

### Gauge Blocks - Reference for Precision



Parallel gauge blocks in compliance with **DIN EN ISO 3650** are supplied in the following calibration and tolerance grades:

- 1. Calibration grade -K-** for sets of extreme-precision master standards and inspection gauge sets determining the sizes of the gauge blocks with lower tolerance grades and of gauges, and for setting testing equipment.
- 2. Tolerance grade -0-** for sets of extreme-precision master standards or comparison standards for gauging the inspection gauge sets.
- 3. Tolerance grade -1-** for inspection gauge sets and production gauges, on which exceptionally high demands are made (inspection department)
- 4. Tolerance grade -2-** for production gauges.

The permissible divergences and tolerances are in compliance with **DIN EN ISO 3650**.

**Reference temperature, at which the gauge blocks' exact dimension is within the permissible limits, is 20°C/68°F.**  
Gauge blocks are supplied preferably with tolerance grade 0, 1 and 2.

Selection of the smallest graduation of a depends on the application. For example, if the set is intended for checking gauges, we recommend a set permitting graduations of one-thousandth of a millimeter.

**Please take advantage of our gauge block service. We can check your gauge block sets in a very short time. After checking you will receive a test certificate and a cost estimate for the gauge blocks to be replaced.**



#### 32001 - 32003

#### Metric Gauge Block Sets



##### Type

In storage box with gauge block inserts. **Special steel:** manufactured using special heat treatment. **Solid carbide:** Carbide stands for high hardness (1500 Vickers) and wear resistance, and therefore provides long service life and dimensional accuracy. More than 100 times more resistant to wear than steel gauges. The molecular structure guarantees best surface quality and extraordinary grip properties. **All sets are delivered with a calibration certificate, which shows traceability to the DKD norms and includes the statement about the measuring divergences. Each gauge block is marked with a unique ID.**

##### Application

For direct measurement and setting of precision indicators, gauges, measuring equipment and machine tools.

##### Note:

Gauge blocks made of **special steel** calibration grade -K-, **solid carbide** with other tolerance grades and set designations, **supplement sets** metric gauge blocks as well as **DKD-records** available on request.

32001

Tolerance grade 0

32002

Tolerance grade 1

32003

Tolerance grade 2

32001 104

##### Set designations:

Set	Indiv. dimensions		Graduation	
	mm	Qty.	by mm	
▶ 32-part.	1,005	1	-	
	1,01 - 1,09	9	0,01	
	1,1 - 1,9	9	0,1	
	1 - 9	9	1,0	
▶ 47-part.	10, 20, 30, 50	4	-	
	1,005	1	-	
	1,01 - 1,20	20	0,01	
	1,3 - 1,9	7	0,1	
▶ 87-part	1 - 9	9	1,0	
	10 - 100	10	10,0	
	1,001 - 1,009	9	0,001	
	1,01 - 1,49	49	0,01	
▶ 103-part.	0,5 - 9,5	19	0,5	
	10 - 100	10	10,0	
	1,005	1	-	
	1,01 - 1,49	49	0,01	
	0,5 - 24,5	49	0,5	
	25 - 100	4	25,0	



Set contents	Quality	Tolerance grade 0		Tolerance grade 1		Tolerance grade 2	
		32001	...	32002	...	32003	...
32-part	special steel	101		101		101	
47-part	special steel	103		103		103	
87-part	special steel	104		104		104	
103-part	special steel	105		105		105	
32-part	solid carbide	201		201		201	
47-part	solid carbide	202		202		202	
87-part	solid carbide	203		203		203	

## • Gauge blocks

32004 - 32006

### Metric Gauge Block Sets

#### Type

Carefully selected, high quality, alloyed special steel, hardened and hand lapped. The **tolerance grade** of the parallel gauge blocks is in compliance with DIN EN ISO 3650. In storage box with gauge block inserts. **Incl. of calibration certificate.**

32004 - 32006



32004

Tolerance grade 0

32005

Tolerance grade 1

32006

Tolerance grade 2

#### Set designations :

Set	Indiv. dimensions mm	Qty.	Graduation by mm
▶ 32-part.	1,005	1	–
	1,01 - 1,09	9	0,01
	1,1 - 1,9	9	0,1
	1 - 9	9	1,0
	10, 20, 30, 50	4	–
▶ 47-part.	1,005	1	–
	1,01 - 1,20	20	0,01
	1,3 - 1,9	7	0,1
	1 - 9	9	1,0
	10 - 100	10	10,0
▶ 87-part.	1,001 - 1,009	9	0,001
	1,01 - 1,49	49	0,01
	0,5 - 9,5	19	0,5
	10 - 100	10	10,0
▶ 103-part.	1,005	1	–
	1,01 - 1,49	49	0,01
	0,5 - 24,5	49	0,5
	25 - 100	4	25,0

	Tolerance grade 0		Tolerance grade 1		Tolerance grade 2	
Set contents	32004	...	32005	...	32006	...
32-part	101		101		101	
47-part	102		102		102	
87-part	103		103		103	
103-part	104		104		104	

32007 - 32008

### Ceramic Metric Gauge Block Sets

#### Type

Extremely high wear resistance, outstanding grip and stability properties, corrosion resistant, guaranteed minimum hardness 1400 HV, heat transmission coefficient similar to steel, **with calibration certificate, in wooden box.**

32007 - 32008



#### Note:

Sets with other tolerance grades available on request.

32007

Tolerance grade 0

#### Application

For calibrating metric gauge blocks of a lower tolerance grade and for setting very accurate measuring instruments.

32008

Tolerance grade 1

#### Application

For inspection gauge sets and production gauges, with very high demands (inspection department).

#### Set designations :

Set	Indiv. dimensions mm	Qty.	Graduation by mm
▶ 32-part.	1,005	1	–
	1,01 - 1,09	9	0,01
	1,1 - 1,9	9	0,1
	1 - 9	9	1,0
	10, 20, 30, 60	4	–
▶ 47-part.	1,005	1	–
	1,01 - 1,19	19	0,01
	1,2 - 1,9	8	0,1
	1 - 9	9	1,0
	10 - 100	10	10,0
▶ 87-part.	1,001 - 1,009	9	0,001
	1,01 - 1,49	49	0,01
	0,5 - 9,5	19	0,5
	10 - 100	10	10,0
▶ 103-part.	1,005	1	–
	1,01 - 1,49	49	0,01
	0,5 - 24,5	49	0,5
	25 - 100	4	25,0

	Tolerance grade 0		Tolerance grade 1	
Set contents	32007	...	32008	...
32-part	101		101	
47-part	102		102	
87-part	105		105	
103-part	103		104	

32019

### Carbide Wear Block Sets

#### Type

In pairs, sizes 1 and 2 mm, in wooden case. **Tolerance grade 0 with test certificate!**

#### Note:

Carbide wear blocks prolong the service life of the gauge blocks when used at the ends of gauge block. Wear due to contact with the workpiece or with comparing instruments is then confined to the measuring faces of the wear blocks.



32019 231

Tolerance grade	number of gauges	Dimensions of the blocks mm	32019	...
0	4	2 x 1 / 2 x 2	220	
1	4	2 x 1 / 2 x 2	231	

### 32027 - 32030

### Individual Metric Gauge Blocks

#### Type

Diameter dimensions:

Rated dimension range below 0,3 mm = 20 x 9 mm, up to 10,1 mm = 30 x 9 mm, above 10,1 mm = 35 x 9 mm.

#### Application

As supplements and replacements of damaged or worn gauge blocks.

#### Note:

Gauge block lengths from 125 mm in storage box.

Individual metric gauge blocks calibration/tolerance grade DIN EN ISO 3650 K and 0 made of **steel**, K, 0

and 2 made of **solid carbide**, DKD certificates available on request.

#### 32027

Special steel, **tolerance grade 1**.

#### 32028

Special steel, **tolerance grade 2**.

#### 32030

Solid carbide, **tolerance grade 1**.

32027 - 32030



Length of block mm	Tolerance grade 1		Tolerance grade 2		Tolerance grade 1/solid carbide	
	32027	...	32028	...	32030	...
0,5	200		200		601	
1,0	201		201		602	
1,001	203		203		603	
1,002	204		204		604	
1,003	205		205		605	
1,004	206		206		606	
1,005	207		207		607	
1,006	208		208		608	
1,007	209		209		609	
1,008	210		210		610	
1,009	211		211		611	
1,01	212		212		612	
1,02	213		213		613	
1,03	214		214		614	
1,04	215		215		615	
1,05	216		216		616	
1,06	217		217		617	
1,07	218		218		618	
1,08	219		219		619	
1,09	220		220		620	
1,1	221		221		621	
1,11	222		222			
1,12	223		223			
1,13	224		224			
1,14	225		225			
1,15	226		226			
1,16	227		227			
1,17	228		228			
1,18	229		229			
1,19	230		230			
1,2	231		231		631	
1,21	232		232			
1,22	233		233			
1,23	234		234			
1,24	235		235			
1,25	236		236			
1,26	237		237			
1,27	238		238			
1,28	239		239			
1,29	240		240			
1,3	241		241		641	
1,31	242		242			
1,32	243		243			
1,33	244		244			
1,34	245		245			
1,35	246		246			
1,36	247		247			
1,37	248		248			
1,38	249		249			
1,39	250		250			
1,4	251		251		651	
1,41	252		252			
1,42	253		253			
1,43	254		254			
1,44	255		255			
1,45	256		256			
1,46	257		257			
1,47	258		258			
1,48	259		259			
1,49	260		260			

Length of block mm	Tolerance grade 1		Tolerance grade 2		Tolerance grade 1/solid carbide	
	32027	...	32028	...	32030	...
1,5	261		261		661	
1,6	262		262		662	
1,7	263		263		663	
1,8	264		264		664	
1,9	265		265		665	
2	266		266		666	
2,5	267		267		667	
3	268		268		668	
3,5	269		269		669	
4	270		270		670	
4,5	271		271		671	
5	272		272		672	
5,5	273		273		673	
6	274		274		674	
6,5	275		275		675	
7	276		276		676	
7,5	277		277		677	
8	278		278		678	
8,5	279		279		679	
9	280		280		680	
9,5	281		281		681	
10	282		282		682	
11	284		284			
12	286		286			
13	288		288			
14	290		290			
15	292		292			
16	294		294			
17	296		296			
18	298		298			
19	300		300			
20	302		302		702	
21	304		304			
22	306		306			
23	308		308			
24	310		310			
25	312		312		712	
30	313		313		713	
40	314		314		714	
50	315		315		715	
60	316		316		716	
70	317		317		717	
75	318		318		718	
80	319		319		719	
90	320		320		720	
100	321		321		721	
125	322		322			
150	323		323			
175	324		324			
200	325		325			
250	326		326			
300	327		327			
400	329		329			
500	331		331			
600	332		332			
700	333		333			
800	334		334			
900	335		335			
1000	336		336			



- Square gauges • Gauge balls • Gauge blocks • Measuring force testing device
- Inspection gauges • Gauge blocks accessories

### 32035 Precision Square Gauges Sets

**Type**  
**12-part**, consists of gauges with angles: 0,25° (15'), 0,5° (30'), 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°. Supplied in case.

**Application**  
 For quick setting of an angle.

**Quality**  
 Steel, hardened and ground.

Set contents	32035	...
12-part	201	



### 32036 Precision Gauge Balls Sets

**Type**  
 2 each per nominal size, in case.

**Quality**  
 Hardened special steel.



Set contents	measuring range	increments	error tolerance	32036	...
	mm	mm	µm		
50-part	1 - 25	1	3	101	



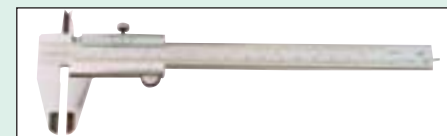
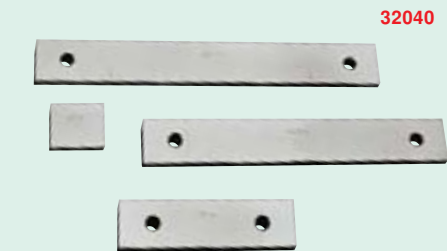
### 32040 Metric Gauge Block Sets (for Slide Callipers)

**Type**  
**Calibration set for slide callipers. Tolerance grade 1.** Selected, highly wear resistant **special steel**, which ensures maximum wear resistance and absolute long life dimension accuracy by special hardness process. High hardness of the measuring surface of 820 HV 1. Coefficient of expansion: 11,5 x 10<sup>-6</sup> K<sup>-1</sup>. **Slide calliper and calibration certificate not included.** Costs for calibration see cat.-no. 30105 (individual gauge blocks).

**Application**  
 For calibrating slide callipers in compliance with VDI/VDE/DGQ 2618, Page 8.

**Note:**  
 Other sizes for slide callipers and other graduations available on request. Dimensions included into the sets are available individually as well. Inspection gauges see cat.-no. 32060 201.

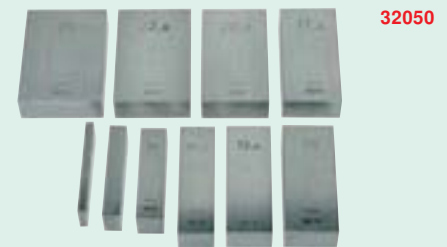
Set contents	Nominal sizes	for measuring range	32040	...
	mm	mm		
3-part	30 / 41,3 / 131,4	0 - 200	200	
5-part	30 / 41,3 / 131,4 / 243,5 / 281,2	0 - 300	199	
8-part.	30 / 41,3 / 131,4 / 243,5 / 281,2 / 481,1 / 550 / 700	0 - 800	203	



### 32050 Metric Gauge Block Sets (for Micrometer Gauges)

**Type**  
**Calibration set for micrometer gauges. Tolerance grade 1.** Selected, highly wear resistant **special steel**, which ensures maximum wear resistance and absolute long life dimension accuracy by special hardness process. High hardness of the measuring surface of 820 HV 1. Coefficient of expansion: 11,5 x 10<sup>-6</sup> K<sup>-1</sup>. **Micrometer gauge and calibration certificate not included.** Costs for calibration see cat.-no. 30105 (individual gauge blocks).

**Application**  
 For calibrating micrometer gauges in compliance with VDI/VDE/DGQ 2618, page 5.



Set contents	Nominal sizes	for measuring range	32050	...
	mm	mm		
5-part	5,1 / 10,3 / 15 / 20,2 / 25	0 - 25	200	
10-part	2,5 / 5,1 / 7,7 / 10,3 / 12,9 / 15 / 17,6 / 20,2 / 22,8 / 25	0 - 25	201	
11-part	25 / 27,5 / 30,1 / 32,7 / 35,3 / 37,9 / 40 / 42,6 / 45,2 / 47,8 / 50	25 - 50	202	
11-part	50 / 52,5 / 55,1 / 57,7 / 60,3 / 62,9 / 65 / 67,6 / 70,2 / 72,8 / 75	50 - 75	203	
11-part	75 / 77,5 / 80,1 / 82,7 / 85,3 / 87,9 / 90 / 92,6 / 95,2 / 97,8 / 100	75 - 100	204	
8-part.	5,1 / 10,3 / 15 / 20,2 / 25 / 50 / 75 / 100	0 - 100	205	

32055

### Measuring Force Testing Device for Micrometer Gauges

**Type**

**Set consists of:**

Load cell manometer for micrometer gauges starting at measuring range 0 - 25 mm, 3 screw-on extension pieces (25 / 50 / 75 mm) for micrometer gauges up to measuring range 100 mm. Supplied in case.

**Application**

For easily testing the measuring force between the contact surfaces (up to Ø 8 mm) of micrometer gauges. In compliance with DIN 863 T1, the measuring force needs to be between 5 and 10 N.

**Note:**

Calibration available on request.

**NEW**

32055



32055 ...

101

32060

### Test Gauges

DBGM

**Type**

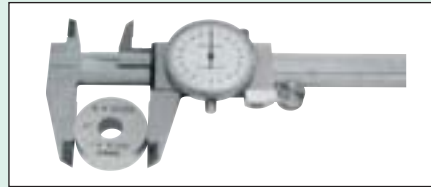
Hardened, ground and lapped.

Manufacturing accuracy: outside and inside Ø +/- 0,001 mm. Calibration certificate **not included**.

**Application**

For checking display-type slide callipers (digital or dial display). The dimensional accuracy of the slide calliper can be tested with the knife-edge or with the main jaws. If discrepancies are detected, the zero point can be redetermined by correcting the display.

32060



External Ø  
mm

Internal Ø  
mm

Height  
mm

32060 ...

30

10

10

201

32065

### Gauge Block Maintenance Kits

**Type**

**Contents:**

1 linen cloth, 1 leather cloth, 1 can corrosion-protection oil (50 ccm), 1 whetstone (for removing small burrs on the measuring surfaces along the edges of the gauge blocks, without any changes of the dimension), 1 brush, 1 grease brush, 1 instruction manual for correct use of the maintenance kit.

32065



32065 ...

201

32068

### Gauge Block Accessory Sets

**Type**

**Set consists of:**

3 x adjustable gauge block holders size 0-50 / 0-100 / 0-200 mm,  
1 x gauge block holder stand,  
1 x knife-edged straight edge,  
1 pair of measuring jaws, planar 100 mm,  
3 pairs of measuring jaws with cylindrical end, 2 / 5 / 10 mm,  
1 pair of measuring jaws, 60 mm,  
1 x laying-out point,  
1 x centring point.  
In solid wooden box.

**Application**

High-precision control devices and gauges can be assembled using the components of this gauge block accessory set. The gauge blocks themselves are treated gently and can keep their precision dimensions.

32068



Set contents

32068 ...

17-part

101

## • Flatness testers

32097

### Flatness Testers

#### Type

Made of special glass. Max. deviation in flatness 0,125 µm.

#### Application

For inspecting the flatness of gauge blocks, measuring pieces, gauges, micrometer gauges and all lapped and polished workpiece surfaces. Interference bands show the deviations on the workpiece. White or monochromatic light is required.

32097 101-102

#### Type

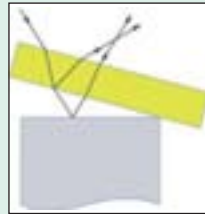
Supplied in wooden case..

32097 202

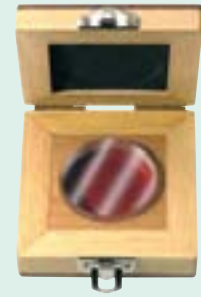


#### Type

15 mm thick. Swiss made. In wooden case incl. of declaration of conformity.



32097 101-102



32097 202



Diameter mm	32097 ...
50	101 <b>NEW</b>
75	102 <b>NEW</b>
50	202



### Light Box with monochromatic Light

#### Application

Used in conjunction with flatness testers or plane-parallel testing planes for light-interferential measuring of flatness and parallelism of contact surfaces.

The light source is monochromatic. Therefore, the lines of the light interference are displayed with high contrast and their light-dark aspects can be interpreted unambiguously.

The light box can be used as background illumination for light gap measurements, e.g. with knife-edged straight edges.

Available on request. Please contact us!



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### Flat Plug Gauges DIN 2246 and 2247 (Boring Hole Gauges)

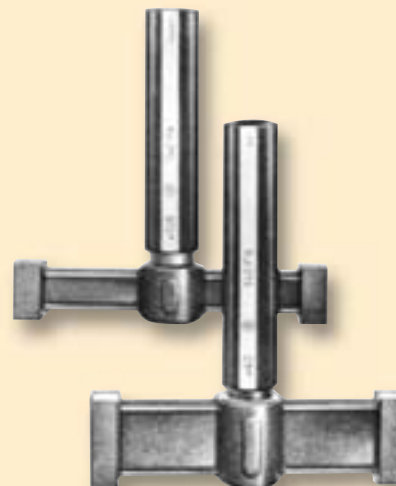
#### Type

Drop-forged, cylindrical measuring faces hardened. Above 100 mm separately as flat plug gauges.

#### Application

For testing hole sizes and determining geometrical faults, particularly out-of-roundness.

Please send us your enquiry!



i

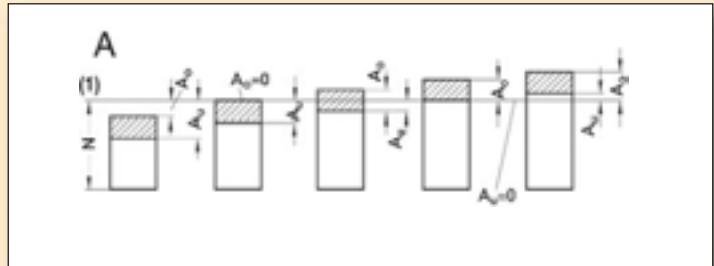


# The ISO System of Fits and Gauges

### The ISO System of Fits

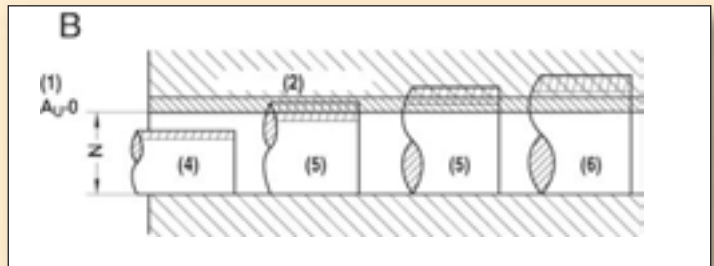
The system of fits forms the base for exchangeable manufacture in Industry. In Germany, the DIN system of fits was introduced in 1923, the ISA system in 1938, and the ISO system in 1962, which has been used ever since.

All the terminology which is mentioned in the DIN 7162, such as: nominal size, actual dimension, manufacturing tolerance, nominal deviation, can be found here. The adjacent **figure A** shows how these basic terms relate to the **reference line (1)**. The position of the tolerance zones relative to the reference line is given with plus or minus.

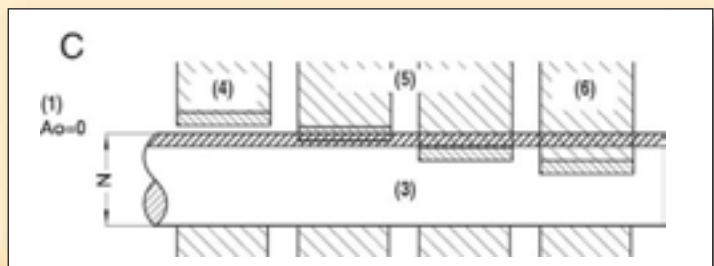


Generally speaking, a distinction is made between two fitting systems:

**Basic hole (2)** and **basic shaft (3)**. Various fits or seats are obtained by different relative positions of the tolerance zones. In the **basic hole system (2)** all holes are made with the nominal size as the minimum, regardless of the required seat, so that the necessary allowances must be taken into account at the shafts in all cases (**figure B**).



In the **basic shaft system (3)**, the various allowances are provided in the holes instead, with the shaft being produced with the nominal size as the maximum (**figure C**).



The nature of a fit is defined by specifying how large the clearance or oversize is or should be between shaft and hole (**figures D and E**). In the system of fits any combination of shafts and holes is possible.

To achieve an economical uniformity when selecting the fits, groups of fits are recommended in DIN 7157 that can be used for the most frequently recurring cases. The restriction to a limited number of fits enables the stock of gauge and tools in a plant to be kept within reasonable limits.

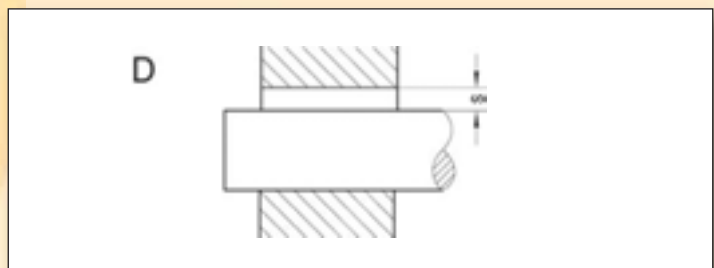
- (4) = Clearance fit,
- (5) = Transition fit,
- (6) = Interference fit.

### The ISO Gauge System

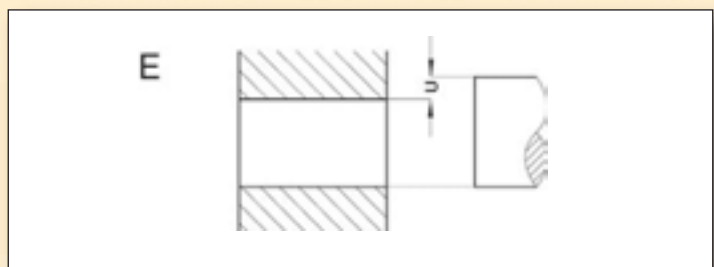
In addition to the ISO system of fits, there is the ISO system of gauges, which is meant to ensure that tolerances are complied with. The workpieces can be tested with indicating instruments or fixed gauges.

A distinction is made between:

- Working gauges**, designed as limit gauges,
- and **master gauges**, monitoring the dimensional accuracy of the working gauges.



Manufacturing tolerances are specified for the working gauges and master gauges, and wear limits in addition for the working gauges. The fixed gauges should if possible conform to Taylor's principle, which states that the "go" side of a limit gauge should test the cumulative effect of the geometric form being checked as a whole, while the "no-go" side should test the various elements of this form. Applied to the cylindrical form, this means that the "go" gauge should test the entire cylinder and the "no-go" gauge the individual diameters.



• Limit plug gauges • Taper Gauges • Snap Gauges

**32100 Cylinder Limit Plug Gauges DIN 2245 (Boring Hole Gauges)**

**Type**  
 Hardened, stress-relieved, ground and lapped. Go and no-go gauges fully cylindrical.  
**Tolerance zone: H7.**  
 Up to nominal Ø 70 mm with only one handle, starting at nominal Ø 75 mm as 2 part.  
**Application**  
 For testing and on boring holes.

**Note:**  
 Other **dimension and tolerance zones** in compliance with DIN 7164, **qualities** (hard-chrome plated or TIN-coated) and **types** (limit plug gauges with extended body or handle, with air groove, with pilot pin or as a inspection gauge) are available on request.



**Quality**  
 Gauge-grade steel, hardened.

Nominal Ø mm	32100	...	Nominal Ø mm	32100	...	Nominal Ø mm	32100	...	Nominal Ø mm	32100	...
1	106		12	125		27	140		48	156	
1,5	108		13	126		28	141		50	157	
2	110		14	127		30	142		52	158	
2,5	112		15	128		32	143		55	159	
3	114		16	129		33	144		60	161	
3,5	115		17	130		34	145		62	162	
4	116		18	131		35	146		65	163	
4,5	117		19	132		36	147		68	164	
5	118		20	133		38	149		70	165	
6	119		21	134		40	150		75	167	
7	120		22	135		42	151		80	169	
8	121		23	136		44	152		85	171	
9	122		24	137		45	153		90	173	
10	123		25	138		46	154		100	177	
11	124		26	139		47	155				

**32150 - 32155 Taper Gauges (Morse Taper) DIN 229**

**Type**  
 Extreme precision, without tang.  
**Application**  
 For checking internal and external tapers.



MT	Taper plug gauges		Taper ring gauges	
	32150	...	32155	...
1	102		102	
2	103		103	
3	104		104	
4	105		105	



**32160 - 32165 Taper Gauges (Steep Taper)**

**Type**  
 Ultimate precision.  
**Application**  
 For checking internal and external tapers.



**Note:**  
 Flat taper gauges with steep taper are available on request.

ST	Taper plug gauges DIN2079		Taper ring gauges DIN 2080	
	32160	...	32165	...
30	101		101	
40	102		102	
50	103		103	





### 32201

### Limit Snap Gauges DIN 2230 (Shaft Gauges)

**Type**

Double-sided, measuring faces hardened, stress-relieved, ground and lapped. **Tolerance zone: h 6.**

**Application**

For measuring shafts for different fits.

**Quality**

Up to 3mm assembled from gauge-grade steel, above 3mm drop-forged.

**Note:**

Other dimensions and tolerance zones in compliance with DIN 7163. Forged one-sided limit snap gauges up to 214 mm, above 214 mm made of sheet steel, and gauges with hard chrome-plated, carbide or measuring faces are available on request.



32201

Nominal Ø mm	32201	...	Nominal Ø mm	32201	...	Nominal Ø mm	32201	...	Nominal Ø mm	32201	...
3	111		16	126		32	140		70	162	
4	113		18	128		35	143		75	164	
5	115		19	129		40	147		80	166	
6	116		20	130		45	150		85	168	
7	117		22	132		46	151		90	170	
8	118		24	134		50	154		95	172	
10	120		25	135		55	156		100	174	
12	122		26	136		60	158				
14	124		28	138		65	160				
15	125		30	139		68	161				

### 32320

### Limit Snap Gauges

**Type**

Adjustable on two sides, 4 adjustable measuring bolts, large measuring range.

**Quality**

Measuring bolts made of gauge-grade steel, hardened, ground and finely lapped.

**Note:**

Easy setting by use of gauge blocks cat.-no. 32027 - 32030.



32320

Measuring range mm	32320	...
0 - 13	201	
13 - 25	202	
25 - 38	203	
38 - 51	204	
51 - 64	205	
64 - 76	206	
76 - 95	207	
95 - 114	208	
114 - 133	209	

### 32340

### Precision Dial Indicator Snap Gauges



**Type**

**Contact surfaces carbide-equipped.** Flatness and parallelism deviation in compliance with DIN 863. Scale drum and scale sleeve dazzle-free with matt-chrome finish. Spindle locking. Spring bearing-mounted anvil. Repeatable measuring force. Lifting of the anvil by means of lever. Clamping shank Ø 8 mm for precision dial indicators, dial indicators and electronic measuring probes. In case, **precision dial indicator not included.**

**Application**

Especially suitable for efficient comparison measurements of series production parts.

**Note:**

Easy setting by use of gauge blocks cat.-no. 32027 - 32030.

Precision dial indicator see cat.-no. 33071 - 33074



32340

Measuring range mm	Contact surface Ø mm	measuring distance movable anvil mm	32340	...
0 - 25	8	3	201	
25 - 50	8	3	202	
50 - 100	8	3	203	



## ▶ Thread Limit Gauges

### Application

The thread limit gauges in compliance with DIN 2279 allow for flawless testing of exchangeable threads. They work similar to cylindrical limit gauges and inspect for:

In compliance with Taylor's principle, the test should cover the overall effect of the thread, whereas the test should check that the various thread elements are within the limits.

The thread elements are:

1. the major diameter (a),
2. the pitch diameter (b),
3. the minor diameter (c),
4. the thread profile from the thread angle and extent of rounding off,
5. the pitch of the screw, stating handedness of thread (right or left)

(d) =  $\varnothing$  of nut thread,

(e) =  $\varnothing$  of bolt thread,

(f) = nut,

(g) = bolt.

### Testing Internal Threads

To test internal threads, thread limit plug gauges are used that have ends which compare the overall effect of the thread with the dimensions of the "go" limits. The manufacturing tolerance of the thread "go" plug gauge has a sufficient allowance for permissible wear.

The 5 thread elements are gauged as follows for:

- 1) A check is not required for the major diameter, since it can not be larger than allowed by the theoretical edge of the thread profile, and natural wear on the thread cutting tools always ensure that the profile is rounded to a certain extent at this point.
- 2) The pitch diameter is checked for with the end of the limit plug gauge.
- 3) The minor diameter is checked with a limit plug gauge.
- 4) and 5) The thread profile, i.e. thread angle and pitch are checked in test 2).

### Testing Male Threads

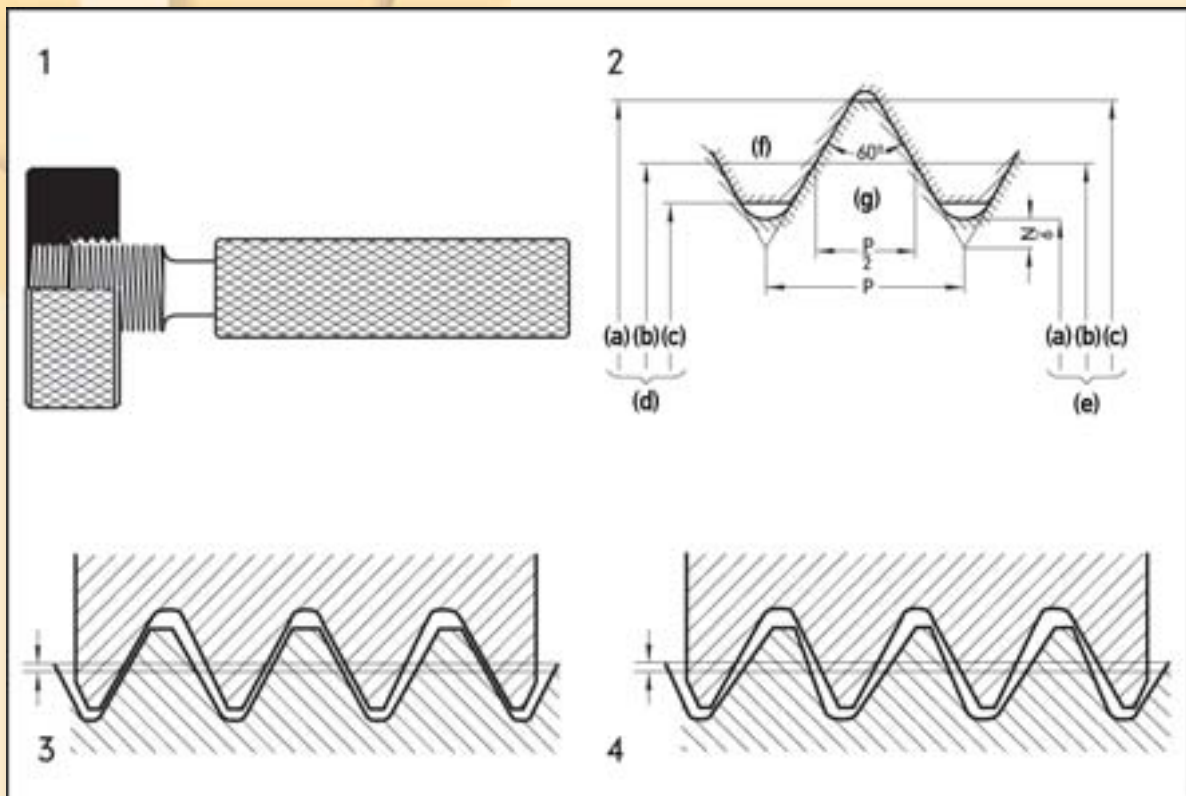
The overall effect of the male thread is checked with a thread ring gauge, or with a thread limit roller snap gauge, which has the following advantages:

- 1) Avoidance of lost time due to screwing the ring gauge on and off.
- 2) Little wear due to rolling friction, so longer service life.
- 3) The same gauge can be used for both right and left handed threads.
- 4) All tolerance classes can be set on the roller snap gauge using the eccentrically aligned rollers on the adjusting end.
- 5) Workpieces clamped between centres can be checked inside the machine without having to unload them.
- 6) Out-of-roundness in the thread can be detected by checking it in several planes.

The pitch diameter and the minor diameter, and also the pitch and thread angle, are tested for an overall effect using the rollers of the thread limit roller snap gauge. The pitch and the thread angle are also checked by observing the set between the gauge rollers and the test piece. The pitch can be observed simply by applying a gauge roller externally to the threads.

The 5 thread elements are gauged as follows for:

- 1) The major diameter is checked separately with a limit snap gauge.
- 2) The pitch diameter is checked for by means of the rollers of the thread limit roller snap gauge. The gauge rollers have truncated thread flanks and only one or two turns. They must not go over the test piece due to the gauge's own weight.
- 3) The minor diameter cannot be smaller than that permitted by the theoretical edge of the thread section.
- 4) and 5) The profile, i.e. thread angle and pitch, is checked in test 2) during the test of the pitch diameter.



32400

### Digital Thread Limit Plug Gauges MultiCheck



**NEW**

32400



**Type**

**Up to 70% shorter testing times.** Thread depths readable up to 4 x D. Thread inserts replaceable (standard inserts in compliance with DIN 2282 available on request). Safe and quick reading thanks to LC-display with a resolution of 0,01 mm. Error tolerance (depth measurement) 0,05 mm. Combined with interface RS 232 Opto, protection rating IP 65. Incl. of Battery (1 x Li-Mn 3 V, CR 2032).

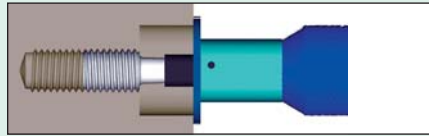
**Application**

For metric ISO standard threads in compliance with DIN 13, tolerance grade 6H. For inspecting threads and, at the same time, measuring the usable thread depth.

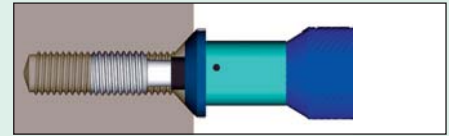
**Note:**

MultiCheck with other thread types (MF, G, UNC, UNF), tolerance, nominal dimensions, or with coated thread inserts available on request. Connecting cable see cat.-no. 35200. Spare batteries see cat.-no. 39900 102.

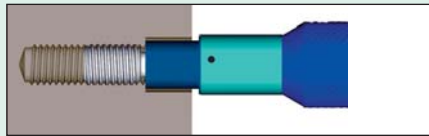
Additional adapters for inspecting with MultiCheck available on request.



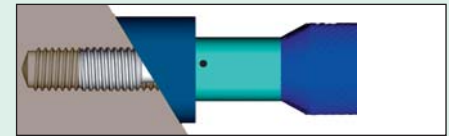
Diameter increase for larger contact surfaces.



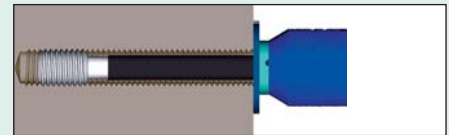
Tapered contact surface for special boreholes.



Diameter reduction for recessed boreholes.



Slanted contact surface sleeve for slanted boreholes.



Threaded mandrel extensions for very deep boreholes.

Nominal Ø mm	measuring depth max. mm	32400 ...
M 3 x 0,50	12	101
M 4 x 0,70	16	102
M 5 x 0,80	20	103
M 6 x 1,00	24	104
M 8 x 1,25	32	105
M 10 x 1,50	40	106
M 12 x 1,75	48	107

### ► Other MultiCheck versions

With scale or vernier available on request.

Please contact us!



32410 - 32411

### Sets of Thread Gauges HSS-E/TiN-coated

**ATORN®**

**Type**

7-part, in wooden case.

**Advantages of the TiN-coating:**

- improved corrosion resistance
- surface hardness approx. 2.500 Vickers
- approx. 10-x better wear resistance when compared to standard gauge-grade steel
- proven for gauging aggressive materials such as non-ferrous metals, diecast alloys, and VA-steel.
- extended calibration periods
- cost reduction

**Application**

For ISO metric standard threads in compliance with DIN 13.

**Quality**

HSS-E/TiN-coated.

**Note:**

TiN-coated gauges, single or as set, in different Dimensions, other thread types, available on request.

32410 101

Set of thread limit plug gauges

32411 101

Set of thread ring gauges



32410 101

**NEW**



32411 101



	Limit plug gauges	ring gauges
Set contents	32410 ...	32411 ...
Size M		
7-part	101	101

## • Plug Gauges • Ring Gauges

32413

### Thread Limit Gauges, ISO Metric Standard Threads DIN 2280

#### Type

Hardened and precision ground, right-hand threads. In compliance with **DIN 2280** for go and no go, tolerance **6 H** (M 1 - M 1,4 tolerance 5 H). End with full thread profile (must screw into test piece without use of force). End with truncated thread flanks and only a few turns (must not screw into the test piece).

#### Application

For **ISO metric standard threads in compliance with DIN 13**.

#### Quality

**Best gauge-grade steel.**

32413



Nominal Ø mm	32413	...
M 1	201	
M 1,2	202	
M 1,4	203	
M 1,6	204	
M 2	206	
M 2,5	208	
M 3	209	

Nominal Ø mm	32413	...
M 3,5	210	
M 4	211	
M 5	213	
M 6	214	
M 7	215	
M 8	216	
M 9	217	

Nominal Ø mm	32413	...
M 10	218	
M 12	220	
M 14	221	
M 16	222	
M 18	223	
M 20	224	
M 22	225	

Nominal Ø mm	32413	...
M 24	226	
M 27	227	
M 30	228	
M 33	229	
M 36	230	

32426 - 32428

### Thread and "no-go" ring Gauges ISO Standard Threads DIN 2285

#### Type

Hardened and precision ground, right-hand threads.

#### Application

For **ISO Metric Standard Threads in compliance with DIN 13**.

#### Quality

**Best gauge-grade steel.**

#### Note:

Other nominal diameters, pitches, tolerance classes, left hand threads or thread types, and thread limit setting gauges for ISO metric standard threads, ISO metric fine threads and thread limit roller snap gauges for ISO metric fine threads available on request.

32426

#### Thread Ring Gauges

#### Type

In compliance with **DIN 2285, tolerance 6 g** (M 1-M 1,4 tolerance

6 h). Must screw into test piece without use of force. A mating thread plug gauge is used for checking the ring gauge - available on request.

#### Application

For determining the overall effect of the thread, and particularly for testing thin-walled workpieces.

32428

#### Thread Ring Gauges

#### Type

In compliance with **DIN 2285, tolerance 6 g** (M 1-M 1,4 tolerance 6 h), with truncated thread flanks (must not screw onto workpiece).



32426 - 32428

Nominal Ø mm	ring gauges		no-go ring gauges	
	32426	...	32428	...
M 1	201		201	
M 1,2	202		202	
M 1,4	203		203	
M 1,6	204		204	
M 2	206		206	
M 2,5	208		208	
M 3	209		209	
M 3,5	210		210	
M 4	211		211	
M 4,5	212		212	
M 5	213		213	
M 6	214		214	
M 7	215		215	

Nominal Ø mm	ring gauges		no-go ring gauges	
	32426	...	32428	...
M 8	216		216	
M 9	217		217	
M 10	218		218	
M 12	220		220	
M 14	221		221	
M 16	222		222	
M 18	223		223	
M 20	224		224	
M 22	225		225	
M 24	226		226	
M 27	227		227	
M 30	228		228	

32429

### Thread Limit Plug Gauges, ISO Fine Threads DIN 2280

#### Type

Hardened and precision ground, right-hand threads. In compliance with **DIN 2280** for and tolerance **6 H**. End with full thread profile (must screw into test piece without use of force). No-go end with truncated thread flanks and only a few turns (must not screw into test piece).

#### Application

For **ISO metric fine threads in compliance with DIN 13**.

#### Quality

**Best gauge-grade steel.**

32429



Nominal Ø mm	32429	...
M 5 x 0,50	101	
M 6 x 0,50	102	
M 6 x 0,75	103	
M 8 x 0,50	104	
M 8 x 0,75	105	
M 8 x 1,00	106	
M 10 x 0,50	107	
M 10 x 0,75	108	

Nominal Ø mm	32429	...
M 10 x 1,00	109	
M 12 x 0,50	110	
M 12 x 1,00	111	
M 12 x 1,50	112	
M 14 x 1,00	113	
M 14 x 1,50	114	
M 16 x 1,00	116	
M 16 x 1,50	117	

Nominal Ø mm	32429	...
M 18 x 1,00	118	
M 18 x 1,50	119	
M 20 x 1,00	121	
M 20 x 1,50	122	
M 22 x 1,00	124	
M 22 x 1,50	125	
M 24 x 1,00	127	
M 24 x 1,50	128	

Nominal Ø mm	32429	...
M 24 x 2,00	129	
M 25 x 1,50	130	
M 26 x 1,50	131	
M 27 x 1,50	132	
M 28 x 1,50	133	
M 30 x 1,50	134	
M 30 x 2,00	135	

### 32430

### Thread Plug Gauges, ISO Metric Fine Threads DIN 2281

#### Type

Hardened and precision ground, right-hand threads. In compliance with **DIN 2281, tolerance 6H**. Full thread profile (must screw into test piece without uses of force). A mating thread plug gauge is used for checking the ring gauge - available on request.

#### Application

For **ISO metric fine threads in compliance with DIN 13**.

#### Quality

**Best gauge-grade steel.**



Nominal Ø mm	32430	...
M 12 x 1,50	112	
M 14 x 1,00	113	
M 14 x 1,50	114	
M 16 x 1,00	116	
M 16 x 1,50	117	
M 18 x 1,00	118	
M 18 x 1,50	119	
M 20 x 1,00	121	
M 20 x 1,50	122	
M 22 x 1,00	124	
M 22 x 1,50	125	
M 24 x 1,00	127	
M 24 x 1,50	128	
M 24 x 2,00	129	
M 25 x 1,50	130	

Nominal Ø mm	32430	...
M 26 x 1,50	131	
M 27 x 1,50	132	
M 28 x 1,50	133	
M 30 x 1,50	134	
M 30 x 2,00	135	
M 32 x 1,50	136	
M 33 x 1,50	138	
M 33 x 2,00	139	
M 35 x 1,50	140	
M 36 x 1,00	141	
M 36 x 1,50	142	
M 36 x 2,00	143	
M 39 x 1,50	144	
M 40 x 1,50	146	
M 42 x 1,50	149	

Nominal Ø mm	32430	...
M 42 x 2,00	150	
M 42 x 3,00	151	
M 45 x 1,50	152	
M 45 x 2,00	153	
M 48 x 1,50	154	
M 48 x 2,00	155	
M 50 x 1,50	157	
M 50 x 2,00	158	
M 52 x 1,50	159	
M 52 x 2,00	160	
M 55 x 2,00	162	
M 56 x 1,50	163	
M 56 x 2,00	164	
M 56 x 4,00	165	
M 58 x 2,00	167	

Nominal Ø mm	32430	...
M 60 x 1,50	168	
M 60 x 2,00	169	
M 64 x 1,50	171	
M 64 x 2,00	172	
M 65 x 1,50	173	
M 65 x 2,00	174	
M 68 x 2,00	176	
M 70 x 1,50	177	
M 70 x 2,00	178	
M 76 x 2,00	182	
M 80 x 1,50	183	
M 80 x 2,00	184	
M 85 x 2,00	186	
M 90 x 2,00	189	
M 90 x 3,00	190	

### 32433 - 32434

### Thread and "no-go" Ring Gauges, ISO Metric Fine Threads DIN 2285

#### Type

Hardened and precision ground, right-hand threads.

#### Application

For **ISO metric fine threads in compliance with DIN 13**.

#### Quality

**Best gauge-grade steel.**

#### 32434

#### Thread ring gauges

#### Type

In compliance with **DIN 2285, tolerance 6 g**, with truncated thread flanks (must not screw onto workpiece).

#### 32433 - 32434



#### 32433

#### Thread Ring Gauges

#### Type

In compliance with **DIN 2285, tolerance 6 g** (must screw onto the test piece without force). A mating thread plug gauge is used for checking the ring gauge - available on request.

#### Application

For determining the overall effect of the thread, and particularly for testing thin-walled workpieces.

Nominal Ø mm	ring gauges		"no-go" ring gauges	
	32433	...	32434	...
M 5 x 0,50	101		101	
M 6 x 0,50	102		102	
M 6 x 0,75	103		103	
M 8 x 0,50	104		104	
M 8 x 0,75	105		105	
M 8 x 1,00	106		106	
M 10 x 0,50	107		107	
M 10 x 0,75	108		108	
M 10 x 1,00	109		109	
M 12 x 0,50	110		110	
M 12 x 1,00	111		111	
M 12 x 1,50	112		112	
M 14 x 1,00	113		113	
M 14 x 1,50	114		114	
M 16 x 1,00	116		116	
M 16 x 1,50	117		117	
M 18 x 1,00	118		118	
M 18 x 1,50	119		119	
M 20 x 1,00	121		121	
M 20 x 1,50	122		122	
M 22 x 1,00	124		124	
M 22 x 1,50	125		125	
M 24 x 1,00	127		127	
M 24 x 1,50	128		128	

Nominal Ø mm	ring gauges		"no-go" ring gauges	
	32433	...	32434	...
M 24 x 2,00	129		129	
M 25 x 1,50	130		130	
M 26 x 1,50	131		131	
M 27 x 1,50	132		132	
M 28 x 1,50	133		133	
M 30 x 1,50	134		134	
M 30 x 2,00	135		135	
M 32 x 1,50	136		136	
M 33 x 1,50	138		138	
M 33 x 2,00	139		139	
M 35 x 1,50	140		140	
M 36 x 1,00	141		141	
M 36 x 1,50	142		142	
M 36 x 2,00	143		143	
M 39 x 1,50	144		144	
M 40 x 1,50	146		146	
M 42 x 1,50	149		149	
M 42 x 2,00	150		150	
M 42 x 3,00	151		151	
M 45 x 1,50	152		152	
M 45 x 2,00	153		153	
M 48 x 1,50	154		154	
M 48 x 2,00	155		155	
M 50 x 1,50	157		157	

Nominal Ø mm	ring gauges		"no-go" ring gauges	
	32433	...	32434	...
M 50 x 2,00	158		158	
M 52 x 1,50	159		159	
M 52 x 2,00	160		160	
M 55 x 2,00	162		162	
M 56 x 1,50	163		163	
M 56 x 2,00	164		164	
M 56 x 4,00	165		165	
M 58 x 2,00	167		167	
M 60 x 1,50	168		168	
M 60 x 2,00	169		169	
M 64 x 1,50	171		171	
M 64 x 2,00	172		172	
M 65 x 1,50	173		173	
M 65 x 2,00	174		174	
M 68 x 2,00	176		176	
M 70 x 1,50	177		177	
M 70 x 2,00	178		178	
M 76 x 2,00	182		182	
M 80 x 1,50	183		183	
M 80 x 2,00	184		184	
M 85 x 2,00	186		186	
M 90 x 2,00	189		189	
M 90 x 3,00	190		190	

• Limit Gauges • Ring Gauges • Measuring and plug gauges • Hub Keyway Gauge Bodies

**32442 - 32448** Thread Limit Gauges for Whitworth Pipe Threads DIN ISO 228

**Type**

Hardened and precision ground, right-hand threads.

**Tolerance zone medium (m).**

End with full thread profile (must screw into test piece without use of force). No-go end with truncated thread flanks and only a few turns (must not screw into test piece).

**Application**

For Whitworth-Pipe Threads in accordance with **DIN ISO 228**.

**Quality**

Best gauge-grade steel.

**Note:**

Further sizes up to G 10 inch, intermediate sizes and thread limit snap gauges and thread limit setting gauges available on request.



32442



32444



32443



32447 - 32448

Nominal Ø inch	Limit plug gauges		plug gauge		no-go gauges		ring gauges		no-go ring gauges	
	32442	...	32443	...	32444	...	32447	...	32448	...
G 1/8	101						101		101	
G 1/4	102						102		102	
G 3/8	103						103		103	
G 1/2	104						104		104	
G 5/8	105						105		105	
G 3/4	106						106		106	
G 1			108		108		108		108	
G 1.1/4			110		110		110		110	
G 1.1/2			111		111		111		111	
G 2			112		112		112		112	

**32490 - 32492** Ring Gauges DIN 2250

**Type**

Hardened, stress-relieved, ground and lapped.

**Application**

For testing thin-walled shafts and as well as setting gauges for measuring instruments.

**Note:**

For better handling, the large rings above 70 mm nominal size are supplied profiled. All nominal dimensions not listed in the table, gauges with tolerances given in numbers, and ring gauges above 100 mm available on request.

**32490**

**Ring gauges**

In compliance with **DIN 2250 - G-**, tolerance zone h 6.

**32492**

**Setting rings**

In compliance with **DIN 2250 - C-**, multi-purpose application.



32490



32492

Go ring gauges				Setting rings				Go ring gauges				Setting rings				Go ring gauges				Setting rings				
Nominal Ø mm	32490	...	32492	...	Nominal Ø mm	32490	...	32492	...	Nominal Ø mm	32490	...	32492	...	Nominal Ø mm	32490	...	32492	...	Nominal Ø mm	32490	...	32492	...
2	105		105		23	133		133		60	158		158		62	159		159		62,5	160		160	
2,5	107		107		24	134		134		70	162		162		72	163		163		75	164		164	
3	109		109		25	135		135		78	165		165		80	166		166		87,5	168		168	
4	111		111		26	136		136		90	170		170		100	172		172		100	172		172	
5	113		113		28	138		138		112,5	173		173		125	174		174		125	174		174	
6	114		114		30	139		139		137,5	175		175		137,5	175		175		137,5	175		175	
7	115		115		32	140		140		162,5	199		199		162,5	199		199		162,5	199		199	
8	116		116		33	141		141		175	176		176		175	176		176		175	176		176	
10	118		118		35	143		143		187,5	177		177		187,5	177		177		187,5	177		177	
12	120		120		36	144		144		225	178		178		225	178		178		225	178		178	
13	122		122		38	146		146		275	180		180		275	180		180		275	180		180	
14	123		123		40	147		147																
15	124		124		42	148		148																
16	125		125		42,5	149		149																
17	126		126		45	150		150																
18	128		128		47	152		152																
19	129		129		48	153		153																
20	130		130		50	154		154																
22	132		132		55	156		156																

### 32645 - 32647

### Measuring and Plug Gauge Sets DIN 2269

## ATORN®

#### Type

Hardened and precision ground.

**Length:** up to 0,99 mm  $\varnothing = 40$  mm, starting at 1,00 mm  $\varnothing = 70$  mm.

**Marking with  $\varnothing$  dimension:** starting at 1,5 mm  $\varnothing$  on the shank, starting at 3 mm  $\varnothing$  on the face.

**Edge machining:** Up to 0,99 mm  $\varnothing$  both ends flat, up to 10,00 mm  $\varnothing$  1 end cut with facets, above 10,01 mm  $\varnothing$  2 ends cut with facets. The heel guides the plug easily into the boring hole without damaging the edges. Supplied in storage box with white coloured size sheet for every plug gauge.

#### Application

For different kind of checking and inspection works within measuring rooms, workshops and technical departments.

For use on gauging machine tools or coordinate milling machines. For measuring dimension accuracy on small and smallest boring holes as well as straightness and checking angles, distances of holes, prism guides, profile depths, guide surfaces

and distances of slots. For setting measuring instruments, e.g. micrometers or indicating gauges.

#### Quality

**Gauge-grade steel, hardness 58-62 HRC.**

#### Note:

Other set designations as well as individual sizes are available on request.

#### 32645

**Accuracy grade 1, tolerance +/- 0,001 mm, roundness less or equal to 1,0  $\mu$ m.**

#### 32647

**Accuracy grade 2, tolerance +/- 0,002 mm, roundness less or equal to 1,0  $\mu$ m.**

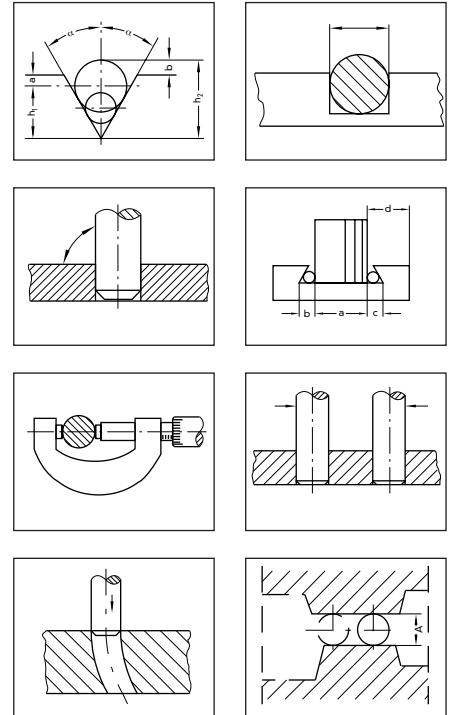
#### 32645 105 + 32647 105

#### Type

In addition, for each nominal diameter one plug gauge with +0,01mm oversize and -0,01mm lower size is included in the set.



32645 - 32647



$\varnothing$ range mm	Graduation	Number of plug gauges mm	Accuracy grade 1		Accuracy grade 2	
			32645	...	32647	...
1 - 5	0,10	41	103		103	
1 - 10	0,10	91	104		104	
1 - 10	0,10 (+ 0,01/-0,01)	273	105		105	
0,5 - 1	0,01	51	113		113	
1 - 2	0,01	101	114		114	
2,01 - 3	0,01	100	115		115	
3,01 - 4	0,01	100	116		116	
4,01 - 5	0,01	100	117		117	
5,01 - 6	0,01	100	118		118	
6,01 - 7	0,01	100	119		119	
7,01 - 8	0,01	100	120		120	
8,01 - 9	0,01	100	121		121	
9,01 - 10	0,01	100	122		122	

### 32649

### Measuring and Plug Gauge Holders

#### Application

For easily assembling individual and gauges, by taking two plug gauges, one with the upper and one with the lower limit size of a tolerance zone.

#### Quality

**Holder shells are made of die-cast zinc, clamping screw with matt-chrome finish.**

32649

Holder size	Clamping range $\varnothing$ mm	Holder length approx. mm	Clamping length approx. mm	32649	...
1	1-2	60	26	101	
2	2-4	68	30	102	
3	4-6	76	33	103	
4	6-8	84	35	104	
5	8-10	92	37	105	



### 32730

### Hub Keyway Gauge Bodies

#### Type

Only one gauge body is required for each range of diameters. The slides for the respective groove widths are easily exchangeable. They can be used for checking the groove width even without the gauge body, since they double as flat limit gauges with plane-parallel measuring faces.

#### Application

For fast and reliable measurement of the keyway depth and for testing of the keyway width. In addition, the alignment of the keyway to the shaft or hole axis is checked. In hubs, the keyway can be checked deep inside the hole in this way. **Without slides.**

Suitable are exchangeable slides cat.-no. 32731 - 32732.

32730

Hub $\varnothing$ range mm	Keyway width mm	32730	...
10 - 17	3 - 5	101	
17 - 30	6 - 8	102	
30 - 50	10 - 14	103	
50 - 75	16 - 20	104	
75 - 110	22 - 28	105	



## • Shaft Keyway Gauge Bodies • Dial indicators

### 32731 - 32732

### Exchangeable Slides for Hub Keyway Gauge Bodies

#### Note:

Slides with tolerance zone D 10, P 8 and/or JS 8 available on request.

#### 32731

**Type**  
For **tolerance zone P 9**, for hub keyway gauge body cat.-no. 32730, for keyway widths in compliance with DIN 6885, 6886, 6887.

#### 32732

#### Type

For **tolerance zone JS 9**, for hub keyway gauge body cat.-no. 32730, for keyway widths in compliance with DIN 6885, 6886, 6887.



32731

Keyway width mm	P 9		JS 9	
	32731	...	32732	...
3	101			
4	102		102	
5	103		103	
6	104		104	
8	105		105	
10	106		106	
12	107		107	

Keyway width mm	P 9		JS 9	
	32731	...	32732	...
14			108	108
16			109	109
18			110	110
20			111	111
22			112	
25			113	
28			114	114

### 32740

### Shaft Keyway Gauge Bodies

#### Type

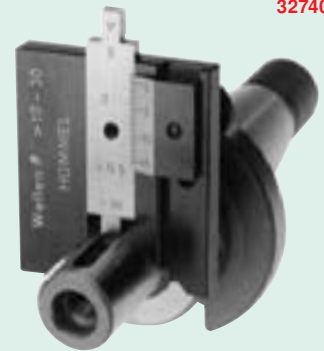
Only one gauge body is required for each range of diameters. The slides for the respective groove widths are easily exchangeable. They can be used for checking the groove width even without the gauge body, since they double as flat limit gauges with plane-parallel measuring faces.

#### Application

For fast and reliable measurement of the keyway depth and for testing of the keyway width. In addition, the alignment of the keyway to the shaft or hole axis is checked. In hubs, the keyway can be checked deep inside the hole in this way. **Without slides.**

Suitable are exchangeable slides cat.-no. 32741 - 32742.

Hub Ø range mm	Keyway width mm	32740	...
10 - 30	3 - 8		101
30 - 75	10 - 20		102
75 - 150	22 - 36		103



32740

### 32741 - 32742

### Exchangeable Slides for Shaft Keyway Gauge Bodies

#### Note:

Slides with tolerance zone D 10, P 8 resp. N 8 available on request.

#### 32741

**Type**  
For **tolerance zone P 9**, for shaft keyway gauge body cat.-no. 32740, for keyway widths in compliance with DIN 6885, 6886, 6887.

#### 32742

#### Type

For **tolerance zone N 9**, for shaft keyway gauge body cat.-no. 32740 for keyway widths in compliance with DIN 6885, 6886, 6887.



32742

Keyway width mm	P 9		N 9	
	32741	...	32742	...
3	101		101	
4	102		102	
5	103		103	
6	104		104	
8	105		105	
10	106		106	
12	107		107	

Keyway width mm	P 9		N 9	
	32741	...	32742	...
14			108	108
16			109	109
18			110	110
20			111	111
22			112	112
25			113	113
28			114	

Special gauges of all dimensions, tolerances, and set designations available on request.

Please contact us!

