



Calços padrão individuais – em aço - Metalduro integral – Cerâmica - Zircônio –

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 ø5.00-20.00 mm without handle: indication on head.



Also available:

With an accuracy of ±0.0003 or ±0.001 mm; – hardened steel ø0.06-20.00 mm, – tungsten carbide or ceramics ø0.50-9.99 mm, with 0.01 mm increments. The length may deviate. More information available on request.

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 ø0.10 - 10.00 mm without handle	
833.704	For 100 pin gauges ø0.10 - 10.00 mm without handle	
833.264	For 50 pin gauges ø0.10 - 10.00 mm with handle	
833.118	For 40 pin gauges ø10.01 - 15.00 mm	
833.705	For 80 pin gauges ø10.01 - 15.00 mm	
833.706	For 30 pin gauges ø15.01 - 20.00 mm	
Pin gauge tube for pin gauges¹:		
833.066	Without handle up to ø0.99 mm	
838.224	Without handle ø1.00 - 7.00 mm	
838.089	With handle up to ø0.99 mm	
834.386 ²	Base inscription per size	

¹ For insert in wooden case.
² For size indication in wooden case.



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 ø5.00-10.00 mm: indication on head.
- Length: ø0.10 - 0.99 mm: 40 mm, ø1.00-10.00 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.



- #### Holders for Go/NoGo determination
- For two pin gauges without handle.
 - With NoGo indication.



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	

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	



Plug gauges

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

- Diameter range: ø0.06 - 10.00 mm.
- Increment: 0.01 mm.
- Accuracy: ±0.0005 mm.
- Hardened tool steel.
- Ground and lapped.
- Measuring length (and total length):
 - ø0.06 - 0.30 mm: 2 mm (34 mm),
 - ø0.31 - 0.50 mm: 3.5 mm (35.5 mm),
 - ø0.51 - 1.50 mm: 5 mm (37 mm),
 - ø1.51 - 2.00 mm: 6 mm (38 mm),
 - ø2.01 - 3.50 mm: 8 mm (43 mm),
 - ø3.51 - 6.00 mm: 10 mm (53 mm),
 - ø6.01 - 8.00 mm: 14 mm (59 mm),
 - ø8.01 - 10.00 mm: 18 mm (63 mm).
- Size indication on the insulated handle.
- Also available in tungsten carbide and ceramic with an accuracy of ±0.001 mm.

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	



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	
833.311	4.01 - 4.50	50	
833.312	4.51 - 5.00	50	
833.313	5.01 - 5.50	50	
833.314	5.51 - 6.00	50	
833.315	6.01 - 6.50	50	
833.316	6.51 - 7.00	50	
833.317	7.01 - 7.50	50	
833.318	7.51 - 8.00	50	
833.319	8.01 - 8.50	50	
833.320	8.51 - 9.00	50	
833.321	9.01 - 9.50	50	
833.322	9.51 - 10.00	50	



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 z₁ (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:	30.000 mm
size	30.000 mm
wear allowance (+z)	0.009 mm
	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 to 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.



Also sets with most common sizes available.

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			

Larger sizes available on request

0636 Set of pin gauges



- Model**
- Made out of high quality gauge steel
- Delivery**
- Wooden case

DIN 2269

H/k9	%	Length mm	Number of pins	Tolerance class	Max. nominal size mm	Increment mm	Order no.
Special steel, hardened and aged							
		40	51	1	0.5 - 1.0	0.01	0636 301
		70	21	1	1.0 - 2.0	0.05	0636 321
		70	21	1	2.0 - 3.0	0.05	0636 322
		70	21	1	3.0 - 4.0	0.05	0636 323
		70	21	1	4.0 - 5.0	0.05	0636 324
		70	21	1	5.0 - 6.0	0.05	0636 325
		70	21	1	6.0 - 7.0	0.05	0636 326
		70	21	1	7.0 - 8.0	0.05	0636 327
		70	21	1	8.0 - 9.0	0.05	0636 328
		70	21	1	9.0 - 10.0	0.05	0636 329
		70	101	1	1.0 - 2.0	0.01	0636 341
		70	100	1	2.01 - 3.0	0.01	0636 342
		70	100	1	3.01 - 4.0	0.01	0636 343
		70	100	1	4.01 - 5.0	0.01	0636 344
		70	100	1	5.01 - 6.0	0.01	0636 345
		70	100	1	6.01 - 7.0	0.01	0636 346
		70	100	1	7.01 - 8.0	0.01	0636 347
		70	100	1	8.01 - 9.0	0.01	0636 348
		70	100	1	9.01 - 10.0	0.01	0636 349
		70	91	1	1.0 - 10.0	0.1	0636 351
		70	81	1	1.0 - 5.0	0.05	0636 352
Special steel, hardened and aged							
		70	101	2	1.0 - 2.0	0.01	0636 372
		70	100	2	2.01 - 3.0	0.01	0636 373
		70	100	2	3.01 - 4.0	0.01	0636 374
		70	100	2	4.01 - 5.0	0.01	0636 375
		70	100	2	5.01 - 6.0	0.01	0636 376
		70	100	2	6.01 - 7.0	0.01	0636 377
		70	100	2	7.01 - 8.0	0.01	0636 378
		70	100	2	8.01 - 9.0	0.01	0636 379
		70	100	2	9.01 - 10.0	0.01	0636 380

- Die cast
- With locking screw



H/k9	%	Measuring range mm	Length mm	Order no.
		1 - 2	60	0636 392
		2 - 4	68	0636 393
		4 - 6	76	0636 394
		6 - 8	84	0636 395
		8 - 10	92	0636 396

0637 Plug gauges



Model

- Manufacturing tolerances: according to DIN 7150-2 and DIN 7164
- Fit H7
- All cylindrical
- Special dimensions with other tolerances are available upon request

H/k9	%	Dimensions acc. DIN	Nominal size mm	Order no.	H/k9	%	Dimensions acc. DIN	Nominal size mm	Order no.
		2245-1	2	0637 103			2245-1	34	0637 138
		2245-1	2.2	0637 104			2245-1	35	0637 139
		2245-1	2.5	0637 105			2245-1	36	0637 140
		2245-1	2.8	0637 106			2245-1	37	0637 141
		2245-1	3	0637 107			2245-1	38	0637 142
		2245-1	3.5	0637 108			2245-1	40	0637 144
		2245-1	4	0637 109			2245-2	42	0637 146
		2245-1	4.5	0637 110			2245-2	43	0637 147
		2245-1	5	0637 111			2245-2	44	0637 148
		2245-1	6	0637 112			2245-2	45	0637 149
		2245-1	7	0637 113			2245-2	46	0637 150
		2245-1	8	0637 114			2245-2	47	0637 151
		2245-1	9	0637 115			2245-2	48	0637 152
		2245-1	10	0637 116			2245-2	50	0637 154
		2245-1	11	0637 117			2245-2	52	0637 155
		2245-1	12	0637 118			2245-2	53	0637 156
		2245-1	13	0637 119			2245-2	56	0637 157
		2245-1	14	0637 120			2245-2	60	0637 158
		2245-1	15	0637 121			2245-2	62	0637 159
		2245-1	16	0637 122			2245-2	65	0637 160
		2245-1	17	0637 123			2245-2	68	0637 161
		2245-1	18	0637 124			2245-2	70	0637 162
		2245-1	19	0637 125			2245-2	72	0637 163
		2245-1	20	0637 126			2245-2	75	0637 164
		2245-1	21	0637 127			2245-2	78	0637 165
		2245-1	22	0637 128			2245-2	80	0637 166
		2245-1	23	0637 129			2245-2	82	0637 167
		2245-1	24	0637 130			2245-2	85	0637 168
		2245-1	25	0637 131			2245-2	88	0637 169
		2245-1	26	0637 132			2245-2	90	0637 170
		2245-1	27	0637 133			2245-2	92	0637 171
		2245-1	28	0637 134			2245-2	95	0637 172
		2245-1	30	0637 135			2245-2	98	0637 173
		2245-1	32	0637 136			2245-2	100	0637 174
		2245-1	33	0637 137					



Model

- DIN 2245
- Hardened gauge steel
- GO and NOGO

Delivery

- Wooden box

H/k9	%	Set pcs	Tolerance class	Nominal size mm	Order no.
		(3, 4, 5, 6, 8, 10, 12)			
		7	H7	3 - 12 mm	0637 190