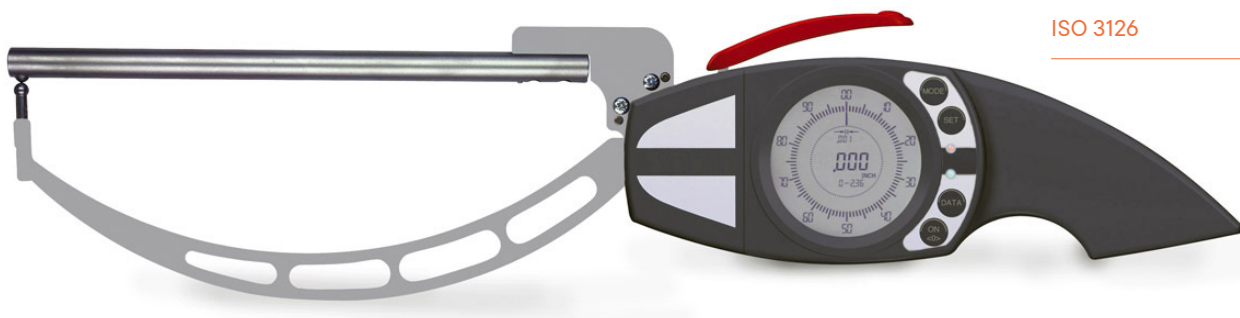


Model no. H3019

## OUTSIDE CALIPER INSIDE CALIPER



According to

ISO 3126

The outside caliper can be used to quickly and easily measure the wall thickness of pipes and fittings. The inside caliper can be used to perform an inside three-point measurement quickly and easily.

**EASY AND SAFE OPERATION**

**RELIABLE TEST RESULTS**

**LASTING EFFICIENCY**

**STATE-OF-THE-ART TECHNOLOGY**

> Operating convenience thanks to good readability of the measurements

> High reading accuracy  
> 100% final inspection  
> Delivered with calibration certificate

> High-quality unit components guarantee high reliability and a long service life  
> Safe storage in supplied high-quality packaging

> PC interface with digital version (available as an option)

<b>VERSION OUTSIDE CALIPER</b>		<b>H3019-0034</b>	<b>H3019-0035</b>	<b>H3019-0036</b>	<b>H3019-0037</b>
<b>UP TO 20 MM</b>					
Application		Measurement of grooves and thickness			
Digital measuring device		✓	-	✓	-
Analog measuring device		-	✓	-	✓
Measuring span	mm	10	10	20	20
Measuring range	mm	0-10	0-10	0-20	0-20
Display range	mm	0 - 10.5	0 - 10.5	0 - 20.5	0 - 20.5
Scale graduation value / digit step value	mm	0.005	0.005	0.01	0.01
Min. hole diameter	mm	3	3	9	9
Measuring accuracy	mm	0.015	0.015	0.03	0.03
Repeatability limits	mm	0.005	0.005	0.01	0.01
Measuring force min. - max.	N	1.2 - 1.6	1.2 - 1.6	1.1 - 1.6	1.1 - 1.6
Measuring contact form movable	mm	Edge R 0.4	Edge R 0.4	Edge R 0.4	Edge R 0.4
Measuring contact length movable	mm	18.8	18.8	24.7	24.7
Measuring contact form fixed	mm	HM-ball Ø 1.5	HM-ball Ø 1.5	HM-ball Ø 1.5	HM-ball Ø 1.5
Measuring contact length fixed	mm	0.9	0.9	2.5	2.5
Max. length of arm	mm	35	35	85	85
Weight	g	240	170	270	200
Reference temperature	°C	20			
Operating temperature	°C	10 - 30			
CE conformity		✓			

✓ included

+ available/optional

○ eligible

- not available

VERSION OUTSIDE CALIPER		H3019-0038	H3019-0039	H3019-0040	H3019-0041	H3019-0042
UP TO 100 MM						
Application		Measurement of grooves and thickness				
Digital measuring device		✓	✓	-	✓	-
Analog measuring device		-	-	✓	-	✓
Measuring span	mm	30	50	50	100	100
Measuring range	mm	0 - 30	0 - 50	0 - 50	0 - 100	0 - 100
Display range	mm	0 - 30.5	0 - 50.5	0 - 50.5	0 - 101	0 - 101
Scale graduation value / digit step value	mm	0.03	0.05	0.05	0.05	0.1
Measuring accuracy	mm	0.04	0.06	0.05	0.15	0.15
Repeatability limits	mm	0.02	0.04	0.025	0.1	0.1
Measuring force min. - max.	N	0.9 - 1.6	0.8 - 1.7	0.8 - 1.7	0.8 - 1.8	0.8 - 1.8
Measuring contact form movable	mm	Edge R 0.75	Edge R 0.75	Edge R 0.75	HM-ball Ø 5.0	HM-ball Ø 5.0
Measuring contact length movable	mm	30	30	30	35	35
Measuring contact form fixed	mm	HM-ball Ø 3.0	HM-ball Ø 3.0	HM-ball Ø 3.0	HM-ball Ø 5.0	HM-ball Ø 5.0
Measuring contact length fixed	mm	4.4	4.6	4.6	15	15
Max. length of arm	mm	116	169	169	382	382
Weight	g	410	460	400	660	600
Reference temperature	°C	20				
Operating temperature	°C	10 -30				
CE conformity		✓				

✓ included

+ available/optional

○ eligible

- not available

<b>VERSION INSIDE CALIPER</b>		<b>H3019-0043</b>	<b>H3019-0044</b>	<b>H3019-0045</b>	<b>H3019-0046</b>
Application			3-point measurement		
Digital measuring device		✓	✓	✓	✓
Measuring span	mm	7	10	15	20
Measuring range	mm	7 - 14	10 - 20	15 - 30	25 - 45
Display range	mm	6.8 - 14.5	9.8 - 20.5	14.5 - 30.5	24.5 - 45.5
Digit step value	mm	0.002	0.005	0.005	0.005
Measuring accuracy	mm	0.01	0.02	0.02	0.02
Repeatability limits	mm	0.004	0.01	0.01	0.01
Measuring force min. - max.	N	1.0 - 1.4	1.1 - 1.6	1.1 - 1.6	1.1 - 1.6
Measuring contact form movable	mm	HM-ball Ø 0.6	HM-ball Ø 1.0	HM-ball Ø 1.0	HM-ball Ø 1.0
Measuring contact length movable	mm	2.5	3.7	5.8	7.3
Measuring contact form fixed	mm	HM-ball Ø 0.6	HM-ball Ø 1.0	HM-ball Ø 1.0	HM-ball Ø 1.0
Measuring contact length fixed	mm	2.4	4.6	5.5	6
Max. measuring contact thickness	mm	Ø 1.2	Ø 1.6	Ø 1.6	Ø 1.6
Max. length of arm	mm	34	75	77	84
Weight	g	250	270	275	255
Reference temperature	°C	20			
Operating temperature	°C	10 - 30			
CE conformity		✓			

✓ included

+ available/optional

○ eligible

- not available

VERSION INSIDE CALIPER		H3019-0047	H3019-0048	H3019-0049	H3019-0050
Messanwendung			3-point measurement		
Digital measuring device		✓	✓	✓	✓
Measuring span	mm	20	20	20	20
Measuring range	mm	40 - 60	55 - 75	70 - 90	75 - 105
Display range	mm	39.5 - 60.5	45.5 - 75.5	69.5 - 91.0	84.5 - 105.0
Digit step value	mm	0.005	0.005	0.005	0.005
Measuring accuracy	mm	0.02	0.02	0.02	0.02
Repeatability limits	mm	0.01	0.01	0.01	0.01
Measuring force min. - max.	N	1.1 - 1.6	1.1 - 1.6	1.1 - 1.6	1.1 - 1.6
Measuring contact form movable	mm	HM-ball Ø 1.0	HM-ball Ø 1.0	HM-ball Ø 1.0	HM-ball Ø 1.0
Measuring contact length movable	mm	12.2	12.2	12.2	12.2
Measuring contact form fixed	mm	HM-ball Ø 1.0	HM-ball Ø 1.0	HM-ball Ø 1.0	HM-ball Ø 1.0
Measuring contact length fixed	mm	6	6	6	6
Max. measuring contact thickness	mm	Ø 1.6	Ø 1.6	Ø 1.6	Ø 1.6
Max. length of arm	mm	84	84	84	84
Weight	g	270	270	275	305
Reference temperature	°C	20			
Operating temperature	°C	10 - 30			
CE conformity		✓			
		✓ included	+ available/optional	O eligible	- not available