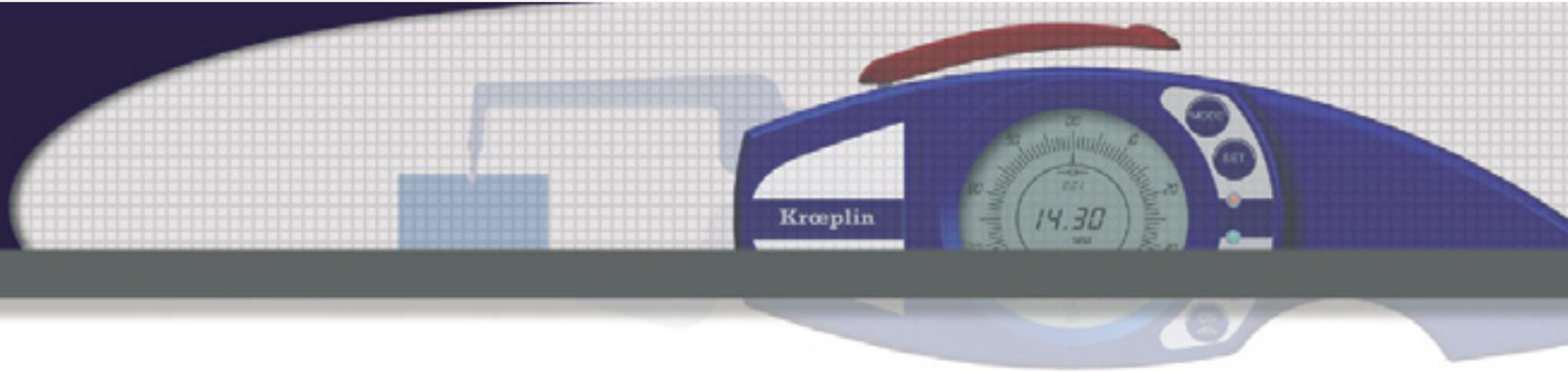


**Kroeplin**  
Längenmesstechnik



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MECHANICAL AND ELECTRONIC

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LENGTH MEASURING INSTRUMENTS

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FOR INTERNAL AND EXTERNAL

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MEASUREMENTS

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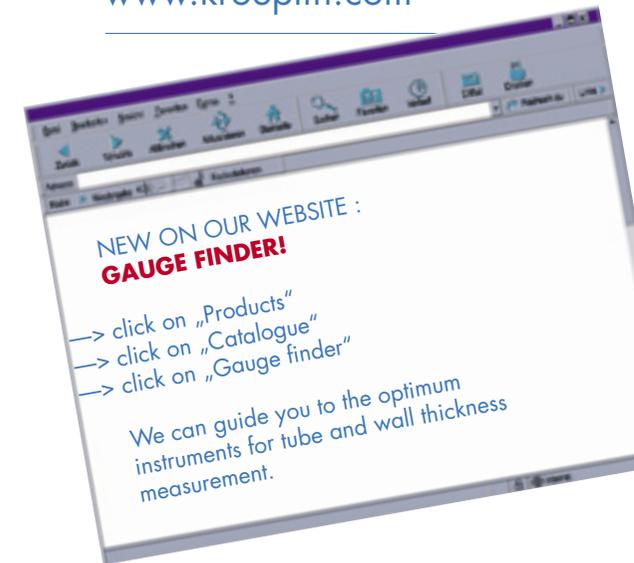
## PRECISION AND CONTINUITY

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Ever since its foundation in 1883 Kroeplin have been involved in development and production of handy reliable and precise gauges for the measurement of lengths and thicknesses, especially for the metalworking industry. Thus the quick test system was created, which was the basis for all further innovations and also for the electronic dial indicators.

Experience is the solid foundation for quality. Careful observation and analysis of the market, flexible realization of requirements, convincing measuring concepts - that is the philosophy that makes Kroeplin successful. Today like before more than 100 years.

[www.kroeplin.com](http://www.kroeplin.com)



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## NEW GENERATION OF INTERNAL AND EXTERNAL MEASURING QUICKTEST GAUGES

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For the first time the gauges provide a digital / analog display for better reading. The quicktest gauges includes custom designed test programs, measuring contacts, absolute- and relative measuring programs and red/green display for tolerance measurement.

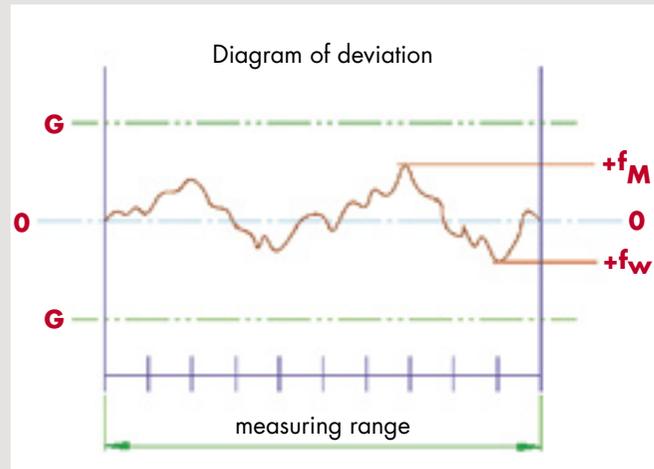
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## FEATURES

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- NEW! For the first time with analog / digital display for better reading
- IP 63, suitable for workshop use
- Mitutoyo interface
- USB interface
- Compact design, easy to handle
- mm / inch conversion
- Measuring programs and contacts for different applications
- Absolute and relative measurement
- Gauge without cable
- Red / green display for tolerance measurement
- Numerical interval switch
- Convincing price for convincing performance
- Special solutions possible
- Certificate of quality
- Optional lug-on-center-back

## DEFINITIONS AND FEATURES



## FEATURES

- Certificate of quality
- Reliable repeatability
- Scales are well arranged and easy to read
- Scale interval from 0,005mm up
- Tolerance marks easy to read
- Very handy
- All mechanical gauges are also available in „INCH“. The electronic Quicktest can be switched over to INCH.
- Absolute measurement
- Measuring contacts are mainly made of carbide

### Definitions:

*Terms of length test techniques see DIN 2257 part 1 and part 2 and International Vocabulary of Basic and General Terms in Metrology*

### Foundations

This instruction follows approximately the checking instructions of the German standard DIN 878 for dial gauges and the checking instructions for caliper gauges according to VDI/VDE/DGQ 2618, page 13.

The gauges are referred to as gauges with absolute measurement and adjustable zero point.

### Range of indication Azb

The range of indication is the range between the highest and the lowest indication.

### Measuring range Meb

The measuring range of a gauge represents the range of measuring values in which given error limits must not be exceeded.

### Measuring span Mes

The measuring span is the difference between starting value and final value of the measuring range.

### Scale interval Skw

The scale interval is the modification of the value of the value of a measured variable that causes the modification of the indication by one interval. The scale interval is indicated in the unity of the measured variable.

### Deviation in the measuring range f<sub>M</sub>

The deviation in the measuring range f<sub>M</sub> represents the distance of ordinates between the highest and the lowest position in the deviation diagram, when the movable caliper arm closes. The **tolerance field G** for f<sub>M</sub> is symmetrically positioned to the zero line.

### Repeat precision f<sub>W</sub>

The repeat precision f<sub>W</sub> is a characteristic value for deviations of the measured quantity within the measuring range in the same motion direction of the movable caliper arm (usually n=5). This margin of error is designated as **repeat limit r**.

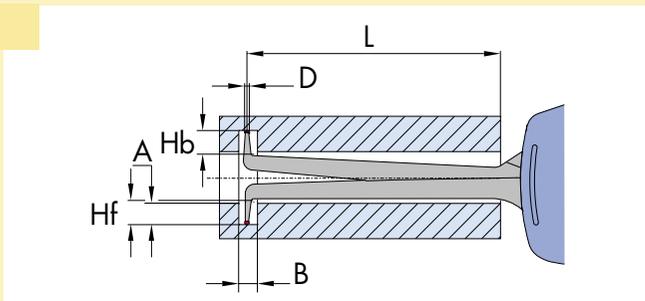
### Measuring force F<sub>min</sub>, F<sub>max</sub>

When the caliper arm closes, the measuring force F<sub>min</sub>/F<sub>max</sub> is determined at the top of the movable caliper arm. The gauge must be held in vertical position ≥ 200 mm

INTERNAL MEASUREMENT

MEASURING CAPACITY

- Groove depth A
- Groove width B
- Measuring depth L
- Type of measuring contact D
- Measuring contact movable Hb
- Measuring contact fixed Hf



F102

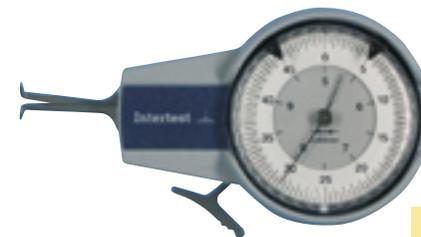


F205

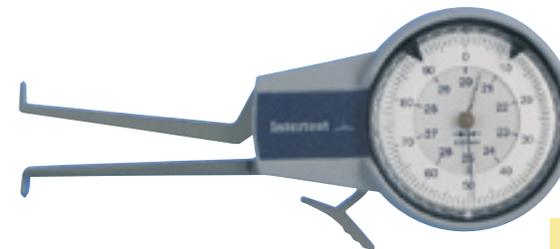


F210

The proven and handy groove measuring gauges for workshop use



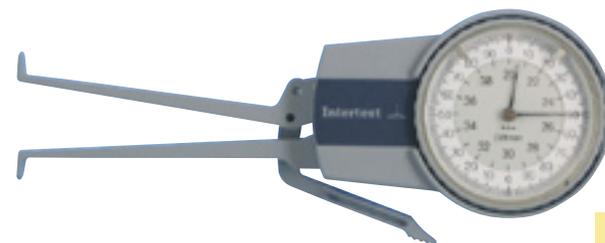
ID0305



ID0720



ID1010



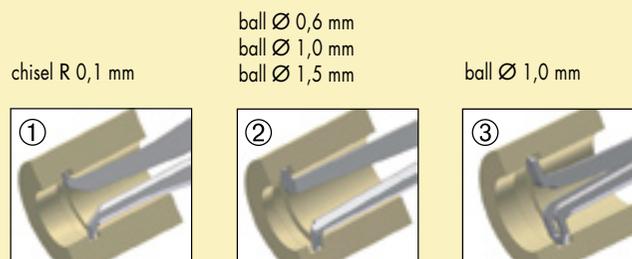
ID1020

## INTERNAL MEASUREMENT

Gauges up to 40 mm

	Measuring range Me <b>b</b>	Measuring span Mes	Range of indication Az <b>b</b>	Scale interval Skw	Max. permissible errors G	Repeatability limit r	Measuring force F min - F max	Weight	Measuring depth L	Groove depth A	Groove width B	Protection class	Measuring contact movable H <b>b</b>	Measuring contact fixed H <b>f</b>	Type of measuring contact D	Picture	Electronic E	Mechanical M	Wooden box	Interface Mitutoyo	Interface USB
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[g]	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]			ACCESSORIES			
ID0302	2,5 - 7,5	5	2,3 - 7,8	0,005	0,015	0,005	1,2 - 1,7	120	10	0,7	0,6	—	0,9	0,9	R 0,1	①	M	1732-01	—	—	
F102 *)	2,5 - 12,5	10	2,3 - 13,0	0,005	0,015	0,015	0,7 - 1,2	270	10	0,7	0,6	IP 63	0,9	0,9	chisel R 0,1	①	E	1732-43	1960-90	1960-91	
ID0305	5 - 10	5	4,7 - 10,3	0,005	0,015	0,005	1,0 - 2,0	120	22	1,8	1,4	—	2,2	2,2	ball Ø 0,6	②	M	1732-01	—	—	
ID0705	5 - 15	10	4,7 - 15,5	0,010	0,020	0,005	0,9 - 2,0	140	23	1,7	1,1	—	2,3	2,3	ball Ø 0,6	②	M	1732-01	—	—	
F205 *)	5 - 25	20	4,8 - 25,5	0,010	0,020	0,020	0,9 - 1,4	290	22	2,2	1,8	IP 63	2,3	2,3	ball Ø 0,6	②	E	1732-43	1960-90	1960-91	
ID0710	10 - 20	10	9,5 - 20,5	0,010	0,020	0,005	0,9 - 2,0	140	56	4,5	2	—	5,3	5,3	ball Ø 1,0	③	M	1732-01	—	—	
ID1010	10 - 30	20	9,8 - 30,5	0,010	0,030	0,010	0,9 - 1,5	240	80	4,5	1,8	—	5	5	ball Ø 1,0	②	M	1732-31	—	—	
F210	10 - 30	20	9,8 - 30,5	0,010	0,020	0,010	0,9 - 1,4	290	47	4	2	IP 63	5,3	5,3	ball Ø 1,0	③	E	1732-43	1960-90	1960-91	
ID0720	20 - 30	10	19,2 - 30,3	0,010	0,020	0,005	0,9 - 2,0	140	56	4,5	2	—	5,3	5,3	ball Ø 1,0	③	M	1732-01	—	—	
ID1020	20 - 40	20	19,8 - 40,5	0,010	0,030	0,010	0,9 - 1,5	260	80	6	2,5	—	7	7	ball Ø 1,0	②	M	1732-31	—	—	
F220	20 - 40	20	19,5 - 40,5	0,010	0,02	0,01	1,1 - 1,7	290	50	4	2	IP 63	—	—	ball Ø 1,0	②	E	1732-43	1960-90	1960-91	
ID0730	30 - 40	10	29,2 - 40,5	0,010	0,020	0,005	0,9 - 2,0	140	56	4,5	2	—	5,3	5,3	ball Ø 1,0	②	M	1732-01	—	—	

### MEASURING CONTACTS FOR INTERNAL MEASUREMENT



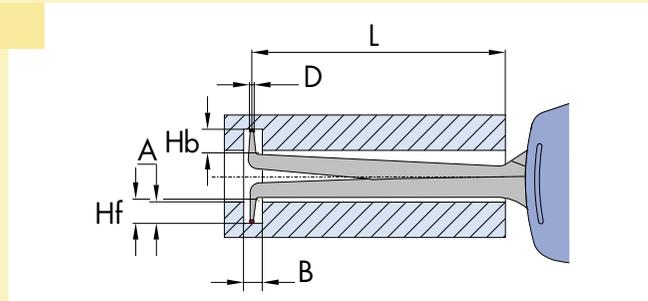
#### \*) MEASUREMENT USING A STAND

Gauges F102 and F205 can be supplied with an adapter to enable measuring a stand. See accessories on page 22, article number 8003-08.

INTERNAL MEASUREMENT

MEASURING CAPACITY

- Groove depth A
- Groove width B
- Measuring depth L
- Type of measuring contact D
- Measuring contact movable Hb
- Measuring contact fixed Hf



F230



F250



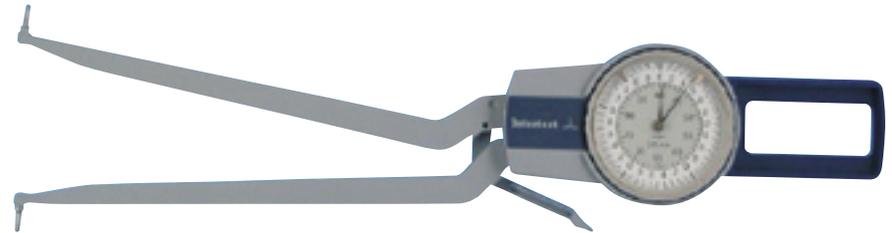
F415



ID1050



ID2015



ID2040

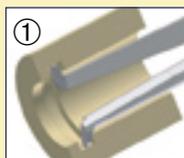
## INTERNAL MEASUREMENT

Gauges up to 100 mm

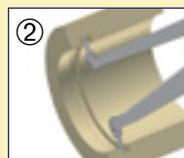
	Measuring range MeB	Measuring span Mes	Range of indication AzB	Scale interval Skw	Max. permissible errors G	Repeatability limit r	Measuring force F min - F max	Weight	Measuring depth L	Groove depth A	Groove width B	Protection class	Measuring contact movable Hb	Measuring contact fixed Hf	Type of measuring contact D	Picture	Electronic E	Mechanical M	ACCESSORIES		
F415	15 - 55	40	14,8 - 56	0,020	0,040	0,020	1,2 - 1,7	360	114	4,5	2,5	IP 63	6	6	ball Ø 1,5	①	E	1732-43	1960-90	1960-91	
ID2015	15 - 65	50	14,5 - 65,5	0,050	0,050	0,025	1,2 - 2,0	400	175	4,5	2,5	—	5,3	5,3	ball Ø 1,5	①	M	1732-30	—	—	
F230	30 - 50	20	29,5 - 50,5	0,010	0,020	0,010	1,1 - 1,7	290	54	6	2	IP 63	9,4	9,4	ball Ø 1,0	②	E	1732-43	1960-90	1960-91	
ID1030	30 - 50	20	29,8 - 50,5	0,010	0,030	0,010	0,9 - 1,5	260	80	6	2,5	—	6,8	6,8	ball Ø 1,0	①	M	1732-31	—	—	
ID0740	40 - 50	10	39,2 - 50,5	0,010	0,020	0,005	0,9 - 2,0	140	57	4,5	2	—	5	5	ball Ø 1,0	①	M	1732-01	—	—	
F240	40 - 60	20	39,5 - 60,5	0,010	0,020	0,010	1,1 - 1,7	290	54	6	2	IP 63	9,1	9,1	ball Ø 1,0	②	E	1732-43	1960-90	1960-91	
ID1040	40 - 60	20	39,8 - 60,5	0,010	0,030	0,010	0,9 - 1,5	300	80	8	2,5	—	8,5	8,5	ball Ø 1,0	②	M	1732-31	—	—	
F435	35 - 75	40	34,5 - 76	0,020	0,040	0,020	1,3 - 1,8	380	114	8	3	IP 63	8,5	8,5	ball Ø 2,0	②	E	1732-43	1960-90	1960-91	
ID2040	40 - 90	50	39,5 - 90,5	0,050	0,050	0,025	1,2 - 2,0	440	175	8	2,5	—	8,5	8,5	ball Ø 2,0	②	M	1732-30	—	—	
F250	50 - 70	20	49,5 - 70,5	0,010	0,020	0,010	1,1 - 1,7	290	54	7,5	2	IP 63	6,5	6,5	ball Ø 1,0	②	E	1732-43	1960-90	1960-91	
ID1050	50 - 70	20	49,8 - 70,5	0,010	0,030	0,010	0,9 - 1,5	300	80	6	2,5	—	8,5	8,5	ball Ø 1,0	②	M	1732-31	—	—	
F455	55 - 95	40	54 - 96	0,020	0,040	0,020	1,3 - 1,8	380	114	8	3	IP 63	8,5	8,5	ball Ø 2,0	②	E	1732-43	1960-90	1960-91	
F260	60 - 80	20	59,5 - 80,5	0,010	0,020	0,010	1,1 - 1,7	290	54	6	2	IP 63	6,5	6,5	ball Ø 1,0	②	E	1732-43	1960-90	1960-91	
ID1060	60 - 80	20	59,8 - 80,5	0,010	0,030	0,010	0,9 - 1,5	310	80	8	2,5	—	8,5	8,5	ball Ø 1,0	②	M	1732-31	—	—	
F270	70 - 90	20	69,5 - 90,5	0,010	0,020	0,010	1,1 - 1,7	290	54	6	2	IP 63	6,5	6,5	ball Ø 1,0	②	E	1732-43	1960-90	1960-91	
ID1070	70 - 90	20	69,8 - 90,5	0,010	0,030	0,010	0,9 - 1,5	310	80	8	2,5	—	8,5	8,5	ball Ø 1,0	②	M	1732-31	—	—	
ID1080	80 - 100	20	79,8 - 100,5	0,010	0,030	0,010	0,9 - 1,5	310	80	8	2,5	—	8,5	8,5	ball Ø 1,0	②	M	1732-31	—	—	

## MEASURING CONTACTS FOR INTERNAL MEASUREMENT

ball Ø 1,0 mm  
ball Ø 1,5 mm  
ball Ø 2,0 mm



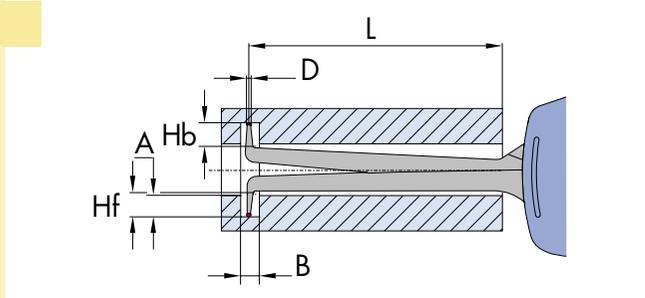
ball Ø 1,0 mm  
ball Ø 2,0 mm



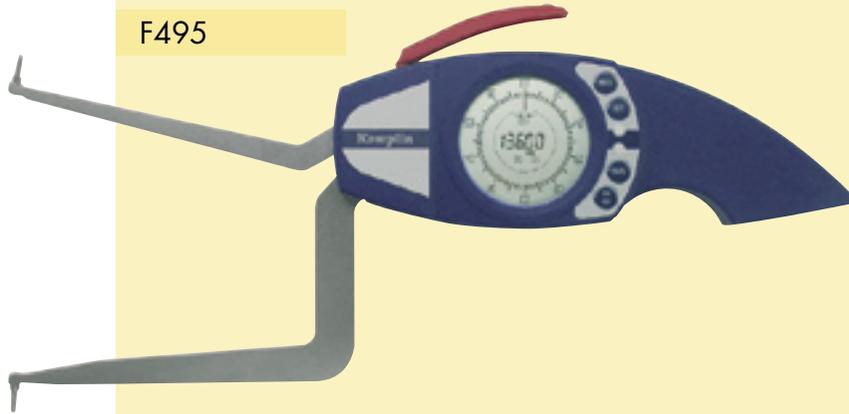
# INTERNAL MEASUREMENT

## MEASURING CAPACITY

- Groove depth A
- Groove width B
- Measuring depth L
- Type of measuring contact D
- Measuring contact movable Hb
- Measuring contact fixed Hf



F495



ID80200



ID20150



ID20100



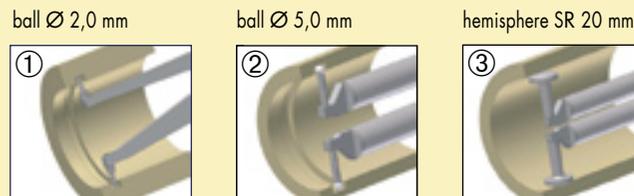
## INTERNAL MEASUREMENT

Gauges up to 200 mm		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[g]	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]			ACCESSORIES		
		Measuring range Meb	Measuring span Mes	Range of indication Azb	Scale interval Skw	Max. permissible errors G	Repeatability limit r	Measuring force F min - F max	Weight	Measuring depth L	Groove depth A	Groove width B	Protection class	Measuring contact movable Hb	Measuring contact fixed Hf	Type of measuring contact D	Picture	Electronic E	Mechanical M	Wooden box	Interface Mitutoyo
	ID4040	40 - 140	100	39,5 - 140,5	0,100	0,150	0,075	1,5 - 2,5	510	385	2	5	—	2,5	2,5	ball Ø 5,0	②	M	HK	—	—
	ID4060	60 - 160	100	59,5 - 160,5	0,100	0,150	0,075	1,5 - 2,5	510	385	12	8	—	12,5	12,5	ball Ø 5,0	②	M	HK	—	—
	ID2070	70 - 120	50	69,5 - 120,5	0,050	0,050	0,025	1,2 - 2,0	440	175	8	3,3	—	10,5	10,5	ball Ø 2,0	①	M	1732-30	—	—
	F475	75 - 115	40	74,0 - 116,0	0,020	0,040	0,02	1,3 - 1,8	380	114	8	3,3	IP 63	10,5	10,5	ball Ø 2,0	①	E	1732-43	1960-90	1960-91
	F495	95 - 135	40	94,0 - 136,0	0,020	0,040	0,02	1,3 - 1,8	380	114	8	3,3	IP 63	10,5	10,5	ball Ø 2,0	①	E	1732-43	1960-90	1960-91
	ID20100	100 - 150	50	99,5 - 150,5	0,050	0,050	0,025	1,2 - 2,0	440	175	8	3,3	—	10,5	10,5	ball Ø 2,0	①	M	1732-30	—	—
	ID20130	130 - 180	50	129,5-180,5	0,050	0,050	0,025	1,2 - 2,0	500	175	8	3,3	—	10,5	10,5	ball Ø 2,0	①	M	HK	—	—
	ID20150	150 - 200	50	149,5-200,5	0,050	0,050	0,025	1,2 - 2,0	520	175	8	3,3	—	30	20	ball Ø 2,0	①	M	HK	—	—
	ID6080	80 - 180	100	79,5 - 180,5	0,100	0,250	0,100	1,5 - 2,5	2000	535	11	8	—	11,5	11,5	ball Ø 5,0	②	M	HK	—	—

> 200 mm		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[g]	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]			ACCESSORIES		
		Measuring range Meb	Measuring span Mes	Range of indication Azb	Scale interval Skw	Max. permissible errors G	Repeatability limit r	Measuring force F min - F max	Weight	Measuring depth L	Groove depth A	Groove width B	Protection class	Measuring contact movable Hb	Measuring contact fixed Hf	Type of measuring contact D	Picture	Electronic E	Mechanical M	Wooden box	Interface Mitutoyo
	ID20180	180 - 230	50	179,5-230,5	0,05	0,075	0,025	1,2 - 2,0	520	175	8	3,3	—	30	20	ball Ø 2,0	①	M	HK	—	—
	ID60150	150 - 250	100	149,5-250,5	0,100	0,300	0,100	1,5 - 2,5	2000	535	30	10	—	31,5	31,5	ball Ø 5,0	②	M	HK	—	—
	ID60220	220 - 320	100	219,5-320,5	0,100	0,300	0,100	1,5 - 2,5	2000	535	30	10	—	31,5	31,5	ball Ø 5,0	②	M	HK	—	—
	ID80200	200 - 400	200	199,0-401,0	0,200	0,400	0,200	1,0 - 2,0	2600	735	28	25	—	29,5	29,5	hemisphere SR 20	③	M	HK	—	—

## MEASURING CONTACTS FOR INTERNAL MEASUREMENT

HK — wooden box is included in delivery.



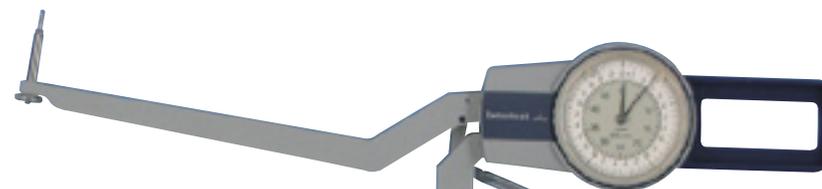
## COMPARISON MEASUREMENT



ID10M120



ID10M60



ID20M180



Measuring range can be varied by using different contacts, secured by finger-screw in the lower measuring arm.

## COMPARISON MEASUREMENT

### GAUGES

up to 190 mm

	Measuring range Meb	Measuring span Mes	Range of indication Azb	Scale interval Skw	Max. permissible errors G	Repeatability limit r	Measuring force F min - F max	Weight	Measuring depth L	Protection class	Measuring contact movable Hb	Measuring contact fixed Hf	Type of measuring contact D	Electronic E	Mechanical M	Wooden box	Interface Mitutoyo	Interface USB
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[g]	[mm]		[mm]	[mm]				ACCESSORIES		
ID10M60	60 - 130	20	59,8 - 130,5	0,010	0,030	0,015	0,9 - 1,5	310	80	—	10	20 - 70	ball Ø 1	M		HK	—	—
ID10M120	120 - 190	20	119,8 - 190,5	0,010	0,040	0,020	0,9 - 1,5	330	80	—	10	20 - 70	ball Ø 1	M		HK	—	—

up to 550 mm

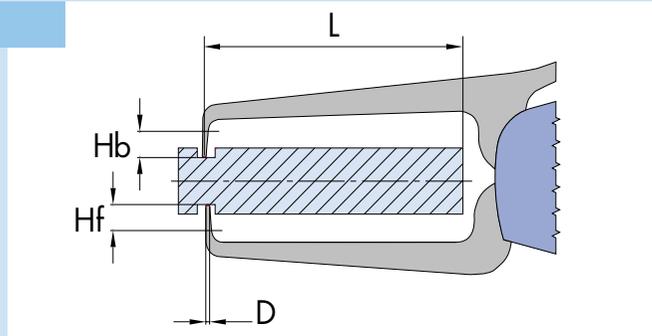
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[g]	[mm]	[mm]		[mm]	[mm]			ACCESSORIES		
ID20M180	180 - 310	50	179,5-310,5	0,050	0,075	0,050	1,2 - 2,0	520	170	—	30	20/60/100	ball Ø 2	M		HK	—	—
ID20M300	300 - 430	50	299,5-430,5	0,050	0,150	0,050	1,2 - 2,0	600	170	—	30	20/60/100	ball Ø 2	M		HK	—	—
ID20M420	420 - 550	50	419,5-550,5	0,050	0,250	0,050	1,2 - 2,0	600	170	—	30	20/60/100	ball Ø 2	M		HK	—	—

These ergonomically designed gauges were developed for comparison measurement of grooves and bores, over very large measuring ranges.

HK — wooden box is included in delivery.

MEASURING CAPACITY

Measuring contact movable Hb  
 Measuring contact fixed Hf  
 Measuring depth L  
 Type of measuring contact D



B110



B220



POCO2K



POCO2F



POCO2N



OD0305



OD0710



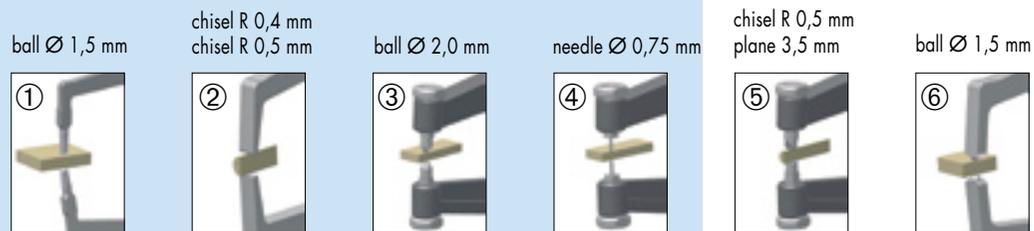
OD1020

## EXTERNAL MEASUREMENT

Gauges up to 20 mm

	Measuring range Meb	Measuring span Mes	Range of indication Azb	Scale interval Skw	Max. permissible errors G	Repeatability limit r	Measuring force F min - F max	Weight	Measuring depth L	Protection class	Measuring contact movable Hb	Measuring contact fixed Hf	Type of measuring contact D	Picture	Electronic F	Mechanical M	ACCESSORIES		
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[g]	[mm]		[mm]	[mm]	[mm]						
OD0305	0 - 5	5	0,0 - 5,4	0,005	0,015	0,005	1,0 - 2,0	120	26	—	7	7	ball Ø 1,5	⑥	M		1732-01	—	—
B110	0 - 10	10	0,0 - 10,5	0,005	0,010	0,010	0,6 - 1,2	270	18	IP 63	16	16	ball Ø 1,5	①	E		1732-43	1960-90	1960-91
OD0710	0 - 10	10	0,0 - 10,8	0,010	0,020	0,005	0,7 - 1,5	140	59	—	7	7	ball Ø 1,5	⑥	M		1732-01	—	—
OD0710S	0 - 10	10	0,0 - 10,8	0,010	0,020	0,005	0,7 - 1,5	140	59	—	7	7	chisel R 0,4	②	M		1732-01	—	—
POCO 2F	0 - 10	10	0,0 - 13,0	0,100	0,100	0,050	0,3 - 1,3	40	36	—	4,5	4,5	Sn-R 0,5 / F Ø 3,5	⑤	M		1732-01	—	—
POCO 2K	0 - 10	10	0,0 - 13,0	0,100	0,100	0,050	0,3 - 1,3	40	36	—	5	5	ball Ø 2,0	③	M		1732-01	—	—
POCO 2N	0 - 10	10	0,0 - 13,0	0,100	0,100	0,050	0,3 - 1,3	40	36	—	3,5	3,5	chisel Ø 0,75	④	M		1732-01	—	—
B220	0 - 20	20	0,0 - 21,0	0,010	0,020	0,010	0,7 - 1,3	290	50	IP 63	16	16	ball Ø 1,5	①	E		1732-43	1960-90	1960-91
B220S	0 - 20	20	0,0 - 21,0	0,010	0,020	0,010	0,7 - 1,3	290	—	IP 63	—	—	chisel R 0,4	②	E		1732-43	1960-90	1960-91
OD1020	0 - 20	20	0,0 - 20,5	0,010	0,030	0,010	0,9 - 1,5	320	80	—	24	24	ball Ø 1,5	①	M		1732-31	—	—
OD1020S	0 - 20	20	0,0 - 20,5	0,010	0,030	0,010	0,9 - 1,5	320	80	—	22	22	chisel R 0,5	②	M		1732-31	—	—

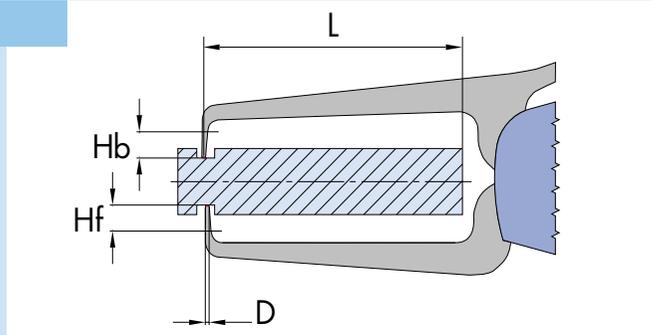
## MEASURING CONTACTS FOR EXTERNAL MEASUREMENT



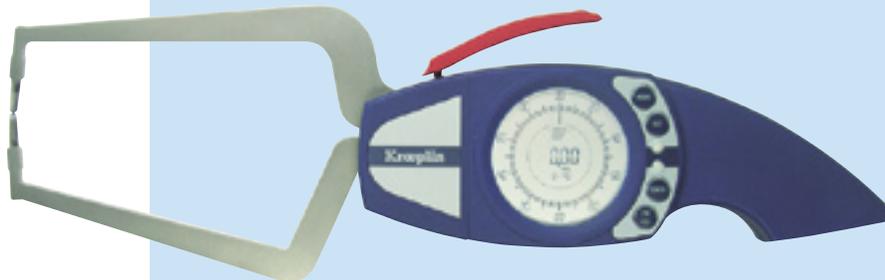
EXTERNAL MEASUREMENT

MEASURING CAPACITY

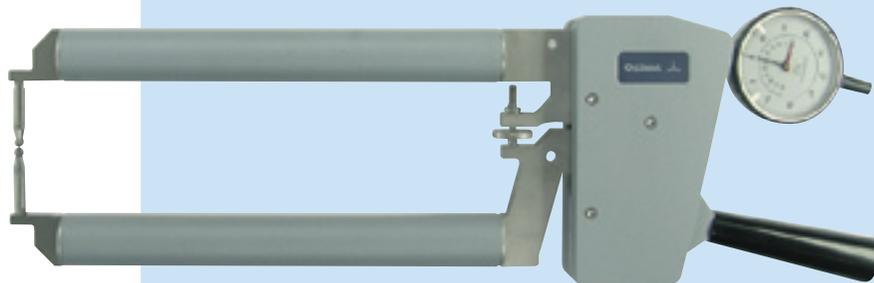
Measuring contact movable Hb  
 Measuring contact fixed Hf  
 Measuring depth L  
 Type of measuring contact D



B440



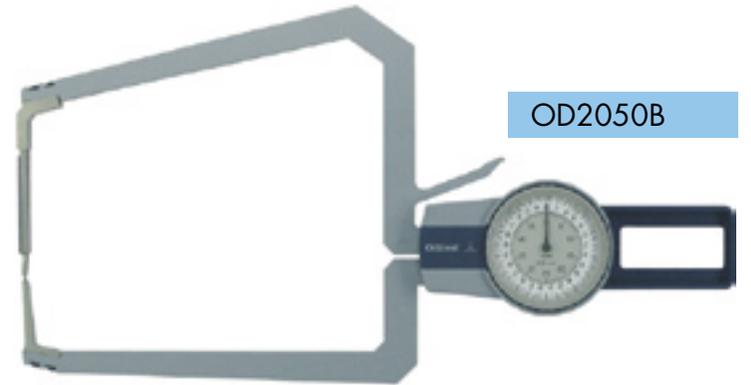
OD3050



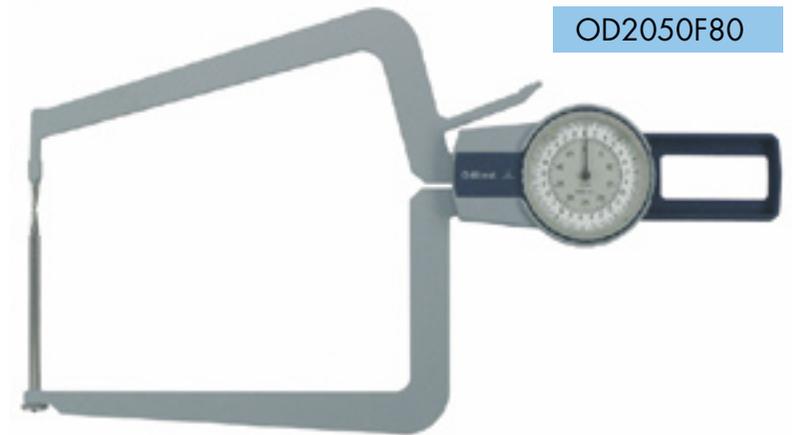
OD2050



OD2050B



OD2050F80



## EXTERNAL MEASUREMENT

Gauges up to 50 mm

	Measuring range Meb	Measuring span Mes	Range of indication Azb	Scale interval Skw	Max. permissible errors G	Repeatability limit r	Measuring force F min - F max	Weight	Measuring depth L	Protection class	Measuring contact movable Hb	Measuring contact fixed Hf	Type of measuring contact D	Picture	Electronic E	Mechanical M	ACCESSORIES		
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[g]	[mm]		[mm]	[mm]	[mm]				1732-43	1960-90	1960-91
B440	0 - 40	40	0,0 - 41,0	0,020	0,040	0,020	1,0 - 1,5	380	115	IP 63	22	22	ball Ø 3	①	E		1732-43	1960-90	1960-91
B440S	0 - 40	40	0,0 - 41,0	0,020	0,040	0,020	1,0 - 1,5	380	115	IP 63	22	18	chisel R 0,75	②	E		1732-43	1960-90	1960-91
OD2050	0 - 50	50	0,0 - 50,5	0,050	0,050	0,025	1,2 - 1,8	560	170	—	32	32	ball Ø 2	①	M		1732-30	—	—
OD2050B	0 - 50	50	0,0 - 50,5	0,050	0,075	0,025	1,2 - 1,8	560	170	—	82	32	ball Ø 2	①	M		HK	—	—
OD2050S	0 - 50	50	0,0 - 50,5	0,050	0,050	0,025	1,2 - 1,8	560	170	—	32	32	chisel R 0,75	②	M		1732-30	—	—
OD2050BF130	0 - 50	50	0,0 - 50,5	0,050	0,075	0,050	1,2 - 1,8	600	170	—	82	132	ball Ø 2	①	M		HK	—	—
OD2050BF80	0 - 50	50	0,0 - 50,5	0,050	0,075	0,050	1,2 - 1,8	580	170	—	82	82	ball Ø 2	①	M		HK	—	—
OD2050F130	0 - 50	50	0,0 - 50,5	0,050	0,075	0,050	1,2 - 1,8	600	170	—	32	132	ball Ø 2	①	M		HK	—	—
OD2050F80	0 - 50	50	0,0 - 50,5	0,050	0,075	0,025	1,2 - 1,8	580	170	—	32	82	ball Ø 2	①	M		HK	—	—
OD3050	0 - 50	50	0,0 - 50,5	0,1	0,150	0,075	1,5 - 2,5	1600	230	—	32	32	ball Ø 5	③	M		HK	—	—

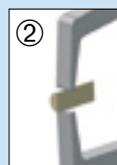
HK — wooden box is included in delivery.

## MEASURING CONTACTS FOR EXTERNAL MEASUREMENT

ball Ø 2,0 mm  
ball Ø 3,0 mm

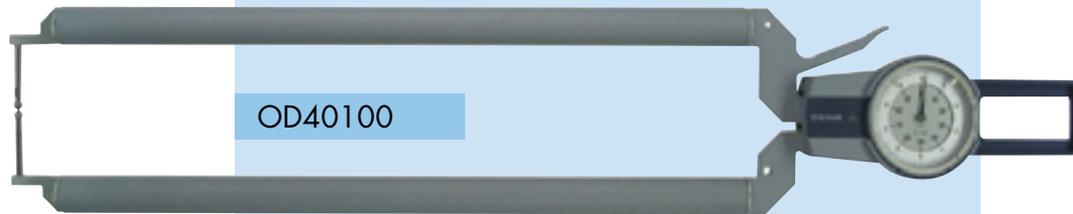
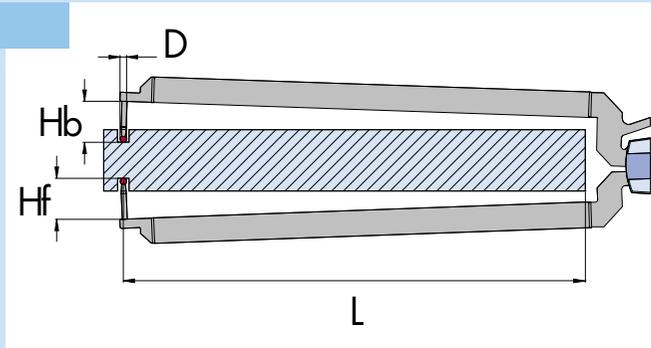
chisel R 0,75 mm

ball Ø 5,0 mm



## MEASURING CAPACITY

Measuring contact movable- Hb  
 Measuring contact fixed Hf  
 Measuring depth L  
 Type of measuring contact D



OD40100



OD60100BJ



OD20100F80

## EXTERNAL MEASUREMENT

Gauges up to 200 mm

	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[g]	[mm]		[mm]	[mm]	[mm]				ACCESSORIES		
	Measuring range Meb	Measuring span Mes	Range of indication Azb	Scale interval Skw	Max. permissible errors G	Repeatability limit r	Measuring force F min - F max	Weight	Measuring depth L	Protection class	Measuring contact movable Hb	Measuring contact fixed Hf	Type of measuring contact D	Picture	Electronic E	Mechanical M	Wooden box	Interface Mitutoyo	Interface USB
OD20100	50 - 100	50	49,5 - 100,5	0,050	0,075	0,025	1,2 - 1,8	580	170	—	32	82	ball Ø 2	①	M		HK	—	—
OD20100F80	50 - 100	50	49,5 - 100,5	0,050	0,075	0,050	1,2 - 1,8	600	170	—	32	82	ball Ø 2	①	M		HK	—	—
OD40100	0 - 100	100	0 - 102	0,100	0,150	0,075	1,5 - 2,5	680	368	—	32	32	ball Ø 5	②	M		HK	—	—
OD60100	0 - 100	100	0 - 102	0,100	0,300	0,150	1,5 - 2,5	2000	530	—	32	32	ball Ø 5	②	M		HK	—	—
OD60100BJ	0 - 100	100	0 - 102	0,100	0,300	0,150	1,5 - 2,5	2300	530	—	32	132	ball Ø 5	②	M		HK	—	—
OD20150	0 - 150	50	99,5 - 150,5	0,050	0,075	0,050	1,2 - 1,8	600	170	—	32	32	ball Ø 2	①	M		HK	—	—
OD80200	0 - 200	200	0 - 20	0,200	0,400	0,200	1,0 - 2,0	3000	725	—	100	100	hemisphere SR 20	③	M		HK	—	—

HK — wooden box is included in delivery.

## MEASURING CONTACTS FOR EXTERNAL MEASUREMENT

ball Ø 2,0 mm



ball Ø 5,0 mm

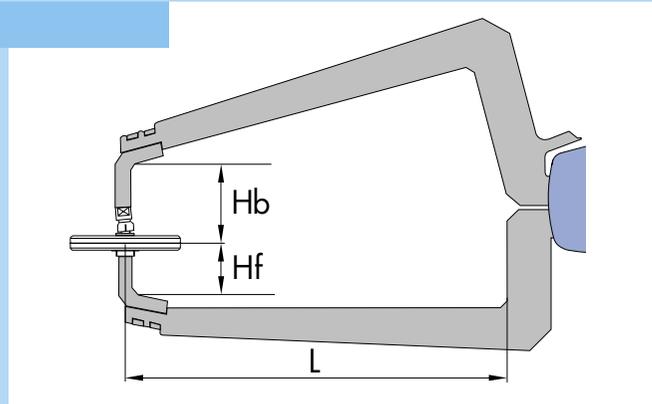


Hemisphere SR 20 mm

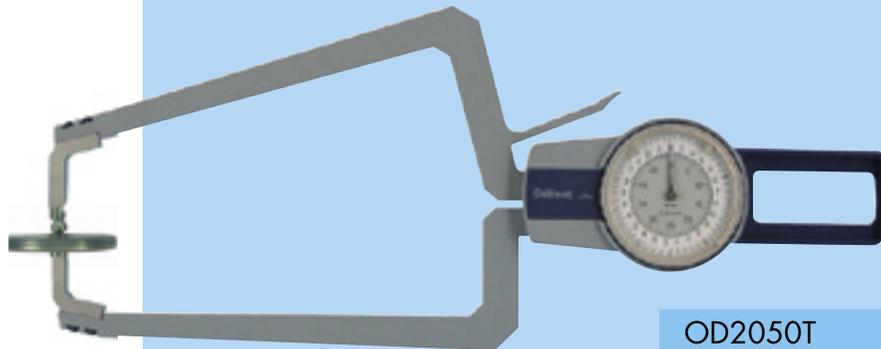


MEASURING CAPACITY

Measuring contact movable Hb  
 Measuring contact fixed Hf  
 Measuring depth L



B110T



OD2050T



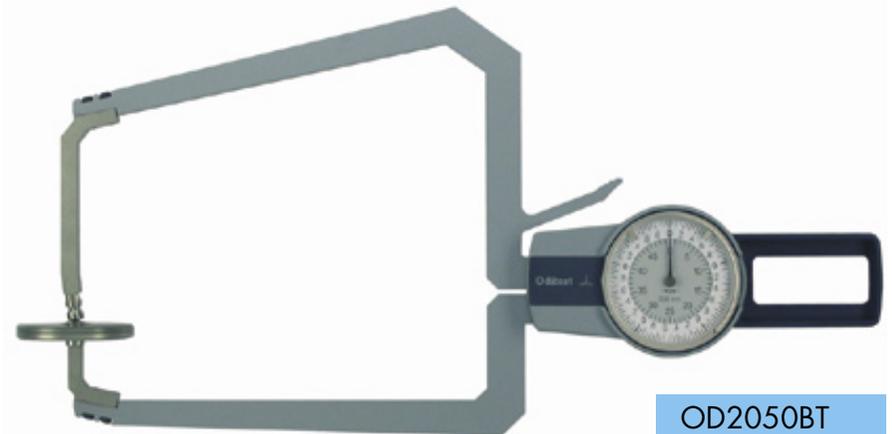
POCO2T



OD0305T



OD1020T10



OD2050BT

## EXTERNAL GAUGES WITH FLAT CONTACTS

Gauges up to 100 mm

	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[g]	[mm]		[mm]	[mm]	[mm]				ACCESSORIES		
	Measuring range Meb	Measuring span Mes	Range of indication Azb	Scale interval Skw	Max. permissible errors G	Repeatability limit r	Measuring force Fmin - Fmax	Weight	Measuring depth L	Protection class	Measuring contact movable H1b	Measuring contact fixed Hf	Type of measuring contact D	Picture	Electronic E	Mechanical M	Wooden box	Interface Mitutoyo	Interface USB	
OD0305T	0 - 5	5	0,0 - 5,4	0,005	0,020	0,005	1,0 - 2,0	120	26	—	15,5	8,5	flat Ø 10	②	M		1732-01	—	—	
B110T	0 - 10	10	0,0 - 10,5	0,005	0,010	0,010	0,6 - 1,2	270	18	IP 63	22	12	flat Ø 10	②	E		1732-43	1960-90	1960-91	
POCO 2T	0 - 10	10	0,0 - 13,0	0,100	0,100	0,050	0,3 - 1,3	40	36	—	8	2	flat Ø 10	①	M		1732-01	—	—	
OD1020T10	0 - 20	20	0,0 - 20,5	0,010	0,050	0,015	0,9 - 1,5	330	80	—	22	15	flat Ø 10	③	M		1732-31	—	—	
B440T	0 - 40	40	0,0 - 41,0	0,020	0,040	0,020	1,0 - 1,5	380	115	IP 63	29	19	flat Ø 50	④	E		1732-43	1960-90	1960-91	
OD2050T	0 - 50	50	0,0 - 50,5	0,050	0,100	0,025	1,2 - 1,8	600	170	—	35	23	flat Ø 50	④	M		1732-30	—	—	
OD40100T	0 - 100	100	0,0 - 102,0	0,100	0,150	0,075	1,5 - 2,5	680	368	—	86	6	flat Ø 50	⑤	M		HK	—	—	
OD60100T	0 - 100	100	0,0 - 102,0	0,100	0,400	0,150	1,5 - 2,5	2000	530	—	46	26	flat Ø 50	⑤	M		HK	—	—	
OD20100T	50 - 100	50	49,5 - 100,5	0,050	0,100	0,050	1,2 - 1,8	630	170	—	35	23	flat Ø 50	④	M		HK	—	—	

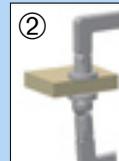
HK — wooden box is included in delivery.

## MEASURING CONTACTS FOR EXTERNAL MEASUREMENT

flat Ø 10 mm



flat Ø 10 mm



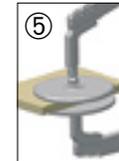
flat Ø 10 mm



flat Ø 50 mm



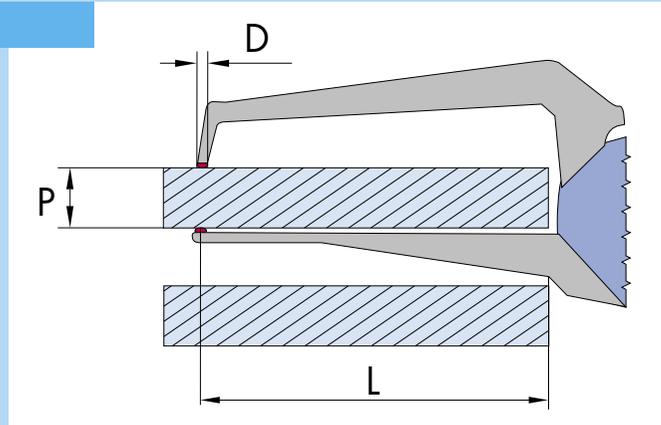
flat Ø 50 mm



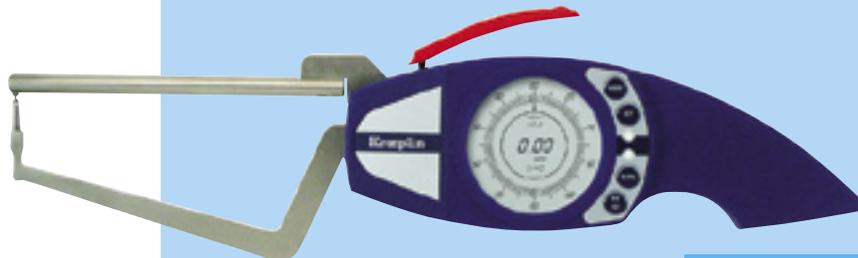
TUBE WALL MEASUREMENT

MEASURING CAPACITY

Measuring depth L  
 Tube wall thickness P  
 Type of measuring contact D



B2R20



B4R40



POCO2R



OD0710R



OD1020R



OD2050R

## TUBE WALL MEASUREMENT

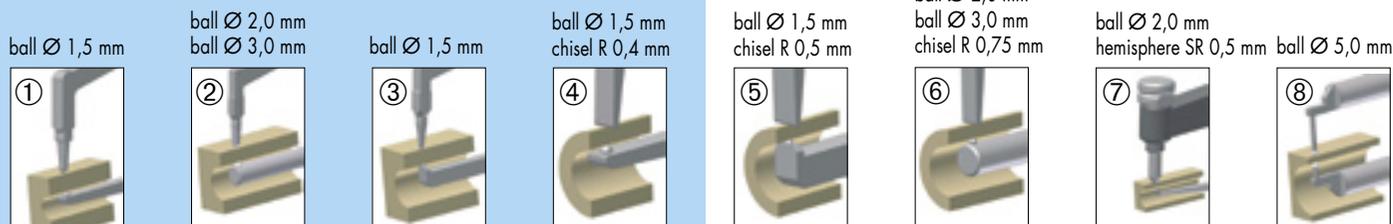
### GAUGES

	GAUGES																		ACCESSORIES		
	Measuring range Meb	Measuring span Mes	Range of indication Azb	Scale interval Skw	Max-permissible errors G	Repeatability limit r	Measuring force F min - F max	Weight	Measuring depth L	Protection class	Measuring contact movable Hb	Measuring contact fixed Hf	Type of measuring contact D	Picture	Electronic E	Mechanical M	Wooden box	Interface Mitutoyo	Interface USB		
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[g]	[mm]		[mm]	[mm]	[mm]								
up to 20 mm	POCO 2R	0 - 10	10	0,0 - 13,0	0,100	0,100	0,050	0,3 - 1,3	40	33	—	5	1	K Ø 2 / SR 0,5	⑦	M	1732-01	—	—		
	OD0710R	0 - 10	10	0,0 - 15,5	0,010	0,020	0,005	0,7 - 1,5	140	59	—	8	0,9	ball Ø 1,5	③	M	1732-01	—	—		
	OD0710RS	0 - 10	10	0,0 - 15,5	0,010	0,020	0,005	0,7 - 1,5	140	59	—	8	0,9	Sn-R 0,4 / K Ø 1,5	④	M	1732-01	—	—		
	B2R20	0 - 20	20	0,0 - 21,0	0,010	0,020	0,010	0,7 - 1,3	290	50	IP 63	15	0,9	ball Ø 1,5	①	E	1732-43	1960-90	1960-91		
	B2R20S	0 - 20	20	0,0 - 21,0	0,010	0,020	0,010	0,7 - 1,3	290	50	IP 63	15	0,9	Sn-R 0,4 / K Ø 1,5	④	E	1732-43	1960-90	1960-91		
	OD1020R	0 - 20	20	0,0 - 20,5	0,010	0,030	0,010	0,9 - 1,5	300	80	—	22	2,3	ball Ø 1,5	③	M	1732-31	—	—		
	OD1020RS	0 - 20	20	0,0 - 20,5	0,010	0,030	0,010	0,9 - 1,5	300	80	—	22	2,3	Sn-R 0,5 / K Ø 1,5	⑤	M	1732-31	—	—		

	GAUGES																		ACCESSORIES		
	Measuring range Meb	Measuring span Mes	Range of indication Azb	Scale interval Skw	Max-permissible errors G	Repeatability limit r	Measuring force F min - F max	Weight	Measuring depth L	Protection class	Measuring contact movable Hb	Measuring contact fixed Hf	Type of measuring contact D	Picture	Electronic E	Mechanical M	Wooden box	Interface Mitutoyo	Interface USB		
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[g]	[mm]		[mm]	[mm]	[mm]								
up to 50 mm	B4R40	0 - 40	40	0,0 - 41,0	0,020	0,040	0,020	1,0 - 1,5	380	115	IP 63	22	1	ball Ø 3	②	E	1732-43	1960-90	1960-91		
	B4R40S	0 - 40	40	0,0 - 41,0	0,020	0,040	0,020	1,0 - 1,5	380	115	IP 63	22	1	Sn-R 0,75 / K Ø 3,0	⑥	E	1732-43	1960-90	1960-91		
	OD2050R	0 - 50	50	0,0 - 50,5	0,050	0,050	0,025	1,2 - 1,8	520	170	—	32	1	ball Ø 2	②	M	1732-30	—	—		
	OD2050BR	0 - 50	50	0,0 - 50,5	0,050	0,075	0,025	1,2 - 1,8	560	170	—	82	1	ball Ø 2	②	M	HK	—	—		
	OD2050RS	0 - 50	50	0,0 - 50,5	0,050	0,050	0,025	1,2 - 1,8	525	170	—	32	1	Sn-R 0,75 / K Ø 2	⑥	M	1732-30	—	—		

	GAUGES																		ACCESSORIES		
	Measuring range Meb	Measuring span Mes	Range of indication Azb	Scale interval Skw	Max-permissible errors G	Repeatability limit r	Measuring force F min - F max	Weight	Measuring depth L	Protection class	Measuring contact movable Hb	Measuring contact fixed Hf	Type of measuring contact D	Picture	Electronic E	Mechanical M	Wooden box	Interface Mitutoyo	Interface USB		
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[g]	[mm]		[mm]	[mm]	[mm]								
up to 100	OD40100R	0 - 100	100	0,0 - 102,0	0,100	0,150	0,075	1,5 - 2,5	680	368	—	31,5	11,5	ball Ø 5	⑧	M	HK	—	—		

### MEASURING CONTACT FORMS FOR TUBE WALL MEASUREMENT



HK — wooden box is included in delivery.

INTERFACES

ELECTRONIC MEASURING GAUGE SERIES B/F

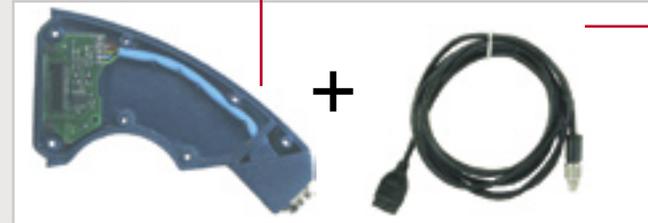


**USB**

**Interface USB**

Order code: 1960-91

**Mitutoyo-Digimatic**



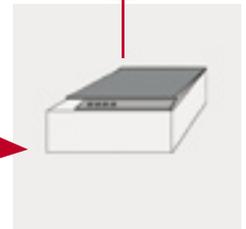
**Interface Mitutoyo**

Order code: 1960-90

**PC · Notebook**



**Interface USB Adapter**



**Digimatic**



The interfaces are available as accessories which can be upgraded at any time. They comprise an interface cover and appropriate cable (1,5m).

ACCESSORIES

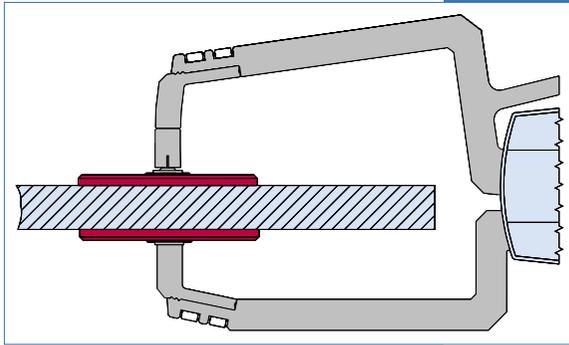
The holding unit enables the Kroeplin gauge to be used with a measuring stand.



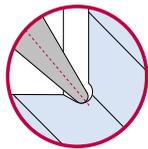
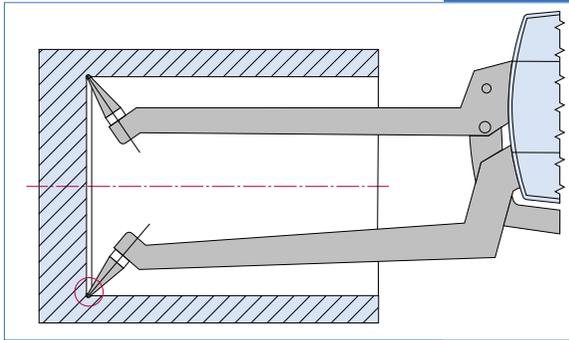
Holding unit  
Order code: 8003-08

## SPECIAL GAUGES

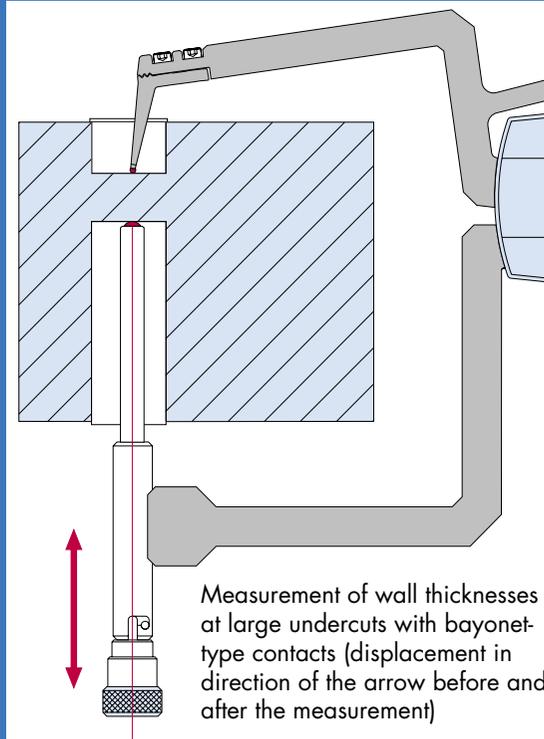
Measurement of foam materials with flat contacts and reduced measuring force



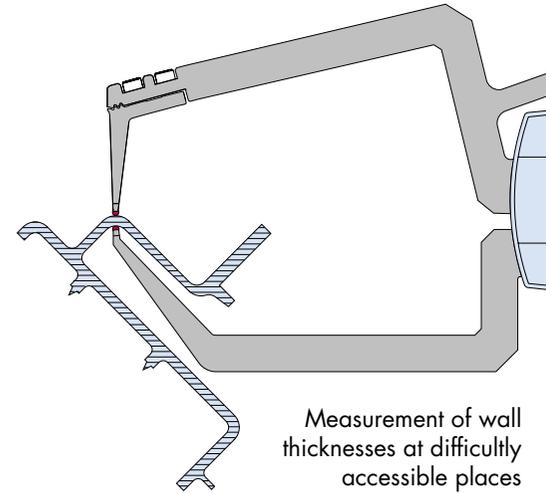
We are always searching for the best solution for your measuring problem, either mechanical or electronic. In order to enable us to find the solution together and to design your special gauge, please kindly send us a drawing of the object to be measured and indicate tolerance and measuring force, and if possible, send us a sample of the part to be measured. Full information at the enquiry stage enables us to put forward the optimum design solution for your application.



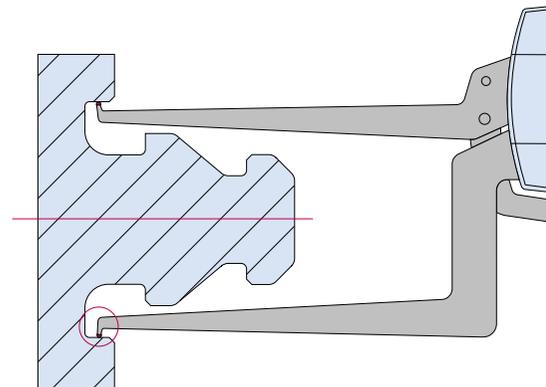
Measurement of undercuts with angled measuring contacts



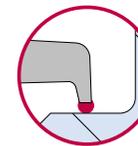
Measurement of wall thicknesses at large undercuts with bayonet-type contacts (displacement in direction of the arrow before and after the measurement)



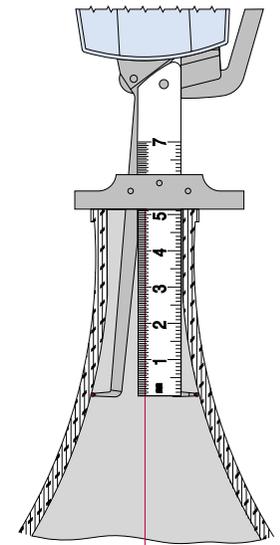
Measurement of wall thicknesses at difficultly accessible places

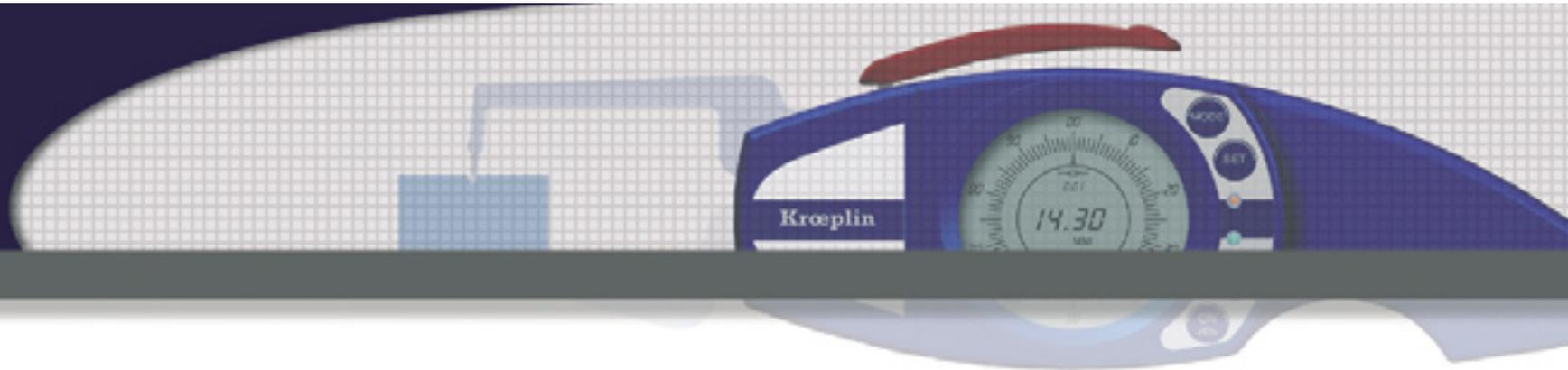


Measurement at difficultly accessible places with specially designed caliper arms

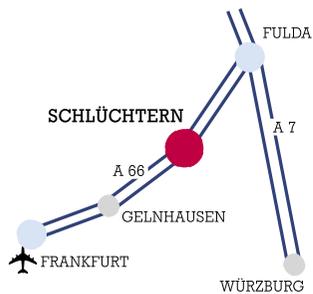


Measurement of bottle diameters with depth measurement





## APPLICATION AREA



- **Mechanical engineering**
- **Automobile industry**
- **Aerospace industry**
- **Wire manufacturers:** Diameter determination of continuous wires.
- **Glass industry:** Measurement of wall thickness in hard-to-access areas.
- **Dental laboratories:** Measurement of tooth crown thicknesses.
- **Aerosol and packaging industry:** Measurement of aerosol cans.
- **Foundries:** Measurement of cast wall thicknesses.
- **Key manufacturers:** Measurement of milled notches of keys.
- **Foam material industry:** Thickness measurement of foam material.
- **Tube manufacturers:** Internal and external measurements, also of extremely wide tubes.
- **Ceramic industry:** Safe and simple determination of contraction due to baking and drying.
- **Gun Clubs:** Checking the admissible thickness of shooting jackets.
- **Medical institutes:** Measurement of skin wrinkles of human and animals.
- **Special designs:** Your measuring task is among them.

