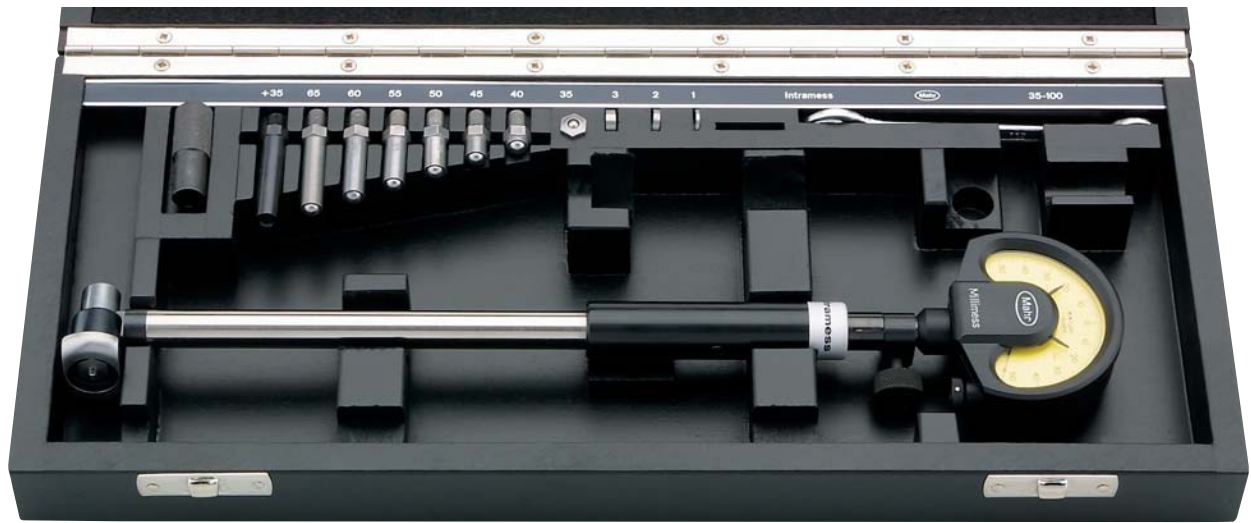


Willrich Precision: Phone : 866-945-5742 Email: Sales@willrich.com

## Self-Centering Dial Bore Gages 844 N Intramess



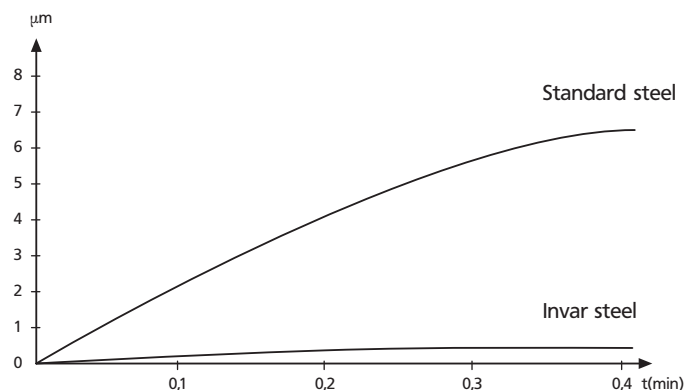
### Features

- Measuring the diameter, roundness and conical form of a bore as well as the distances of plane-parallel surfaces
- Measuring head consists of a carbide-tipped moving anvil and an interchangeable stationary anvil which has a hardened steel ball; alternatively a carbide ball is available
- Transmission lever system transfers movement of the movable anvil to indicating instrument
- The broad centering bridge ensures automatic centering in the bore
- Insensitive to temperature due to both the shank and transfer rod being made from heat resistant **Invar steel**
- Highly resistant to wear and tear due to the carbide-tipped moving anvil
- Constant measuring force due to built-in spring thus eliminating user influence
- Universally applicable and extremely versatile as every instrument spans a broad measuring range, within this range it is quick and easy to adjust to any size
- Measuring head, holder, extensions, right-angle attachments and depth stops are all part of this extensive modular system

**Invar steel** has a particularly low expansion coefficient and thus makes the instrument totally insensitive to any kind of heat. Body heat from the user, increases in ambient temperature have no influence on the measuring results.

The graph on the right compares the Invar steel version to a standard type. Both gages were hand-held and thus influenced by body heat. The deviation when using Invar steel is negligible.

Change in length due to heat



## Technical Data

### Complete Instrument

**844 N** Carbide-tipped moving anvil;  
stationary anvil with steel ball

**844 NH** Moving anvil and stationary anvil are carbide-tipped

### Accuracy

**Accuracy of transmission**  $\leq 2 \mu\text{m}$

**Repeatability**  $\leq 0,5 \mu\text{m}$

#### 844 N

Measuring range mm	for meas. depth** (inch) to mm/inch	Order no.*
18 - 50	(.7 - 2")	200/8" 4474000
35 - 100	(1.4 - 4")	250/10" 4474001
100 - 250	(4 - 10")	350/14" 4474002
250 - 400	(10 - 16")	500/20" 4474003
400 - 800	(16 - 32")	500/20" 4474004
250 - 800	(10 - 32")	500/20" 4474005

#### 844 NH

Measuring range mm	for meas. depth** (inch) to mm/inch	Order no.*
18 - 50	(.7 - 2")	200/8" 4475000
35 - 100	(1.4 - 4")	250/10" 4475001
100 - 250	(4 - 10")	350/14" 4475002
250 - 400	(10 - 16")	500/20" 4475003
400 - 800	(16 - 32")	500/20" 4475004
250 - 800	(10 - 32")	500/20" 4475005

\* Includes holder, measuring head, stationary anvil, wooden case (excludes indicating instrument)

\*\* Excludes extension

## Indicating Instruments

All indicating instruments that has a 8 mm mounting shank may be used. Recommended are:

Dial Comparator	Readings mm / inch	Order no. mm / inch
Compramess 1004 / 1004 Z	5 $\mu\text{m}$ / .0001"	4333000/4333900
Millimess 1003 / 1003 Z	1 $\mu\text{m}$ / .00005"	4334000/4334900
Supramess 1002 / 1002 Z	0.5 $\mu\text{m}$ / .00002"	4335000/4335900
Extramess 2001	0.2 $\mu\text{m}$ / .00001"	4346100*
	0.5 $\mu\text{m}$ / .00002"	
	1 $\mu\text{m}$ / .00005"	
$\mu\text{Max}\mu\text{m}$	0.5 $\mu\text{m}$ / .00002"	EDI-20302**

Digital Indicators see Chapter 5

Electrical Indicating Instruments see Chapter 7

\* 230 V, for 115 V please refer to page 6-5

\*\* requires contact 4360107



2001



1003

## Accessories to adjust Dial Bore Gages

### 1. Ring Gage 355 E

Special wear-resistant gage steel. Hardened and lapped.  
With actual deviation engraved

Dimensions: DIN 2250, type C  
Manufacturing tolerance: DIN 2250  
Available diameters: 0,5 - 200 mm

355 E



### 2. Setting Device

Uses standard gage blocks for setting any bore diameter and any tolerance. Replaces ring gages and is universally applicable

#### Components

##### Measuring Jaw 844 em

Measuring range mm	Dimensions mm/inch	Order no.
18 - 800 (.7 - 32")	60 x 9.5 x 9 / 2.36 x .37 x .35"	4470095

##### Setting Bridge 844 Neb

Measuring range mm	Width mm/inch	Height mm/inch	Order no.
18 - 250 (.7 - 10")	70/2.75"	12/.47"	4474080
18 - 400 (.7 - 16")	165/6.49"	17/.67"	4474081
18 - 800 (.7 - 32")	320/12.59"	20/.78"	4474082

##### Gage Block Holder 420 h

Clamping range mm	(inch)	Order no.
0 - 70	(0 - 2.75")	4800120
0 - 120	(0 - 4.72")	4800121
100 - 220	(4 - 8.66")	4800122
100 - 420	(4 - 16.53")	4800123
400 - 820	(16 - 32")	4800124

##### Stand 844 ef

For mounting setting device up to 420 mm

Order no. 4470098



## Modular Unit System 844 N

In addition to complete Dial Bore Gages 844 N, modular units can also be compiled as required to suit a individual measuring task and or application.

### Measuring Head 844 Nk, steel

### Measuring Head 844 NHk, carbide

With built-in lever transmission system, carbide-tipped anvil and extra-wide centering bridge. With interchangeable stationary anvil. Threaded connection for Holders 844 Ng and 844 Ngk.

Measuring range mm	(inch)	Order no. 844 Nk	Order no. 844 NHk
18 - 50	(.7 - 2")	4474151	4474156
35 - 100	(1.37 - 4")	4474152	4474157
100 - 250	(4 - 10")	4474153	4474158
250 - 400	(10 - 16")	4474154	4474159
400 - 800	(16 - 32")	4474155	4474160

### Extension Set 844 Nes

For extending range of Measuring Head 844 Nk/NHk from 250-400 mm to 800 mm. Consists of additional centering bridge and two extensions.

Order no.: 4474010

### Holder 844 Ng

Shank and transfer rod made of heat-resistant Invar steel. With a locking clamp for indicator.

For meas. range mm/inch	L (mm/in)	d1 (mm/in)	d2 (mm/in)	Order no.
18 - 50 / .7 - 2"	(200/ 8")	(14/ .6")	(8/ .3")	4474040
35 - 100/ 1.37 - 4"	(250/ 10")	(18/ .7")	(12/ .5")	4474041
100 - 250 / 4 - 10"	(350/ 14")	(26/ 1.0")	(18/ .7")	4474042
250 - 800/ 10 - 32"	(500/ 20")	(30/ 1.2")	(24/ .9")	4474043

### Short Holder 844 Ngk

Shank and transfer rod made of heat-resistant Invar steel. With a locking clamp for indicator.

For meas. range mm/inch	L (mm/in)	d1 (mm/in)	d2 (mm/in)	Order no.
18 - 50 / .7 - 2"	(120/ 5")	(14/ .6")	(8/ .3")	4474050
35 - 100 / 1.37 - 4"	(120/ 5")	(18/ .7")	(12/ .5")	4474051
100 - 250 / 4 - 10"	(150/ 6")	(26/ 1.0")	(18/ .7")	4474052
250 - 800/ 10 - 32"	(250/ 10")	(30/ 1.2")	(24/ .9")	4474053

### Right Angle Attachment 844 Nw

For measuring difficult to reach bores, e.g. in tight spaces, inconveniently located or on machine tools. For screwing in between 844 Ng or 844 Ngk and 844 Nk/NHk.

For meas. ranges mm	(inch)	Length* L mm/in	Bore depth mm/in	Order no.
18 - 50	(.7 - 2")	66/2.6"	45/1.8"	4474070
35 - 100	(1.37 - 4")	80/3.1"	55/2.2"	4474071
100 - 250	(4 - 10")	105/4.1"	70/2.8"	4474072

\* With measuring heads 844 Nk/NHk

### Extension 844 Nv

For extra deep bores. For screwing in between 844 Ng and 844 Nk/NHk. Shank and transfer rod made of Invar steel.

For instruments mm	(inch)	Length L (mm/inch)	Order no.
18 - 50	(.7 - 2")	250 / 9.8"	4474066
35 - 100	(1.37 - 4")	250 / 9.8"	4474060
100 - 250	(4 - 10")	250 / 9.8"	4474061
		500 / 19.7"	4474062
400 - 800	(16 - 32")	250 / 9.8"	4474063
		500 / 19.7"	4474064

