External measurement

Application range up to 30 mm

C015

D110S

K220

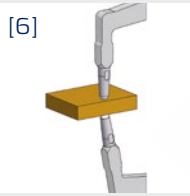
D220

K330

Type	Measuring span Mes [mm]	Measuring range Meb [mm]	Range of indication Azb [mm]	Numerical interval Zw Scale interval Skw [mm]	Permissible errors G [mm]	Repeatability limit r [mm]	Measuring force F_{min} [N]	Measuring force F_{max} [N]	Weight [g]	Protection class	Measuring contact movable Hb [mm]	Measuring contact fixed Hf [mm]	Type of measuring contact [mm]	Measuring depth L max. [mm]	Picture	Electronic E Mechanical M	Wooden box
C015	15	0–15	0–15,5	0,001	0,010	0,005	1,3	1,5	170	IP67	17	17	Ball Ø 1.5	45	[6]	E	1732-38
C015S	15	0–15	0–15,5	0,001	0,015	0,005	1,3	1,5	170	IP67	12	12	Chisel R 0.4	45	[7]	E	1732-38
K110	10	0–10	0–10,5	0,005	0,015	0,005	1,2	1,6	260	IP67	19,1	18,6	Ball Ø 1.5	35	[6]	E	1732-65
D110	10	0–10	0–10,5	0,005	0,015	0,005	1,2	1,6	170	IP65	19,1	18,6	Ball Ø 1.5	35	[6]	M	1732-45
K110S	10	0–10	0–10,5	0,005	0,015	0,005	1,2	1,6	260	IP67	18,8	18,5	Chisel R 0.4	35	[7]	E	1732-65
D110S	10	0–10	0–10,5	0,005	0,015	0,005	1,2	1,6	170	IP65	18,8	18,5	Chisel R 0.4	35	[7]	M	1732-45
K220	20	0–20	0–20,5	0,01	0,03	0,01	1,1	1,6	300	IP67	24,7	24,6	Ball Ø 1.5	85	[6]	E	1732-65
D220	20	0–20	0–20,5	0,01	0,03	0,01	1,1	1,6	210	IP65	24,7	24,6	Ball Ø 1.5	85	[6]	M	1732-45
K220S	20	0–20	0–20,5	0,01	0,03	0,01	1,1	1,6	300	IP67	24,7	24,6	Chisel R 0.4	85	[7]	E	1732-65
D220S	20	0–20	0–20,5	0,01	0,03	0,01	1,1	1,6	210	IP65	24,7	24,6	Chisel R 0.4	85	[7]	M	1732-45
K330	30	0–30	0–30,5	0,01	0,04	0,02	0,9	1,6	430	IP67	30	30	Ball Ø 3	116	[6]	E	1732-71
K330S	30	0–30	0–30,5	0,01	0,04	0,02	0,9	1,6	430	IP67	30	30	Chisel R 0.75	116	[7]	E	1732-71

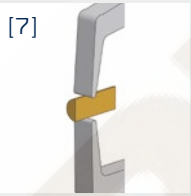
Measuring contacts

[6]



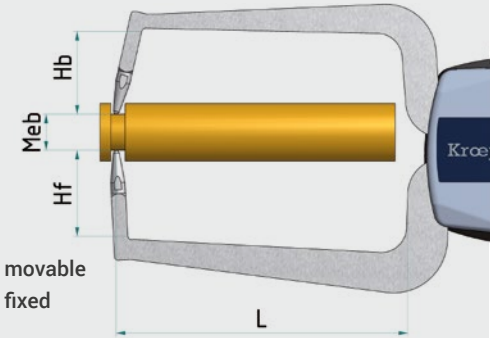
Ball Ø 1.5 mm
Ball Ø 3.0 mm

[7]



Chisel R 0.4 mm
Chisel R 0.75 mm

Measuring capacity



Meb Measuring range
Hb Measuring contact movable
Hf Measuring contact fixed
L Measuring depth

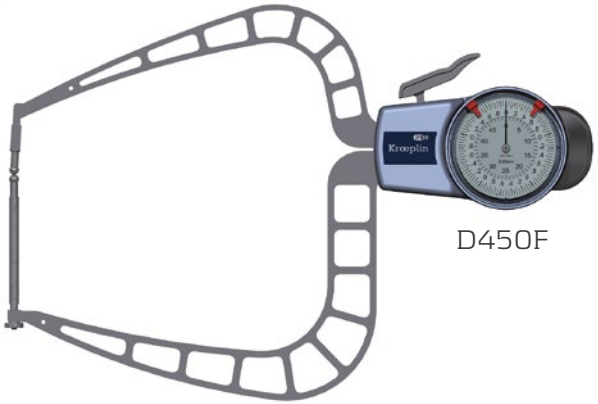
External measurement

Application range up to 200 mm

K450

D450

K8100

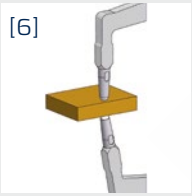


D450F

C16200

Type	Measuring span Mes [mm]	Measuring range Meb [mm]	Range of indication Azb [mm]	Numerical interval Zw Scale interval Skw [mm]	Permissible errors G [mm]	Repeatability limit r [mm]	Measuring force F_{min} [N]	Measuring force F_{max} [N]	Weight [g]	Protection class	Measuring contact movable Hb [mm]	Measuring contact fixed Hf [mm]	Type of measuring contact [mm]	Measuring depth L max. [mm]	Picture	Electronic E Mechanical M	Wooden box
K450	50	0–50	0–50,5	0,01	0,05	0,03	0,8	1,7	490	IP67	30	30	Ball Ø 3	167	[6]	E	1732-71
D450	50	0–50	0–50,5	0,05	0,05	0,025	0,8	1,7	430	IP65	30	30	Ball Ø 3	167	[6]	M	1732-51
K450S	50	0–50	0–50,5	0,01	0,05	0,03	0,8	1,7	490	IP67	30	30	Chisel R 0.75	167	[7]	E	1732-71
D450S	50	0–50	0–50,5	0,05	0,05	0,025	0,8	1,7	430	IP65	30	30	Chisel R 0.75	167	[7]	M	1732-51
K450B	50	0–50	0–50,5	0,01	0,06	0,04	0,8	1,7	510	IP67	72,6	30	Ball Ø 5	167	[6]	E	HK
D450B	50	0–50	0–50,5	0,05	0,075	0,05	0,8	1,7	450	IP65	72,6	30	Ball Ø 5	167	[6]	M	HK
K450F	50	0–50	0–50,5	0,01	0,06	0,04	0,8	1,7	510	IP67	30	72,6	Ball Ø 5	167	[6]	E	HK
D450F	50	0–50	0–50,5	0,05	0,075	0,05	0,8	1,7	450	IP65	30	72,6	Ball Ø 5	167	[6]	M	HK
K4100	50	50–100	49,5–100,5	0,01	0,06	0,04	0,8	1,7	510	IP67	30	23	Ball Ø 5	167	[6]	E	HK
D4100	50	50–100	49,5–100,5	0,05	0,075	0,05	0,8	1,7	450	IP65	30	23	Ball Ø 5	167	[6]	M	HK
K4150	50	100–150	99,5–150,5	0,01	0,06	0,04	0,8	1,7	530	IP67	30	23	Ball Ø 5	167	[6]	E	HK
D4150	50	100–150	99,5–150,5	0,05	0,075	0,05	0,8	1,7	470	IP65	30	23	Ball Ø 5	167	[6]	M	HK
K8100	100	0–100	0–101	0,05	0,15	0,1	0,8	1,8	660	IP67	33	33	Ball Ø 5	375	[16]	E	HK
D8100	100	0–100	0–101	0,1	0,15	0,1	0,8	1,8	600	IP65	33	33	Ball Ø 5	375	[16]	M	HK
C12100	100	0–100	0–101	0,1	0,3	0,2	1,2	1,8	950	-	30	30	Ball Ø 5	530	[16]	E	HK
D12100	100	0–100	0–101	0,1	0,3	0,2	1,2	1,8	1000	-	30	30	Ball Ø 5	530	[16]	M	HK
C12100BJ	100	0–100	0–101	0,1	0,3	0,2	1,2	1,8	1100	-	30	124	Ball Ø 5	530	[16]	E	HK
D12100BJ	100	0–100	0–101	0,1	0,3	0,2	1,2	1,8	1100	-	30	124	Ball Ø 5	530	[16]	M	HK
C16200	200	0–200	0–201	0,2	0,4	0,2	0,8	1,5	1300	-	98	98	Hemisphere SR 20	728	[17]	E	HK
D16200	200	0–200	0–201	0,2	0,4	0,2	0,8	1,5	1400	-	98	98	Hemisphere SR 20	728	[17]	M	HK

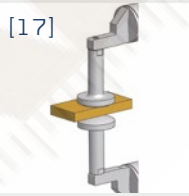
Measuring contacts



Ball Ø 3.0 mm
Ball Ø 5.0 mm

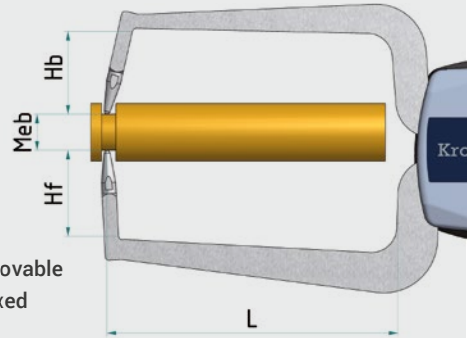
Chisel R 0.75 mm

Ball Ø 5.0 mm



Hemisphere SR 20 mm

Measuring capacity



Meb Measuring range
Hb Measuring contact movable
Hf Measuring contact fixed
L Measuring depth

Tube wall measurement

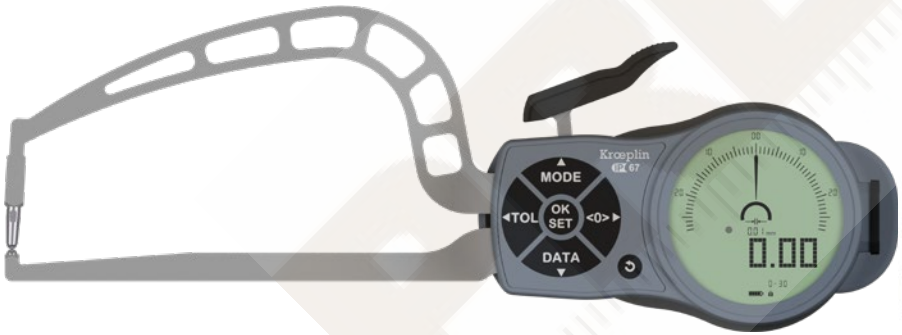
Application range up to 100 mm

COR15S

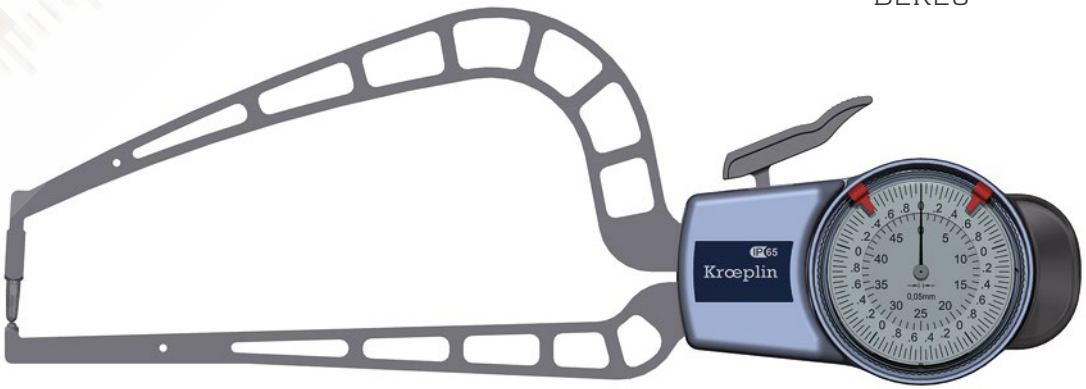
D1R10

K1R10

D2R20



K3R30

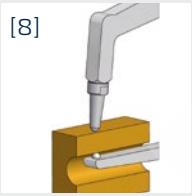


D4R50

Type	Measuring span Mes	Measuring range Meb	Range of indication Azb	Numerical interval Zw Scale interval Skw	Permissible errors G	Repeatability limit r	Measuring force F_{min}	Measuring force F_{max}	Weight	Protection class	Type of measuring contact movable	Measuring contact movable Hb	Type of measuring contact fixed	Measuring contact fixed Hf	bore diameter d min.	Measuring depth L max.	Picture	Electronic E Mechanical M	Wooden box
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[N]	[g]		[mm]	[mm]	[mm]	[mm]		[mm]			
C0R15	15	0–15	0–15,5	0,001	0,01	0,005	1,3	1,5	165	IP67	Ball Ø 1.5	17	Ball Ø 1.5	0.9	4	46	[8]	E	1732-38
C0R15S	15	0–15	0–15,5	0,001	0,01	0,005	1,3	1,5	170	IP67	Chisel Ø 0.4	12	Ball Ø 1.5	0.9	4	46	[9]	E	1732-38
K1R10	10	0–10	0–10,5	0,005	0,015	0,005	0,8	1,2	255	IP67	Ball Ø 1.5	19.1	Ball Ø 1.5	0.9	3	35	[8]	E	1732-65
D1R10	10	0–10	0–10,5	0,005	0,015	0,005	0,8	1,2	165	IP65	Ball Ø 1.5	19.1	Ball Ø 1.5	0.9	3	35	[8]	M	1732-45
K1R10S	10	0–10	0–10,5	0,005	0,015	0,005	0,8	1,2	255	IP67	Chisel R = 0.4	18.8	Ball Ø 1.5	0.9	3	35	[9]	E	1732-65
D1R10S	10	0–10	0–10,5	0,005	0,015	0,005	0,8	1,2	165	IP65	Chisel R = 0.4	18.8	Ball Ø 1.5	0.9	3	35	[9]	M	1732-45
K2R20	20	0–20	0–20,5	0,01	0,03	0,01	1,1	1,6	290	IP67	Ball Ø 1.5	24.7	Ball Ø 1.5	2.5	9	80	[10]	E	1732-65
D2R20	20	0–20	0–20,5	0,01	0,03	0,01	1,1	1,6	200	IP65	Ball Ø 1.5	24.7	Ball Ø 1.5	2.5	9	80	[10]	M	1732-45
K2R20S	20	0–20	0–20,5	0,01	0,03	0,01	1,1	1,6	290	IP67	Chisel R = 0.4	24.7	Ball Ø 1.5	2.5	9	80	[11]	E	1732-65
D2R20S	20	0–20	0–20,5	0,01	0,03	0,01	1,1	1,6	200	IP65	Chisel R = 0.4	24.7	Ball Ø 1.5	2.5	9	80	[11]	M	1732-45
K3R30	30	0–30	0–30,5	0,01	0,04	0,02	0,9	1,6	410	IP67	Ball Ø 3	30	Ball Ø 3	4	10	116	[10]	E	1732-71
K3R30S	30	0–30	0–30,5	0,01	0,04	0,02	0,9	1,6	410	IP65	Chisel R = 0.75	30	Ball Ø 3	4	10	116	[11]	E	1732-71
K4R50	50	0–50	0–50,5	0,01	0,05	0,03	0,8	1,7	460	IP67	Ball Ø 3	30	Ball Ø 3	4.3	13	169	[10]	E	1732-71
D4R50	50	0–50	0–50,5	0,05	0,05	0,025	0,8	1,7	400	IP65	Ball Ø 3	30	Ball Ø 3	4.3	13	169	[10]	M	1732-51
K4R50S	50	0–50	0–50,5	0,01	0,05	0,03	0,8	1,7	460	IP67	Chisel R = 0.75	30	Ball Ø 3	4.3	13	169	[11]	E	1732-71
D4R50S	50	0–50	0–50,5	0,05	0,05	0,025	0,8	1,7	400	IP65	Chisel R = 0.75	30	Ball Ø 3	4.3	13	169	[11]	M	1732-51
K8R100	100	0–100	0–101	0,05	0,15	0,1	0,8	1,8	660	IP67	Ball Ø 5	35	Ball Ø 5	15	36	382	[15]	E	HK
D8R100	100	0–100	0–101	0,1	0,15	0,1	0,8	1,8	600	IP65	Ball Ø 5	35	Ball Ø 5	15	36	382	[15]	M	HK

Measuring contacts

[8]



Ball Ø 1.5 mm

[9]

Chisel R 0.4 mm
Ball Ø 1.5 mm

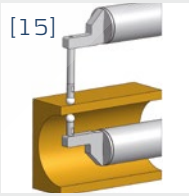
[10]

Ball Ø 1.5 mm
Ball Ø 2.0 mm
Ball Ø 3.0 mm

[11]

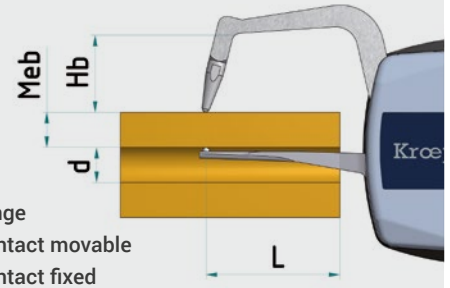
Chisel R 0.4 mm
Chisel R 0.75 mm
Ball Ø 1.5 mm
Ball Ø 2.0 mm
Ball Ø 3.0 mm

[15]



Ball Ø 5.0 mm

Measuring capacity



Meb Measuring range
Hb Measuring contact movable
Hf Measuring contact fixed
L Measuring depth
d Diameter

Measurement of foamed material and foils

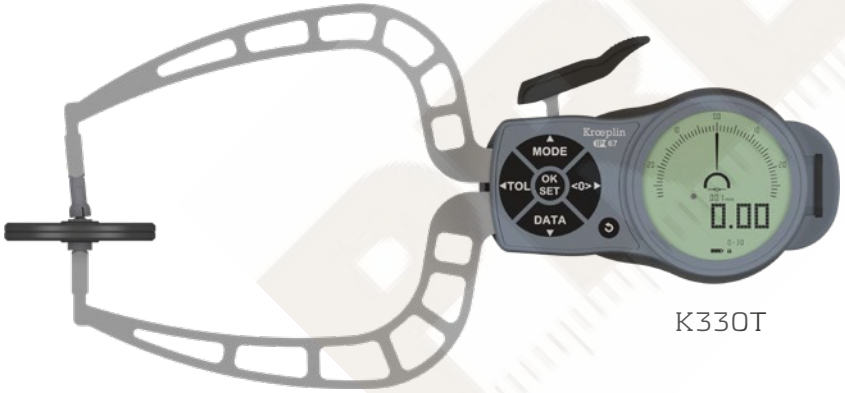
Application range up to 100 mm

K110T

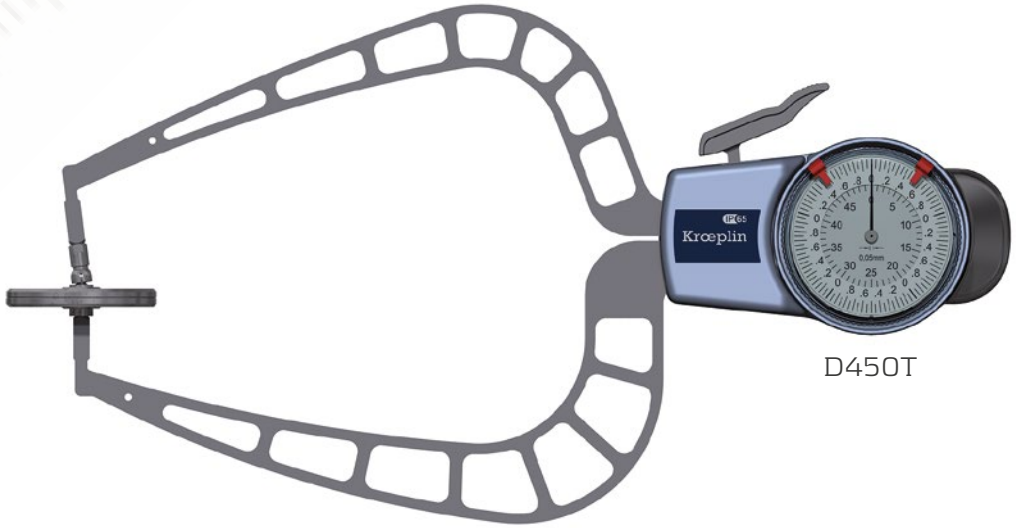
D110T

K220T

D220T



K330T

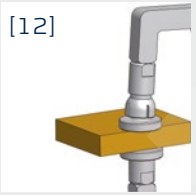


D450T

Type	Measuring span Mes	Measuring range Meb	Range of indication Azb	Numerical interval Zw Scale interval Skw	Permissible errors G	Repeatability limit r	Measuring force F_{min}	Measuring force F_{max}	Weight	Protection class	Measuring contact movable Hb	Measuring contact fixed Hf	Type of measuring contact	Measuring depth L max.	Picture	Electronic E Mechanical M	Wooden box
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[N]	[N]	[g]		[mm]	[mm]	[mm]	[mm]			
K110T	10	0–10	0–10,5	0,005	0,02	0,005	0,8	1,2	265	IP67	21,7	14,8	Flat Ø 6	35	[12]	E	1732-65
D110T	10	0–10	0–10,5	0,005	0,02	0,005	0,8	1,2	175	IP65	21,7	14,8	Flat Ø 6	35	[12]	M	1732-45
K220T	20	0–20	0–20,5	0,01	0,04	0,01	1,1	1,6	310	IP67	28,2	20,7	Flat Ø 10	85	[12]	E	1732-65
D220T	20	0–20	0–20,5	0,01	0,04	0,01	1,1	1,6	220	IP65	28,2	20,7	Flat Ø 10	85	[12]	M	1732-45
K330T	30	0–30	0–30,5	0,01	0,06	0,04	0,9	1,6	430	IP67	36	24	Flat Ø 50	116	[14]	E	1732-71
K450T	50	0–50	0–50,5	0,01	0,06	0,04	0,8	1,7	500	IP67	36	24	Flat Ø 50	167	[14]	E	1732-71
D450T	50	0–50	0–50,5	0,05	0,1	0,05	0,8	1,7	440	IP65	36	24	Flat Ø 50	167	[14]	M	1732-51
K4100T	50	50–100	49,5–100,5	0,01	0,06	0,04	0,8	1,7	520	IP67	36	17	Flat Ø 50	167	[14]	E	HK
D4100T	50	50–100	49,5–100,5	0,05	0,075	0,05	0,8	1,7	450	IP65	36	17	Flat Ø 50	167	[14]	M	HK
K8100T	100	0–100	0–101	0,05	0,15	0,1	0,8	1,8	670	IP67	39	7	Flat Ø 50	375	[14]	E	HK
D8100T	100	0–100	0–101	0,1	0,15	0,1	0,8	1,8	610	IP65	39	7	Flat Ø 50	375	[14]	M	HK
C12100T	100	0–100	0–101	0,1	0,3	0,2	1,6	2,2	1000	-	34	14	Flat Ø 50	550	[14]	E	HK
D12100T	100	0–100	0–101	0,1	0,3	0,2	1,6	2,2	1100	-	34	14	Flat Ø 50	550	[14]	M	HK

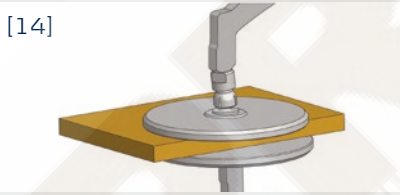
Measuring contacts

[12]



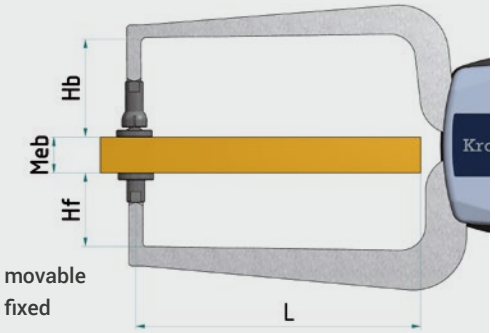
Flat Ø 6 mm
Flat Ø 10 mm

[14]



Flat Ø 50 mm

Measuring capacity



Meb Measuring range
Hb Measuring contact movable
Hf Measuring contact fixed
L Measuring depth