



# CARY

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SWISS



## PIN GAUGES

The most convenient and fastest method to control small diameter holes

## RING GAUGES

For the control of cylindrical parts  
Such as: pivot, axes, wheels, etc.

## ABSOLUTE PRECISION



## CARY TDH AND TLH/TTLH PLUG GAUGES $\varnothing$ 0.05 to 0.3 mm



Type TDH



Type TLH/TTLH

The TDH plug gauge consists of a gauging pivot fixed in a 9 mm long aluminium handle. It is best handled by means of tweezers as the gauge handle is too small for use by hand.

The TLH is identical to the TDH gauge with a 30 mm handle. This enables the use of the gauge without tweezers. This type is also available as double-ended.

Quality	Standard			Etalon	
Accuracy (1 $\mu$ m = 0,001 mm)	+/- 0.4 $\mu$ m			+/- 0.15 $\mu$ m	
Marking units (engraving)	[mm]*			[mm]*	
Nominal diameter (mm)	da 0.05 a 0.1	da 0.1 a 0.15	da 0.15 a 0.2	da 0.2 a 0.25	da 0.25 a 0.3
Measuring length	0.8mm	1mm	1.2mm	1.4mm	1.6mm
Material	steel	hard metal	steel	steel	hard metal
Colour of handle	●blue	●black	●yellow	●yellow	●red

(\*)for example: 094 = 0,094 mm

## CARY PLUG GAUGES IN STEEL: TXH/TTXH $\varnothing$ 0,3 to 10 mm

## CARY PLUG GAUGES IN TUNGSTEN CARBIDE: (hard metal) TCH/TTCH $\varnothing$ 0,3 to 6 mm

Single – ended Plug Gauges

Double-ended Plug Gauges

Application: In practice the measuring and inspection of small bores is best achieved by means of plug gauges. They are also eminently suitable for setting, adjusting and checking of precision measuring instruments such as micrometers, comparators, etc.



Type TXH–Standard



Type TTXH–Etalon



Type TCH–Standard

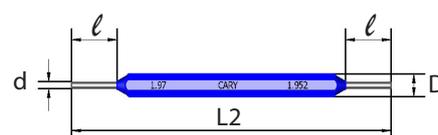
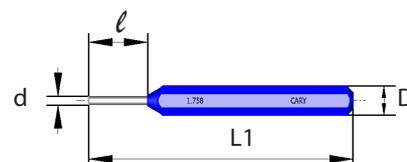


Type TCH–Etalon

Quality	Standard	Etalon
Accuracy: from $\varnothing$ 0.3 to 3mm	+/- 0.4 $\mu$ m	+/- 0.25 $\mu$ m
from $\varnothing$ 3 to 10mm	+/- 0.5 $\mu$ m	+/- 0.3 $\mu$ m

## OVERALL SIZES FOR PLUG GAUGES [mm]

$\varnothing$ from	to	L1	L2	D	$\ell$	Box for 50 gauges
0.3	0.5	38	41	3.5	3	PTXK
0.5	1	39	43	3.5	4	PTXK
1	1.5	40	45	3.5	5	PTXK
1.5	2	46	52	5	6	MTXK
2	2.5	47	54	5	7	MTXK
2.5	3	48	56	5	8	MTXK
3	3.5	49	58	5	9	MTXK
3.5	4	60	70	8	10	GTXK
4	5	61	72	8	11	GTXK
5	10	62	74	8	12	GTXK



## LONG GAUGE PNH

Treatment  
tempered, ground and lapped

Measuring Length  
Diameter 0.08 a 0.15mm: 20mm  
Diameter 0.15 a 6.35mm: 32mm



Type PNH

Unit  
metric or inch

	Accuracy $\varnothing$	Accuracy
Standard	0.08 a 10mm	+/- 0.8 $\mu$ m
Master	0.1 a 6mm	+/- 0.3 $\mu$ m
	6 a 10mm	+/- 0.5 $\mu$ m

## CARY RING GAUGES BCH, BAH e BOM

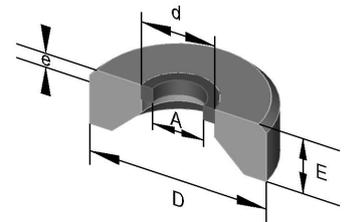
Application: measuring, gauging and inspection of cylindrical components (pivot, axles, wheels, etc.). The inspection of cylindrical components by means of ring gauges enables the measurement of the external diameter which is particularly important for components which are not perfectly round.



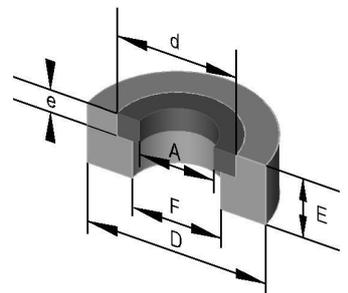
Ref.	BCH	BAH	BOM
Material	tungsten carbide	steel	steel or tungsten carbide
Colour of out ring	●black	●blue	●grey
Diameter ( $\varnothing$ ) (mm)	from 0.05 to 5	from 0.151 to 5	from 5 to 29.99
Accuracy: $\varnothing$ 0.06 a 3mm	+/- 0.6 $\mu$ m		
Accuracy: $\varnothing$ 0.15 a 3mm		+/- 0.6 $\mu$ m	
Accuracy: $\varnothing$ 3 a 5mm	+/- 0.75 $\mu$ m	+/- 0.75 $\mu$ m	
Accuracy: $\varnothing$ 5 a 10mm			+/- 1.25 $\mu$ m
Accuracy: $\varnothing$ 10 a 18mm			+/- 1.5 $\mu$ m
Accuratezza: $\varnothing$ 18 a 29.99mm			+/- 2 $\mu$ m

### RING GAUGES SIZES [mm]

		Ring				Outer ring	
$\varnothing$ from	to	BCH	BAH	BCH	BAH	D= $\varnothing$ ext.	E= height
		d= $\varnothing$ ext.		e= height			
0.06	0.509	1.8	1.4	0.5	0.35	8	2.5
0.510	0.759	1.8	1.8	0.5	0.5	8	2.5
0.760	1.259	2.4	2.4	0.75	0.75	8	2.5
1.260	1.509	3	3	0.9	0.9	8	2.5
1.510	2.509	5	5	1.5	1.5	12	4
2.510	4.009	8	8	2.4	2.4	16	5.5
4.010	5.000	10	10	3.0	3.0	20	7.0



$\varnothing$ from	to	BCH & BAH		D= $\varnothing$ est.	E= alt.	F
		d= $\varnothing$ est.	e= alt.			
5.001	9.999	18	2	30	4	10.5
10.000	13.999	24	2.5	38	5	15
14.000	17.999	30	3	46	6	19
18.000	23.999	38	3.5	56	8	25
24.000	30.000	46	4	68	8	25



### GO an NO GO ring gauges:

BCH and BAH as well as BOMm et BOMa ring gauges can be mounted, in pairs, on plates, thus forming GO and NOGO gauges



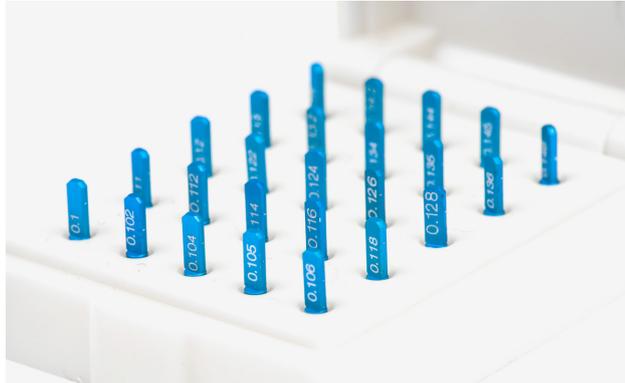
### Characteristics:

Ring gauges are mounted in light alloy rings which enables easier handling and, at the same time, provides protection for the ring gauge.

Types	BIMH	BBOM
Diameter ( $\varnothing$ ) (mm)	from 0.06 to 5mm	from 5 to 29.99mm
Equipment	BIMHm: with 2 tungsten carbide rings (BCH) BIMHa: with 2 steel rings (BAH)	BBOMm: with 2 tungsten carbide rings (BOMm) BBOMA: with 2 steel rings (BOMA)

## CARY' SALES PROGRAM

- Etalon gauges and rings
- Horizontal measuring benches
- Vertical stands
- High precision stands
- Measuring system for bores
- Metrological lengths sensors
- Display cases
- Static systems
- Special applications



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