

Gauges / Pin gauges / Thread and tolerance tables



C12.001-EN-dealer/20110825

Limit gauges for internal and external dimensions

The manufacturing tolerance and the permissible reduction in wear for plain gauges are laid down in DIN 7162.

New gauges are supplemented with a wear allowance on the Go end: z (plus) for plug gauges and z_1 (minus) for ring gauges. Accordingly, the size indicated on the handle is not similar to the measured value of the new Go end.

Example: plug gauge 30 H9

New Go end:

size	30.000 mm
wear allowance (+z)	<u>0.009 mm</u>
	30.009 mm
manufacturing tolerance	± 0.002 mm
largest value measured	30.011 mm
smallest value measured	30.007 mm

The gauges are also available without wear allowance (additional cost). This should be indicated when ordering.

Measuring reports

For all gauges also measuring reports can be ordered.

- ① Inspection report (German) per gauge. Stating of product specifications, measured values after production, used traceable measuring devices, measuring inaccuracy and measuring date. A favourable choice when your quality system does not require traceable (RvA) certificates.
- ② Traceable RvA certificate (Dutch) with measuring reports of the ordered gauges. Besides stating of the measured values the extra assurance of an external RvA inspection.

Plug gauges

Manufactured according DIN 2245, 2246 and 2247. Available from 0.5 to 250 mm; up to 70 mm with Go and NoGo on one handle, over 70 mm in two parts. Prices are for H7 plug gauges with Go and NoGo ends in hardened steel.



Also available:

- other fit sizes, like H6 and H8,
- hard-chrome plated plug gauges,
- tungsten carbide plug gauges,
- extended plug gauges,
- plug gauges with vent hole,
- plug gauges with easy-entry pilot,
- flat plug gauges,
- square and hexagonal plug gauges.



Size H7/mm	Price	Size H7/mm	Price	Size H7/mm	Price	Size H7/mm	Price
1		14		34		65	
1.5		15		35		68	
2		16		36		70	
2.5		17		37		72	
3		18		38		75	
3.5		19		40		78	
4		20		42		80	
4.5		21		44		82	
5		22		45		85	
5.5		23		46		88	
6		24		47		90	
7		25		48		92	
8		26		50		95	
9		27		52		98	
10		28		55		100	
11		30		58			
12		32		60			
13		33		62			
						<i>Larger sizes available on request</i>	

Pin gauges

Swiss made, hardened and ground steel pin gauges; available loose and in sets.

- Hardened, ground, and seasoned steel.
- Diameter range:
without handle: 0.06 - 20.00 mm,
with handle: 0.06 - 10.00 mm.
- Increment: 0.01 mm.
- Accuracy: ± 0.0015 mm.
- Pin gauges $\varnothing 5.00 - 20.00$ mm
without handle: indication on head.



Diameter/mm	Length/mm	Price
Pin gauge without handle:		
0.06 - 0.09 ¹	30	
0.10 - 0.19 ¹	40	
0.20 - 0.29 ¹	40	
0.30 - 0.49 ¹	40	
0.50 - 0.99 ¹	40	
1.00 - 2.99	70	
3.00 - 4.00	70	
4.01 - 5.00	70	
5.01 - 5.99	70	
6.00 - 9.99	70	
10.00 - 11.99	70	
12.00 - 13.99	70	
14.00 - 15.99	70	
16.00 - 18.99	70	
19.00 - 20.00	70	
Pin gauge with handle²:		
0.06 - 0.09 ¹	23	
0.10 - 0.19 ¹	33	
0.20 - 0.29 ¹	33	
0.30 - 0.49 ¹	33	
0.50 - 0.99 ¹	33	
1.00 - 2.99	62	
3.00 - 4.00	62	
4.01 - 5.00	62	
5.01 - 5.99	62	
6.00 - 10.00	62	

¹ Delivery in plastic transport case.

² The length here indicates the measuring length and not the total length of the pin gauges.



Item No.	Description	Price
Wooden case (tubes not included):		
833.211	For 50 pin gauges $\varnothing 0.10 - 10.00$ mm without handle	
833.704	For 100 pin gauges $\varnothing 0.10 - 10.00$ mm without handle	
833.264	For 50 pin gauges $\varnothing 0.10 - 10.00$ mm with handle	
833.118	For 40 pin gauges $\varnothing 10.01 - 15.00$ mm	
833.705	For 80 pin gauges $\varnothing 10.01 - 15.00$ mm	
833.706	For 30 pin gauges $\varnothing 15.01 - 20.00$ mm	
Pin gauge tube for pin gauges:		
833.066	Without handle up to $\varnothing 0.99$ mm	
838.224	Without handle $\varnothing 1.00 - 7.00$ mm	
838.089	With handle up to $\varnothing 0.99$ mm	
834.386	Base inscription per size	



Also available:

With an accuracy of ± 0.0003 or ± 0.001 mm;
– hardened steel $\varnothing 0.06 - 20.00$ mm,
– tungsten carbide or ceramics $\varnothing 0.50 - 9.99$ mm,
with 0.01 mm increments. The length may deviate. More information available on request.

Pin gauges in sets

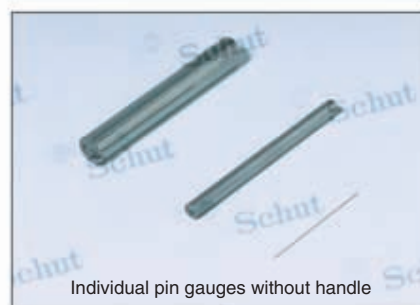
- Hardened, ground, and seasoned steel.
- Diameter range: 0.10- 10.00 mm.
- Increment: 0.01 mm.
- Accuracy: ± 0.0015 mm.
- Without handle.
- Pin gauges $\varnothing 5.00$ - 10.00 mm: indication on head.
- Length: $\varnothing 0.10$ - 0.99 mm: 40 mm,
 $\varnothing 1.00$ - 10.00 mm: 70 mm.
- Sets with larger diameters and/or with handle are available on request.



Set pin gauges without handle

Item No.	Diameter mm	Increment mm	Number per set	Price*
833.901	0.10- 1.00	0.01	91	
833.902	1.00- 2.00	0.01	101	
833.903	2.00- 3.00	0.01	101	
833.904	3.00- 4.00	0.01	101	
833.905	4.00- 5.00	0.01	101	
833.906	5.00- 6.00	0.01	101	
833.907	6.00- 7.00	0.01	101	
833.908	7.00- 8.00	0.01	101	
833.909	8.00- 9.00	0.01	101	
833.910	9.00-10.00	0.01	101	
834.190	1.00-10.00	0.10	91	

* Prices per set, in wooden case.



Individual pin gauges without handle

Pin gauges accessories

Interchangeable handles

- For pin gauges without handle.



Item No.	For diameter/mm	Price
836.043	0.40-0.80	
834.172	0.80- 1.30	
836.044	1.30- 1.80	
836.045	1.80- 2.30	
837.615	2.30- 2.80	
837.956	2.80- 3.30	
837.957	3.30- 3.80	
837.958	3.80- 4.30	
837.959	4.30- 4.80	
837.960	4.80- 5.30	

Holders for Go/NoGo determination

- For two pin gauges without handle.
- With NoGo indication.



Item No.	For diameter/mm	Price
833.310	1.00- 2.00	
833.311	2.00- 4.00	
833.312	4.00- 6.00	
833.313	6.00- 8.00	
833.314	8.00- 10.00	

NEW



Pin gauges

Ground and lapped, hardened tool steel pin gauges with a high accuracy. Available per piece and in sets. Swiss made.

- Diameter range: \varnothing 0.06 - 10.00 mm.
- Increment: 0.01 mm.
- Accuracy: \pm 0.0005 mm.
- Hardened tool steel.
Ground and lapped.
- Measuring length (and total length):
 - \varnothing 0.06 - 0.30 mm: 2 mm (34 mm),
 - \varnothing 0.31 - 0.50 mm: 3.5 mm (35.5 mm),
 - \varnothing 0.51 - 1.50 mm: 5 mm (37 mm),
 - \varnothing 1.51 - 2.00 mm: 6 mm (38 mm),
 - \varnothing 2.01 - 3.50 mm: 8 mm (43 mm),
 - \varnothing 3.51 - 6.00 mm: 10 mm (55 mm),
 - \varnothing 6.01 - 8.00 mm: 14 mm (59 mm),
 - \varnothing 8.01 - 10.00 mm: 18 mm (63 mm).
- Size indication on the insulated handle.



Per piece

Diameter/mm	Price
0.06 - 0.09	
0.10 - 0.19	
0.20 - 0.29	
0.30 - 0.49	
0.50 - 0.99	
1.00 - 2.99	
3.00 - 5.99	
6.00 - 10.00	

NEW



Sets

Item No.	Diameter mm	Pieces	Price
833.761	0.06 - 0.50	45	
833.762	0.51 - 1.00	50	
833.763	1.01 - 1.50	50	
833.764	1.51 - 2.00	50	
833.765	2.01 - 2.50	50	
833.766	2.51 - 3.00	50	
833.767	3.01 - 3.50	50	
833.768	3.51 - 4.00	50	
837.311	4.01 - 4.50	50	
837.312	4.51 - 5.00	50	
837.313	5.01 - 5.50	50	
837.314	5.51 - 6.00	50	
837.315	6.01 - 6.50	50	
837.316	6.51 - 7.00	50	
837.317	7.01 - 7.50	50	
837.318	7.51 - 8.00	50	
837.319	8.01 - 8.50	50	
837.320	8.51 - 9.00	50	
837.321	9.01 - 9.50	50	
837.322	9.51 - 10.00	50	



Setting rings

Setting rings, manufactured according DIN 2250 form C, 1 to 315 mm.

The size is indicated on the ring to three decimal places, 3 to 50 mm setting rings are also available in tungsten carbide as are form B rings for pneumatic measuring tools.

Prices for intermediate and larger sizes are available on request.



Size mm	Price	Size mm	Price	Size mm	Price	Size mm	Price	Size mm	Price
1		18		43		80		165	
1.2		19		44		82		170	
1.5		20		45		84		175	
1.8		21		46		85		180	
2		22		47		86		185	
2.2		23		48		88		190	
2.5		24		49		90		195	
2.8		25		50		92		200	
3		26		52		94		210	
3.5		27		54		95		220	
4		28		55		96		230	
4.5		29		56		98		240	
5		30		58		100		250	
6		31		60		105		260	
7		32		62		110		270	
8		33		64		115		280	
9		34		65		120		290	
10		35		66		125		300	
11		36		68		130		310	
12		37		70		135		315	
13		38		72		140			
14		39		74		145			
15		40		75		150			
16		41		76		155			
17		42		78		160			
									<i>Intermediate sizes over 3 mm are also available</i>

Measuring reports

For all gauges also measuring reports can be ordered.

- ① Inspection report (German) per gauge. Stating of product specifications, measured values after production, used traceable measuring devices, measuring inaccuracy and measuring date. A favourable choice when your quality system does not require traceable (RvA) certificates.
- ② Traceable RvA certificate (Dutch) with measuring reports of the ordered gauges. Besides stating of the measured values the extra assurance of an external RvA inspection.

Taper gauges

To increase the already large capacity to transmit moments, some taper gauges are furnished with a lip which functions as catch lock.



Morse taper gauges

Indica- tion Morse	Without lip, DIN 229				With lip, DIN 230			
	Item No.	Price	Item No.	Price	Item No.	Price	Item No.	Price
0	Plug: 832.531		Ring: 832.532		Plug: 832.552		Ring: 832.553	
1	832.533		832.534		832.554		832.555	
2	832.535		832.536		832.556		832.557	
3	832.537		832.538		832.558		832.559	
4	832.539		832.540		832.560		832.561	
5	832.541		832.542		832.562		832.563	
6	832.543		832.544		832.564		832.565	

Metric taper gauges

Indica- tion metric	Without lip, DIN 234				With lip, DIN 235			
	Item No.	Price	Item No.	Price	Item No.	Price	Item No.	Price
4	Plug: 804.001		Ring: 804.011		Plug: —		Ring: —	
6	804.002		804.012		—		—	
80	804.003		804.013		804.021		804.031	
100	804.004		804.014		804.022		804.032	
120	804.005		804.015		804.023		804.033	

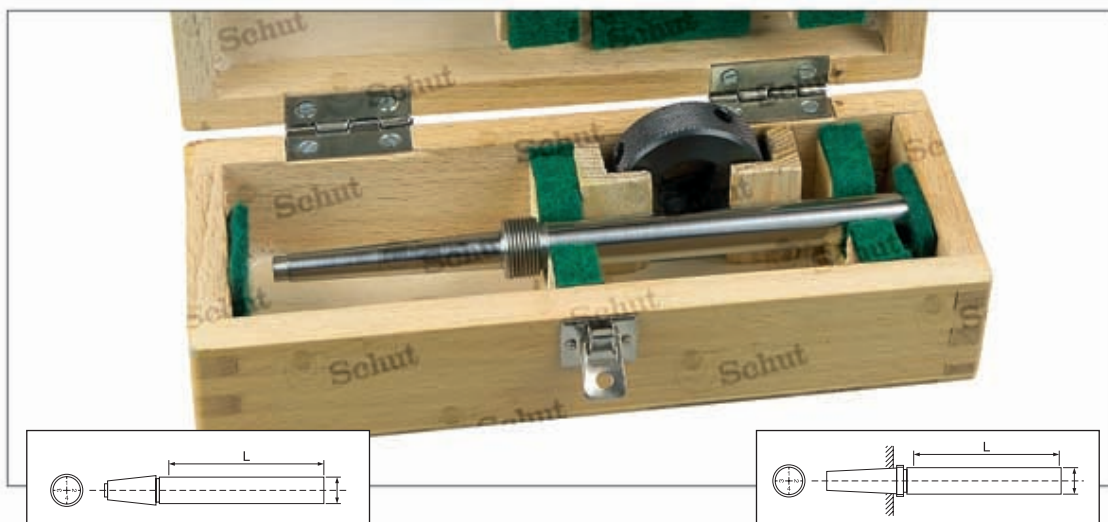
Short taper gauges

Indica- tion SK	Plug, DIN 2079		Ring, DIN 2080	
	Item No.	Price	Item No.	Price
30	832.568		832.569	
40	832.570		832.571	
50	832.572		832.573	
60	832.574		832.575	



Measuring mandrels

The cylinders are hollow and have four marks on the cylinder wall near the thread and numbered marks in successive distances of 90° on the face. The cylinder and the front face are ground and lapped. The hardness is (60 ± 2) HRc.



Measuring mandrels with internal thread, without external screw thread and nut

Item No.	Cone	Dimensions cylinder		Price
		ø/mm	length/mm	
832.591	Sc 20	24	150	
832.592	Sc 30	32	200	
832.593	Sc 30	32	300	
832.594	Sc 40	40	300	
832.595	Sc 45	40	300	
832.596	Sc 50	40	300	
832.597	Sc 50	63	500	

Specifications of the accuracy:

straightness of the cylinder $\leq 3 \mu\text{m}$, out of roundness $\leq 3 \mu\text{m}$, eccentricity $\leq 3 \mu\text{m}$.

Measuring mandrels without draw bar thread, with external screw thread and nut

Item No.	Cone	Dimensions cylinder		Price
		ø/mm	length/mm	
832.581	Mc 0	12	75	
832.582	Mc 1	12	75	
832.583	Mc 2	24	150	
832.584	Mc 3	32	200	
832.585	Mc 4	40	300	
832.586	Mc 5	40	300	
832.587	Mc 6	63	500	
832.588	Mec 80	80	500	

Other models are available.

Gauges for keyway depths on shafts

- With interchangeable gauge parts.
- Available in all common fits.
- Prices available on request.



Thread gauges

The prices of the thread gauges apply to the following tolerances:

Kind of thread	Tolerances	
	Thread plug gauge	Thread ring gauge
Metric thread according ISO 1502 up to and incl. M1.4 larger than M1.4	5H 6H	6h 6g (standard) 4h and 6e
Fixing pipe thread DIN ISO 228	center	A
Trapezoidal thread DIN 103	7H	7e

Other tolerances, sizes and kinds of threads are available on request; also available are special screw threads as per your design. Left-hand screw thread: price on request.



Measuring reports

For all gauges also measuring reports can be ordered.

- ① Inspection report (German) per gauge. Stating of product specifications, measured values after production, used traceable measuring devices, measuring inaccuracy and measuring date. A favourable choice when your quality system does not require traceable (RvA) certificates.
- ② Traceable RvA certificate (Dutch) with measuring reports of the ordered gauges. Besides stating of the measured values the extra assurance of an external RvA inspection.

Thread plug and ring gauges

Hardened steel thread plug gauges (up to M39: Go + NoGo, from M42: Go and NoGo separate) and thread ring gauges (Go or NoGo) for metric screw thread (ISO) with coarse pitch (ISO 1502).

Indication M...	Price	
	Thread plug	Thread ring
1 x 0.25		
1.2 x 0.25		
1.4 x 0.3		
1.6 x 0.35		
1.8 x 0.35		
2 x 0.4		
2.2 x 0.45		
2.5 x 0.45		
3 x 0.5		
3.5 x 0.6		
4 x 0.7		
4.5 x 0.75		
5 x 0.8		
6 x 1		
8 x 1.25		
10 x 1.5		
12 x 1.75		
14 x 2		
16 x 2		
18 x 2.5		
20 x 2.5		
22 x 2.5		
24 x 3		
27 x 3		
30 x 3.5		
33 x 3.5		
36 x 4		
39 x 4		

Indication M...	Thread plug		Thread ring
	Go	NoGo	
42 x 4.5			
45 x 4.5			
48 x 5			
52 x 5			
56 x 5.5			
60 x 5.5			



Thread plug and ring gauges (continued)

Hardened steel thread plug gauges (Go + NoGo) and thread ring gauges (Go or NoGo) for metric screw thread (ISO) with pitch 0.5 (ISO 1502).

Indication M...x0.5	Price Thread plug	Price Thread ring
5		
6		
8		
10		
12		
14		
16		
18		
20		



Hardened steel thread plug gauges (Go + NoGo) and thread ring gauges (Go or NoGo) for metric screw thread (ISO) with pitch 0.75 (ISO 1502).

Indication M...x0.75	Price Thread plug	Price Thread ring
6		
8		
10		
12		
14		
16		
18		
20		
22		
24		
26		
28		
30		

Hardened steel thread plug gauges (Go + NoGo) and thread ring gauges (Go or NoGo) for metric screw thread (ISO) with pitch 1 (ISO 1502).

Indication M...x1	Price Thread plug	Price Thread ring
8		
10		
11		
12		
14		
16		
18		
20		
22		
24		
25		
26		
27		
28		
30		



Hardened steel thread plug gauges (up to M40: Go + NoGo, from M42: Go and NoGo separate) and thread ring gauges (Go or NoGo) for metric screw thread (ISO) with pitch 1.5 (ISO 1502).

Indication M...x1.5	Price Thread plug	Price Thread ring
12		
14		
16		
18		
20		
22		
24		
25		
26		
27		
28		
30		

(continued on the next page)

Thread plug and ring gauges (continued)

Indication M... x 1.5	Price Thread plug	Price Thread ring
<i>(continued)</i>		
32		
33		
34		
35		
36		
38		
39		
40		
Indication M... x 1.5	Thread plug Go NoGo	Thread ring
42		
45		
48		
50		

Hardened steel thread plug gauges (up to M40: Go + NoGo, from M42: Go and NoGo separate) and thread ring gauges (Go or NoGo) for metric screw thread (ISO) with pitch 2 (ISO 1502).

Indication M... x 2	Price Thread plug	Price Thread ring
20		
22		
24		
26		
28		
30		
32		
34		
36		
38		
40		
Indication M... x 2	Thread plug Go NoGo	Thread ring
42		
45		
48		
50		



Hardened steel thread plug gauges (up to G1": Go + NoGo, from G1 1/8": Go and NoGo separate) and thread ring gauges (Go or NoGo) for non-sealing fixing pipe thread (DIN ISO 228).

Indication G..."	Price Thread plug	Price Thread ring
1/8		
1/4		
3/8		
1/2		
5/8		
3/4		
7/8		
1		
Indication G..."	Thread plug Go NoGo	Thread ring
1 1/8		
1 1/4		
1 1/2		
1 3/4		
2		
2 1/4		
2 1/2		
2 3/4		
3		



Hardened steel thread plug and thread ring gauges for sealing pipe thread (DIN 2999).

Indication R..."	Price Thread plug	Price Thread ring
1/8		
1/4		
3/8		
1/2		
3/4		
1		
1 1/4		
1 1/2		
2		
<i>Larger sizes available on request</i>		

Thread plug and ring gauges (continued)

Hardened steel thread plug gauges (up to 1 $\frac{1}{4}$: Go + NoGo, from 1 $\frac{3}{8}$: Go and NoGo separate) and thread ring gauges (Go or NoGo) for American screw thread UNC and UNF according ANSI B 1.1 class 2B (thread plug) and 2A (thread ring).

Indication UNC	Price Thread plug	Price Thread ring
No 1-64		
No 2-56		
No 3-48		
No 4-40		
No 5-40		
No 6-32		
No 8-32		
No 10-24		
No 12-24		
$\frac{1}{4}$ -20		
$\frac{5}{16}$ -18		
$\frac{3}{8}$ -16		
$\frac{7}{16}$ -14		
$\frac{1}{2}$ -13		
$\frac{9}{16}$ -12		
$\frac{5}{8}$ -11		
$\frac{3}{4}$ -10		
$\frac{7}{8}$ -9		
1 -8		
1 $\frac{1}{8}$ -7		
1 $\frac{1}{4}$ -7		

Indication UNC	Thread plug Go	NoGo	Thread ring
1 $\frac{3}{8}$ -6			
1 $\frac{1}{2}$ -6			
1 $\frac{3}{4}$ -5			
2 -4 $\frac{1}{2}$			
2 $\frac{1}{4}$ -4 $\frac{1}{2}$			
2 $\frac{1}{2}$ -4			
2 $\frac{3}{4}$ -4			
3 -4			
3 $\frac{1}{4}$ -4			
3 $\frac{1}{2}$ -4			
3 $\frac{3}{4}$ -4			
4 -4			

Indication UNF	Price Thread plug	Price Thread ring
No 0-80		
No 1-72		
No 2-64		
No 3-56		
No 4-48		
No 5-44		
No 6-40		
No 8-36		
No 10-32		
No 12-28		
$\frac{1}{4}$ -28		
$\frac{5}{16}$ -24		
$\frac{3}{8}$ -24		
$\frac{7}{16}$ -20		
$\frac{1}{2}$ -20		
$\frac{9}{16}$ -18		
$\frac{5}{8}$ -18		
$\frac{3}{4}$ -16		
$\frac{7}{8}$ -14		
1 -12		
1 $\frac{1}{8}$ -12		
1 $\frac{1}{4}$ -12		

Indication UNF	Thread plug Go	NoGo	Thread ring
1 $\frac{3}{8}$ -12			
1 $\frac{1}{2}$ -12			



Thread plug and ring gauges (continued)

Hardened steel tapered thread plug and thread ring gauges for sealing pipe thread according ANSI/ASME B 1.20.1.



Indication NPT..."	Price Thread plug	Price Thread ring
1/16		
1/8		
1/4		
3/8		
1/2		
3/4		
1		
1 1/4		
1 1/2		
2		
2 1/2		
3		

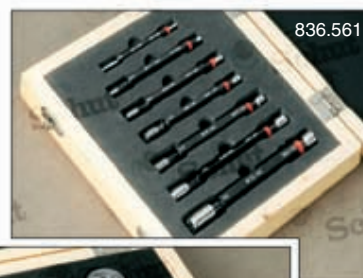
Thread plug and ring gauges in sets

Sets of thread plug gauges or thread ring gauges for inspection of metric ISO threads.

- For threads M3, M4, M5, M6, M8, M10 and M12.
- Tolerance class:
thread plug gauges: 6H,
thread ring gauges: 6g.
- Hardened steel.
- ISO 1502.
- Delivery in a wooden case with an inspection report.

NEW

PRICE



Item No.	Thread gauges set	Price
836.561	Plug gauges (Go+NoGo)	
836.562	Ring gauges (Go)	
836.563	Ring gauges (NoGo)	

Thread jaw gauges

Jaw-shaped gauge for inspection of external screw thread.
Delivery excl. setting thread plug gauge.



Available on request.



Drill gauges

Gauge in the form of a steel plate with bores of increasing diameters for determining drill diameters.



856.536

Item No.	Meas. range mm	Incre- ment mm	Number of bores	Price
856.534	0.1 - 5	0.1	50	
856.535	0.5 - 5	0.05	90	
856.536	0.1 - 10	0.1	100	
856.537	5 - 8	0.05	61	
856.547	8 - 10	0.05	41	
856.538	0.5 - 10	0.5	20	
856.539	10 - 20	0.5	20	
856.540	1 - 20	1	20	
856.543	10 - 12.5	0.1	26	
856.544	12.6 - 15	0.1	25	
856.545	15.1 - 17.5	0.1	25	
856.546	17.6 - 20	0.1	25	

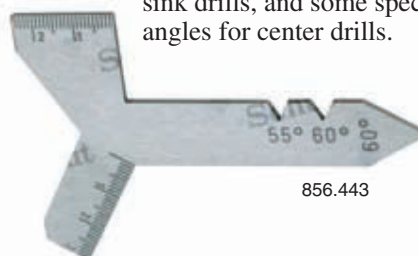
Twist drill grinding gauges

For checking twist drills for the place and the 118° angle of the twist drill point. The maximum drill diameter is 50 mm.



856.441

Universal twist drill grinding gauge, also called *Y-gauge*. Besides the standard angle of 118°, this gauge also has a 90° angle for counter-sink drills, and some special angles for center drills.



856.443

Item No.	Description	Price
856.441	Twist drill grinding gauge	
856.443	<i>Y-gauge</i>	

Measuring wedges

Measuring wedges for quick measurements and checks of slits, key-ways, distances, etc.

- Measuring range: 0.4 - 26 mm.
- Graduation: 0.05, 0.1 or 0.2 mm.



909.536

NEW



Item No.	Measuring range/mm	Graduation mm	Price
909.535	0.4 - 6	0.05	
909.536	1 - 15	0.1	
909.537	2 - 26	0.2	

Flat plug gauges

- Measuring range: 1 - 60 mm.
- Graduation: 0.1 mm.
- Stainless steel, no-glare chrome finished.
- Graduation on both sides.
- Ground measuring faces.



907.876

Item No.	Measuring range/mm	Price
907.876	1 - 15	
909.516	15 - 30	
909.517	30 - 45	
909.534	45 - 60	



Conical plug gauges

- Measuring range: \varnothing 1 - 45 mm.
- Graduation: 0.1 mm.
- Hardened, ground and chrome finished.
- With anodized handle.



909.490

Item No.	Measuring range/mm	Price
909.490	\varnothing 1 - 6	
909.491	\varnothing 4 - 15	
909.492	\varnothing 15 - 30	
909.493	\varnothing 30 - 45	



Nozzle gauges

Set of pins in holder serving as a gauge to determine jet nozzle sizes.



856.107

Item No.	Number of pins	Sizes mm	Price
856.107	20	\varnothing 0.45 - 1.50	
856.108	16	\varnothing 1.50 - 3.00	

Nozzle gauges with vernier

Nozzle gauges with a hardened and ground tapered needle.

- Measuring range: \varnothing 0 - 5 mm.
- Vernier: 0.01 mm.

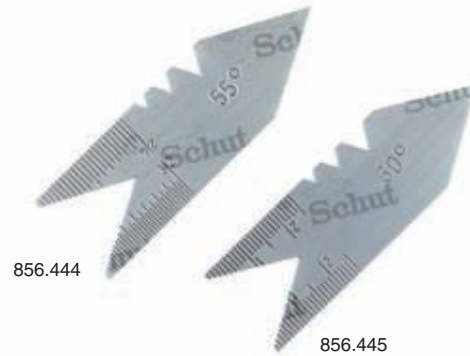


856.110

Item No.	Measuring range/mm	Price
856.109	\varnothing 0 - 3	
856.110	\varnothing 0 - 5	

Center gauges

For checking thread cutting tools for Whitworth thread 55° or metric thread 60°.



Item No.	Description	Price
856.444	Whitworth 55°	
856.445	Metric 60°	

Thread cutting tool gauges



856.446



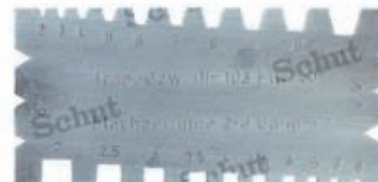
856.447



856.449



856.450



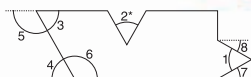
856.451

Item No.	Description	Price
856.446	Universal thread cutting tool gauge for angular thread and flat thread	
856.447	Trapezoidal thread cutting tool gauge for trapezoidal thread DIN 103 (30°, 2-12 mm)	
856.449	Combined lathe and thread cutting tool gauge for – cutting tool wedge angle, – trapezoidal thread (30°), and – angular thread (55° and 60°)	
856.450	Combined lathe and thread cutting tool gauge like 856.449, with additional angle stop (0-30°) on the back	
856.451	Thread cutting tool gauge for – rectangular thread, – trapezoidal thread (30°), and – angular thread (55° and 60°)	

Angle gauge set

- Measuring range: 5-90° (supplementary angles: 90-175°).
- Increment: 5° (18 pieces).
- Multiple angles per angle gauge:
 - primary angles (1, 2*, 3, 4),
 - supplementary angles (5, 6), and
 - ½ primary angles (7, 8).
- Delivery in a case.

NEW



* Angle 2: only with the angle gauges from 20°.



Item No.	Description	Price
909.410	Angle gauge set	

Angle gauges

- Measuring range: 1-45°.
- Number of blades: 20.
- Angles: 1° - 2° - 3° - 4° - 5° - 6° - 7° - 8° - 9° - 10° - 12° - 14° - 16° - 18° - 20° - 25° - 30° - 35° - 40° - 45°.

NEW



Item No.	Description	Price
908.798	Angle gauges	

Radius gauges

- Measuring range radius: 1-25 mm.
- Increment:
 - 1-3 mm: 0.25 mm,
 - 3.5-20 mm: 0.5 mm,
 - >20 mm: 1.0 mm.



Item No.	Radius range/mm	Price
907.766	1 - 7	
907.767	7.5 - 15	
907.768	15.5 - 25	

Shape and radius gauge

This stainless steel gauge can be used to adopt various complex shapes of tools and workpieces. When the gauge is pressed against the part which has to be checked, it takes on the shape of this part. Because of the graduation (mm) on the case, the shape can be checked easily.

Because the tracers were supported under pressure, they don't move on their own.



Item No.	Measuring range/mm	Price
836.319	150 x 40	

Set of welding seam gauges

- For weld thickness: 3 - 12 mm.
- Up to 7 mm increasing with 0.5 mm, plus 8, 10 and 12 mm.
- Total: 12 pieces.
- Bright steel.



Welding seam gauge

- For measurement of welding seams.
- Graduation: 0.2 mm.
 - Stainless steel.
 - Delivery in a case.



Item No.	Description	Price
856.452	Welding seam gauges	

Item No.	Description	Price
856.438	Welding seam gauge	

Welding seam calipers

For measurement of welding seams.

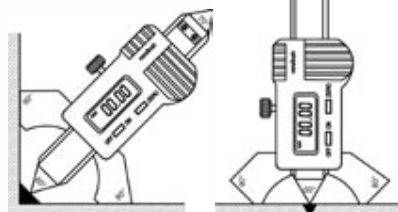
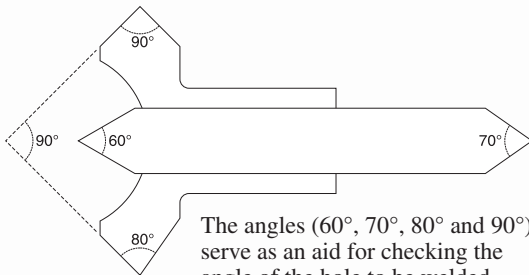
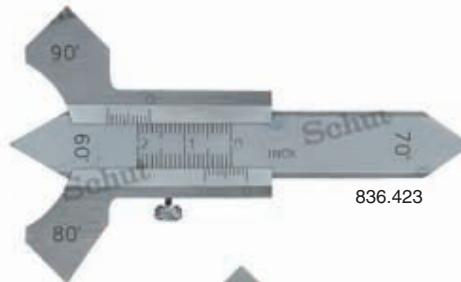
- Measuring range: 0 - 20 mm.
- Analog: vernier 0.1 mm, digital: resolution 0.01 mm.
- Delivery in a case.

Analog

- Stainless construction.

Digital

- mm/inch conversion.
- On/off switch.
- Reset.
- Power supply: 1 battery type V357.



Item No.	Measuring range/mm	Price
Analog: 836.423	0 - 20	
Digital: 906.429	0 - 20	
Option: 836.535	Spare battery	

Thread and tolerance tables

Thread table

Table with all standard international thread indications: metric, Ww, Gas, BSF, Pg, BA, UNC, UNF and UNEF.

Tolerance table

Table comprising all tolerances and fits according ISO R286, up to 500 mm (table with over 6400 pairs of tolerance values for internal and external measurements).

Conversion table mm/inch

For converting from mm to inch and from inch to mm.



Item No.	Description	Price
835.162	Thread table	
835.163	Tolerance table	
835.164	Conversion table mm/inch	

Flat thickness gauge

Gauge to e.g. measure the thickness of steel plating.

- Measuring range: 1 - 13 mm.
- Graduation: 0.5 mm.
- Stainless steel.

NEW



Item No.	Measuring range/mm	Price
907.899	1 - 13	

Screw pitch gauges



Item No.	Type of thread	Price
856.456	Metric	
856.457	Whitworth	
856.458	BSP	
856.459	Metric/Whitworth	
856.460	Metric/Whitworth BSP	
856.461	UNC/UNF	