



TEST AND BACK-PLUNGER INDICATORS AND HOLDERS



Back-Plunger Dial Indicators

No. 650 Series with deep hole attachment .200"

No. 651 Series without deep hole attachment

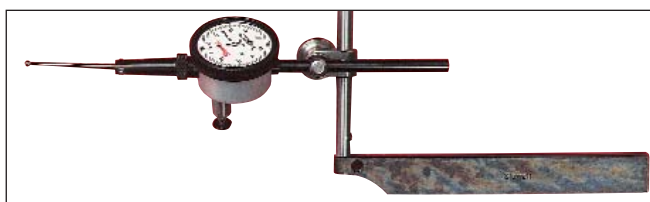
These workhorse back-plunger indicators feature AGD (American Gage Design) stem holding fixtures and the great variety of AGD contact points. This very versatile indicator series has the following features:

- ◆ Smooth and accurate operation due to their sturdy, basic design
- ◆ Hardened, stainless steel AGD stem .375" (9.5mm) diameter
- ◆ Shank dimension 1/4" (6.3mm) diameter, 3-3/16" (80mm) long
- ◆ No. 650 Indicators have a 3" (75mm) deep hole attachment that connects directly with the main spindle for positive action. Attachment is convenient to use when checking internal dimensions of a workpiece while in fixtures or machines. When not needed, the attachment can be easily removed and the hole capped
- ◆ No. 651 Indicators are identical to the No. 650 Series except they cannot accept the deep hole attachment



Left-to-right:
Nos. 650 and 651.

- ◆ Both models have large 1-11/16" (43mm) diameter bezels with easy-to-read dial numbers and graduations



Individual Contact Points Only

Photo	Part No.	EDP No.
	PT07215	70965
	PT06632-5	70793
	PT06632-6	70794

- ◆ With their .375" (9.5mm) AGD stem diameter, the 650 and 651 can be used with our No. 670 Hole Attachment and our No. 671 Universal Attachment the .375" (9.5mm) AGD stem diameter
- ◆ Adjustable dials to set zero at any point opposite the hand
- ◆ Inch reading dials have white faces and millimeter reading dials are yellow
- ◆ Three different styles of contact points are furnished with each indicator

Inch Reading

Range	Graduation	Dial Reading	Description	No. 650 Series		No. 651 Series	
				With Deep Hole Attachment	Without Deep Hole Attachment	With Deep Hole Attachment	Without Deep Hole Attachment
				Catalog No.	EDP No.	Catalog No.	EDP No.
.200"	.001"	0-100	Indicator with 3 Contact Points, 3 Attachments*, in Case	650A1Z	64475	651A1Z	64483
			Indicator with 3 Contact Points Only	650B1	64477	651B1	64485
		0-50-0	Indicator with 3 Contact Points, 3 Attachments*, in Case	650A5Z	64474	651A5Z	64484
			Indicator with 3 Contact Points Only	650B5	64476	651B5	64486

Millimeter Reading

				No. 650M Series		No. 651M Series	
5 mm	0.01mm	0-100 Yellow Dial Face	Indicator with 3 Contact Points, 3 Attachments*, in Case	650MA1Z	65261	651MA1Z	65263
			Indicator with 3 Contact Points Only	650MB1	65262	651MB1	65264

*Attachments include **clamp, tool post holder and snug (PT18718)**. For detailed information, see below and next page.

Attachments for Starrett No. 650 & No. 651 Series Back-Plunger Dial Indicators

A. *Clamp – No. PT99437

With a 1-5/16" (33mm) flat or round capacity – 5/16" (8mm) post used with No. PT18718 Snug. (See right)



B. *Tool Post Holder – No. PT99438

3/8" x 3/4" x 6" (9.5 x 19 x 150mm) with upright spindle 5/16" dia. x 4-1/2" length (8 x 114mm).



(Continued on the next page.)



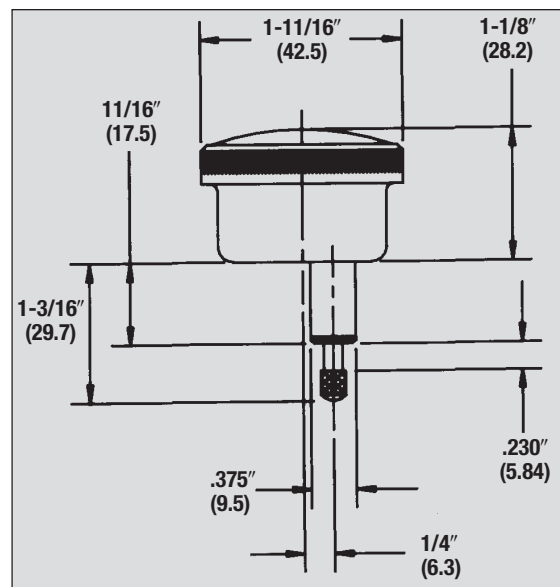
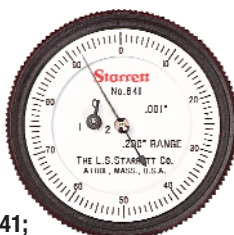
Back-Plunger Dial Indicators

No. 641 .200"

No. 641M 5mm

These indicators have the same design as the 650 Series, but without the shank and deep hole attachments. They are useful for positioning in unconventional fixtures and mountings. The spindle is perpendicular to the dial face for optimum dial readability.

Above: No. 641;
Below: No. 641M.



Attachments for Starrett No. 650 and No. 651 Series Back-Plunger Dial Indicators (continued)

C. *Snug Complete – No. PT18718
Post hole has a 5/16" diameter† and 3/32-1/4" holding capacity. Can be used on our No. 252 Height Transfer Gage, Nos. 57 and 257A and B Surface Gages, on No. 657A Magnetic Base and Swivel Post Assembly.



D. Snug Complete – No. PT18724
Post hole has a 3/8" diameter (9.5mm) and 3/32-1/4" (2.4-6.3mm) holding capacity. Can be used with our Nos. 57 and 257C and D Surface Gages or No. 657AA Magnetic Base with upright post.



- ◆ Continuous reading dials with revolution counters
- ◆ Uses standard AGD contacts

Inch Reading

Range	Graduation	Dial Reading	Catalog No.	EDP No.
.200"	.001"	0-100	641	65107

Millimeter Reading

Range	Graduation	Dial Reading	Catalog No.	EDP No.
5mm	0.01mm	0-100	641M	65108

E. Universal Snug – No. 57S

With spindle hole diameters 5/16", 3/8" (8, 9.5mm) and gripping hole diameters 9/64", 5/32", 3/16", 1/4" (3.5, 4, 4.8, 6.3mm).



F. Universal Snug – No. 58S

With spindle hole diameters 1/4", 5/16", 3/8" (6.3, 8, 9.5mm). Gripping hole diameters range from 3/32-1/4"



Photo Key	Description	Catalog/Part No.	EDP No.
A*	Clamp (see previous page)	PT99437	64492
B*	Tool Post Holder (see previous page)	PT99438	64493
C*	Snug Complete	PT18718	50709
D	Snug Complete – 1/4" and 3/8" Holes	PT18724	50710
E	Universal Snug	57S	50296
F	Universal Snug	58S	56613

* Attachments marked with an asterisk (*) are furnished with all sets having "A" in the catalog number.

† For snug with 8mm post hole diameter and 2.4-6.3mm holding capacity, order PT27171, EDP 66457.

NOTE: For AGD attachments and contact points that can be used with No. 650 and No. 651 Indicators, see the attachments and accessories pages with the AGD Indicators, further on in the section.



TEST AND BACK-PLUNGER INDICATORS AND HOLDERS



Universal Back-Plunger Dial Indicators

No. 196 Series .200"

No. 196M Series 5mm

Our No. 196 Indicator is one of the most versatile indicators available ... and it is the "granddaddy" of them all. Over the years this tool has been improved by methods and materials but the basic design is unchanged. The design is older than most of you and has withstood the test of time and beaten all challengers because it is:

- ◆ Accurate and reliable
- ◆ Simple to operate
- ◆ Rugged, with few moving parts
- ◆ Smooth in operation
- ◆ Inexpensive – the best indicator value you can buy

While there is a need for indicators with finer graduations, such as our No.708 Series, this indicator with graduations to .001" and 0.02mm will handle by far the majority of jobs. Shank diameter is 1/4" (6.3mm). Antimagnetic models are also available – (inch reading) Nos. 196A6Z and 196B6.



Left, No. 196B1;
right, No. 196MB1.

For full use, the operator first chooses the proper contact from the three hardened contact points that come with each model. Then the contact should be brought against the work with enough pressure to give the hand

one full turn. Set the hand at zero by rotating the dial with the knurled bezel. This provides one full rotation of the hand both to the right and left of zero, showing a rise or drop in the work and the amount of that variation.

Inch Reading – Shank Diameter 1/4"

Graduation	Range	Dial Reading	Description	Catalog No.	EDP No.
.001"	.200"	0-100	Indicator with 3 Contact Points, Adaptor, 4 Attachments* in Case	196A1Z	50697
			Indicator with 3 Contact Points and Adaptor Only	196B1	50699
			Indicator with 3 Contact Points, Adaptor, and Standard Letter of Certification†	196B1 W/SLC	66865
		0-50-0	Antimagnetic Indicator with 3 Contact Points, 4 Attachments* in Case	196A6Z	50701
			Antimagnetic Indicator with 3 Contact Points Only	196B6	50702
			Indicator with 3 Contact Points, Adaptor, 4 Attachments* in Case	196A5Z	50714
			Indicator with 3 Contact Points and Adaptor Only	196B5	50717

Millimeter Reading – Shank Diameter 6.3mm

0.02mm	5mm	0-100	Indicator with 3 Contact Points, Adaptor, 4 Attachments* in Case	196MA1Z	65251
		Yellow Dial Face	Indicator with 3 Contact Points and Adaptor Only	196MB1	65252
		0-50-0	Indicator with 3 Contact Points, Adaptor 196R, 4 Attachments* in Case	196MA5Z	65253
		Yellow Dial Face	Indicator with 3 Contact Points and Adaptor Only	196MB5	65254

*Attachments include **clamp, tool post holder, snug and hole attachment**. For detailed information, see next page.

†Includes redemption card for Standard Letter of Certification (SLC).

Contact Points and Adaptors Only

Description	Catalog/Part No.	EDP No.
Adaptor**	196R	50711
Adaptor (Metric Threads)	196MR	67457
Hardened Steel	PT05471	70617
	PT05472	70618
	PT05473	70619



196R, 196MR



PT05472



PT05471



PT05473

**For Contact Points with #4-48 Thread, see AGD Contact Listings.



Attachments for Starrett Nos. 196, 196M Series Universal Dial Indicators

A. *Clamp – No. PT99437

With a 1-5/16" (33mm) flat or round capacity, 5/16" (8mm) post used with No. PT18718 Snug.



B. *Tool Post Holder – No. PT99438

3/8" x 3/4" x 6" (9.5 x 19 x 150mm) with upright spindle 5/16" dia. x 4-1/2" length (8 x 114mm). Use with No. PT18718 Snug.



C. *Snug Complete – No. PT18718

Post hole has a 5/16" diameter† and 3/32-1/4" holding capacity. Can be used on our No. 252 Height Transfer Gage, Nos. 57 and 257A and B Surface Gages, on No. 657A Magnetic Base and Swivel Post Assembly.

D. Snug Complete – No. PT18724

Post has a 3/8" diameter (9.5mm) and 3/32-1/4" (2.4-6.3mm) holding capacity. Can be used with our Nos. 57 and 257C and D Surface Gages and No. 657AA Magnetic Base with upright post.



E. *Hole Attachment – No. 196F

Lets indicator be used over obstructions and inside holes to a depth of approximately 1-5/8" (40mm).



F. Shock Absorbing Anvil – No. PT08726A



G. Universal Snug – No. 57S

With spindle hole diameters 5/16", 3/8" (8, 9.5mm) and gripping hole diameters 9/64", 5/32", 3/16", 1/4" (3.5, 4, 4.8, 6.3mm).



H. Universal Snug – No. 58S

With spindle hole diameters 1/4", 5/16", 3/8" (6.3, 8, 9.5mm). Gripping hole diameters range from 3/32-1/4" (2.4-6.3mm).



I. Split Bushing – No. PT00764

Allows attachment of No. 196 Indicator to No. 660 Magnetic Base.



Photo Key	Description	Catalog/Part No.	EDP No.
A*	Clamp	PT99437	64492
B*	Tool Post Holder	PT99438	64493
C*	Snug Complete	PT18718	50709
D	Snug Complete – 1/4" and 3/8" Holes	PT18724	50710
E*	Hole Attachment	196F	50706
F	Shock Absorbing Anvil	PT08726A	66052
G	Universal Snug	57S	50296
H	Universal Snug	58S	56613
I	Split Bushing	PT00764	68850

* Attachments marked with an asterisk (*) are furnished with all sets having "A" in the catalog number.

† For snug with 8mm post hole diameter and 2.4-6.3 mm holding capacity, order PT27171, EDP 66457.

NOTE: For AGD attachments and contact points that can be used with No. 196 Indicators, see the attachments and accessories pages with the AGD Indicators, further on in the section.