity

#### Metric readout

No	A	mm	mm	mm	Depth (mm)		N	
					min.	max.	min.	max.
S57500761	IA 3-542	0,01	50 ÷ 150	3	9	220	1	3
S57500749	IA 3-555	0,002	50 ÷ 150	3	9	220	1	3
S57500061	IA 3-556	0,001	50 ÷ 150	3	9	220	1	3
S57600105	IA 4-542	0,01	50 ÷ 300	3	9	220	1	3
S57600067	IA 4-555	0,002	50 ÷ 300	3	9	220	1	3
S57600252	IA 4-556	0,001	50 ÷ 300	3	9	220	1	3
S57700762	IA 6-542	0,01	300 ÷ 500	3	9	220	1	3
S57700763	IA 6-555	0,002	300 ÷ 500	3	9	220	1	3
S57700764	IA 6-556	0,001	300 ÷ 500	3	9	220	1	3

#### Inch readout

No	A	in		in	Depth (mm)		N	
		min.	max.		min.	max.		
Upon request	IA 3-543 A	0.0005	2 ÷ 6	0.120	0.360	8 <sup>3</sup> / <sub>4</sub>	1	3
S57500193	IA 3-555 A	0.0001	2 ÷ 6	0.120	0.360	8 <sup>3</sup> / <sub>4</sub>	1	3
Upon request	IA 4-543 A	0.0005	2 ÷ 12	0.120	0.360	8 <sup>3</sup> / <sub>4</sub>	1	3
S57600587	IA 4-555 A	0.0001	2 ÷ 12	0.120	0.360	8 <sup>3</sup> / <sub>4</sub>	1	3
Upon request	IA 6-543 A	0.0005	12 ÷ 20	0.120	0.360	8 <sup>3</sup> / <sub>4</sub>	1	3
Upon request	IA 6-555 A	0.0001	12 ÷ 20	0.120	0.360	8 <sup>3</sup> / <sub>4</sub>	1	3



IA3: 50-150 mm/2-6 in.  
IA4: 50-300 mm/2-12 in.  
IA6: 300-500 mm/12-20 in

3 mm/.120 in for each gauge body

1,5 µm (gauge body alone, w/o dial gauge)

Tungsten carbide contact pins

1 gauge body.  
1 set of extensions for the contact pins.  
1 set of contact pins, interchangeable.  
1 extension RI 100.  
1 wrench for exchanging the contact pin.

Wooden case

Declaration of conformity

### Bore Gauges, Type IA3, IA4 or IA6 – Without Dial Gauge

No	mm	mm
IA3	50 ÷ 150	3
IA4	50 ÷ 300	3
IA6	300 ÷ 500	3

No	in	in
IA3A	2 ÷ 6	0.120
IA4A	2 ÷ 12	0.120
IA6A	12 ÷ 20	0.120

## Dial Gauges for Type IA1 to IA6, 58 mm Dial Diameter



See dial gauge table

Regular dial gauges with a release button for activating the measuring bolt

Cardboard box

Identification number

Inspection report with a declaration of conformity

### Metric readout

No	mm
IAP542	0,01
IAP555	0,002
IAP556	0,001

### Inch readout

No	in
IAP543A	0.0005
IAP555A	0.0001

## Standard Accessories for Bore Gauges



<b>IA34</b>	For use of a gauge type IA3 as IA4. Consists of 2 extensions and 1 centring shoe.
<b>RIA4</b>	Handle for gauge type IA2 up to IA6. Allows the use of a regular dial gauge or inductive probe.
<b>RI100</b>	100 mm long extension for gauge type IA2 up to IA6. 2 extensions can be used together at the most.
<b>EIA2</b>	Setting device, capacity 0 ÷ 215 mm. Provided in a wooden case, without slip gauges.
<b>IABL0500</b>	500 mm long extension for IA3, IA4 and IA6. Features a counterweight based mechanism for raising the measuring bolt, thus ensuring that the measurements are being taken correctly in any position of use. Provided in a wooden case.
<b>IABL0750</b>	750 mm long extension for IA3, IA4 and IA6
<b>IABL1000</b>	1000 mm long extension for IA3, IA4 and IA6
<b>IABL1500</b>	1500 mm long extension for IA3, IA4 and IA6
<b>IABL2000</b>	2000 mm long extension for IA3, IA4 and IA6
<b>532IA</b>	Identical to series 532, but with reinforced pressure spring for use with IABL-type extensions.
<b>555IA</b>	Identical to series 555, but with reinforced pressure spring for use with IABL-type extensions.
<b>533AIA</b>	Identical to series 533A, but with reinforced pressure spring for use with IABL-type extensions.
<b>555AIA</b>	Identical to series 555A, but with reinforced pressure spring for use with IABL-type extensions.

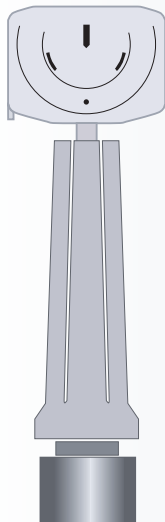




## TESADIA Plug Gauge

Easy-to-handle plug gauge for 2-point or 3-point measurement on cylindrical bores – Ideal for blind bores and short centring shoulders with diameters ranging from 2,98 up to 250 mm.

- Features a built-in probe that can be connected to a TESA's electronic unit, e.g. TESATRONIC or TESA Interface Box BP 880.
- Specially suited for recurrent measuring on the production floor as well as for receiving and final inspection of medium and large-sized batches of parts.
- Equipped with a guiding cylinder that renders unnecessary swinging the plug gauge to find the culmination point. Self-centring and self-aligning.



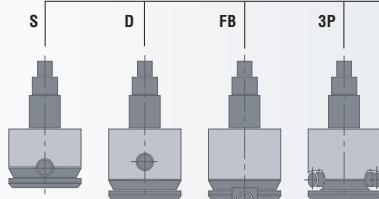
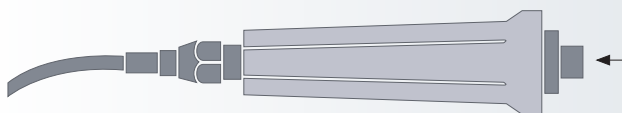
**Nº**

**=**

- |                  |                                       |
|------------------|---------------------------------------|
| <b>05560221</b>  | Handle with built-in GT21 axial probe |
| <b>05560228</b>  | Handle alone                          |
| <b>S55071072</b> | Handle for indicator                  |

### Handle

- With built-in TESA GT 21 axial probe.
- Mechanical device for fine adjustment, stress-relieved probe cable.
- Possible connection of a TESA GT 21 compatible probe from another source.



- S** 2-point plug gauge in standard execution for through holes
- D** 2-point plug gauge with longer guiding cylinder for through holes
- FB** Plug gauge for blind bores
- 3P** 3-point plug gauge for through holes



You may ask for a quotation for plug gauges with their own setting rings as well as for the electronic unit.

Specify nominal dimension along with both upper and lower limits of size as well as workpiece material.

### Plug Gauge

- Equipped with both a measuring head and guiding cylinder.
- Uses the measuring needle with reversal wedge at one end to transfer the sweeping movement of the measuring insert to the axial probe.
- Houses a guiding cylinder having a special profile for unrestrained introduction of the plug gauge into the bore to be measured. No locking, no tilting.
- Choice of gauging contacts offering optimum adaptation to the parts to be checked, i.e.:
  - tungsten carbide tipped (not suited for non-ferrous metal alloy);
  - hard-chrome plated (partially suited for non-ferrous metal alloy);
  - ruby contacts (suited for non-ferrous metal alloy);
  - diamond contacts (suited for soft light alloy);
  - synthetic contacts (suited for polished surfaces).



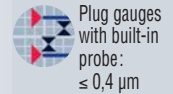
Measuring faces: see opposite



Plug gauges with built-in probe.  
 • 2-point model: 1%  
 • 3-point model: 3%  
 These percentages refer to the measuring span of each plug gauge



Plug gauges with built-in probe.  
 • 2-point model:  $\leq 1 \mu\text{m}$   
 • 3-point model:  $\leq 2 \mu\text{m}$



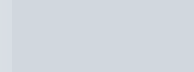
Plug gauges with built-in probe:  $\leq 0,4 \mu\text{m}$   
 0,3 to 1,2 N according to relevant model



10° C to 35° C



-25° C to 55° C

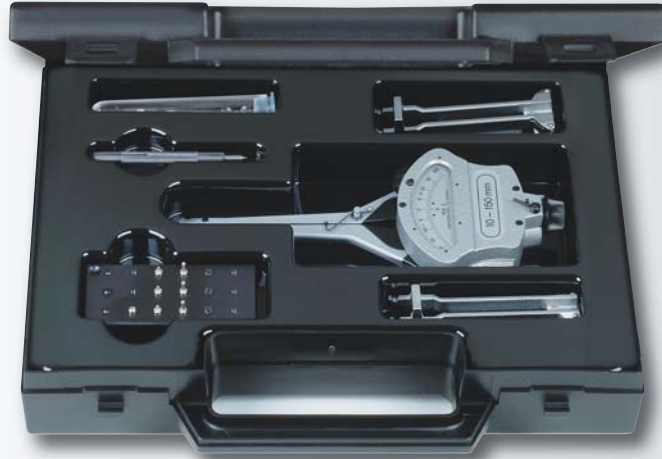


Declaration of conformity

# INTERAPID IRA 2

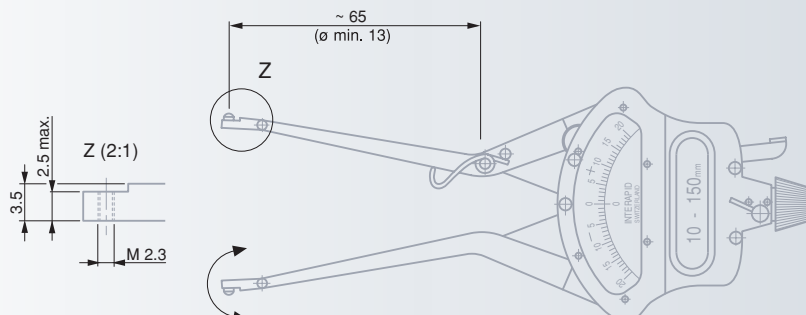
The finest precision gauge for measuring by comparison – Performs two- or three-point measurement depending on the used accessory – Suitable for verifying through holes, blind bores, grooves, undercuts or slots with plan-parallel faces, among others.

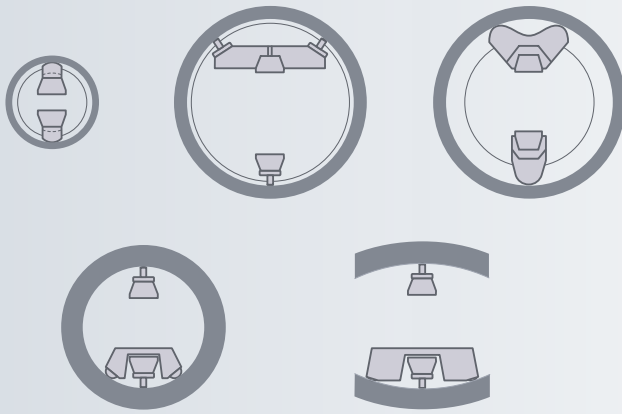
- Wide application range from 10 up to 150 mm.
- Ideal in design, light in weight, easy to handle.
- Built-in indicator to 0,01 mm with fine setting.
- Centring arm for 2-point measurement.



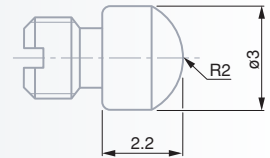
- ✓
- 0,01 mm or 0.0005 in
- 10 ÷ 150 mm or 0.375 ÷ 6 in
- ± 0,20 mm or ± 0.008 in
- 10 mm arm clearance
- Hardened steel or tungsten carbide tipped measuring faces as listed in the table
- 3,5 N
- Suited plastic case
- Identification number
- Declaration of conformity

mm		in
<b>079105704</b>	<b>INTERAPID IRA 2</b>	<b>079108640</b>
<i>Supplied with the following standard accessories:</i>		
<b>079105667</b>	3 Steel inserts, hardened (order number for 1 item)	<b>079105697</b>
<b>079105668</b>	3 Short steel inserts, hardened (order number for 1 item)	<b>079105698</b>
<b>079105669</b>	3 Long steel inserts, hardened (order number for 1 item)	<b>079105699</b>
<b>079112126</b>	2 Adjustable contact arms for bores ≥ 6 mm	<b>079112126</b>
<b>079110111</b>	1 Small insert holder for 3-point measurement	<b>079110113</b>
<b>079110110</b>	1 Large insert holder for 3-point measurement	<b>079110112</b>
<b>079108502</b>	1 Centring arm for bores 15 ÷ 30 mm	<b>079108504</b>
<b>079108503</b>	1 Centring arm for bores 30 ÷ 150 mm	<b>079108505</b>
<b>079105694</b>	1 Screwdriver with special design	<b>079105694</b>
<b>079111401</b>	<b>INTERAPID IRA 2 md</b> Same as INTERAPID IRA 2, but furnished with the measuring inserts listed below instead of those in steel with order No. 079105667 or 079105697.	<b>079111402</b>
<b>079105756</b>	3 Tungsten carbide inserts (order number for 1 item)	<b>079105759</b>

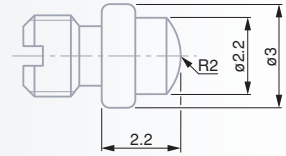




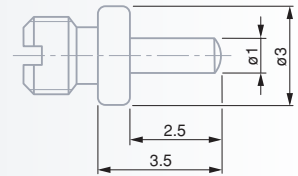
079105667



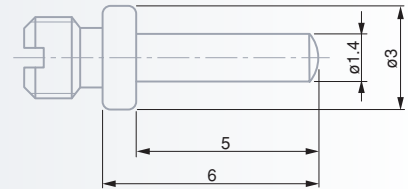
079105756



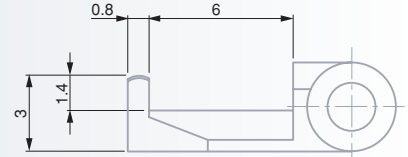
079105668



079105669



079112126



Chrome plated,  
hardened steel

## Optional Accessories

**Nº**

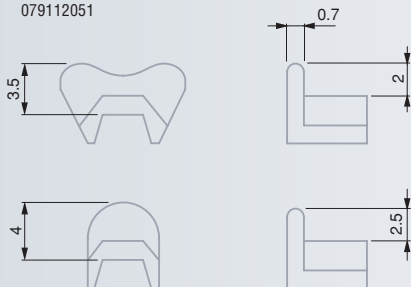
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**079112051** Set = 2 small inserts (1-point contact)  
1 small insert (2-point contact)

**079112052** Set = 2 large inserts (1-point contact)  
1 large insert (2-point contact)

**079108830** Handle

079112051



079112052

