System components | **Measuring wheels** | **Different coatings, different circumferences**



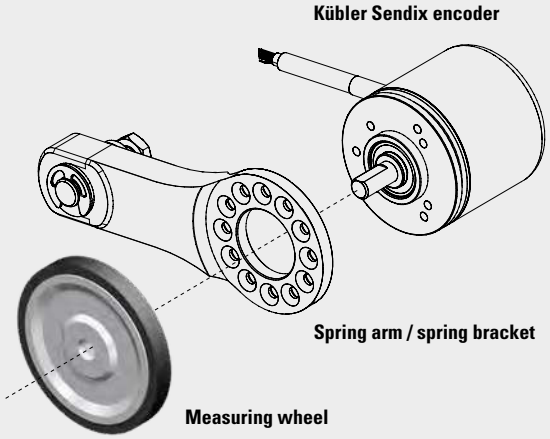
Measuring wheels for measuring the length of products in movement, e.g. in the paper, metal, textile, wood or plastic industry.

Different wheel surfaces to meet the requirements of the various surfaces of the product to be measured – different circumferences, designed for use with Kübler encoders, available for metric and imperial systems.

The measuring wheels can be easily combined with Kübler Sendix encoders and suitable encoder brackets.

The brackets are equipped with spring elements to ensure optimum contact pressure of the measuring wheel on the measuring surface and as compensation for unevenness and assembly tolerances in the application.

In addition, the measuring wheels can only be used for in-house purposes which are not subject to the stipulations of the German calibration code.



Measuring wheel coatings



Diamond knurl
(aluminum)



Plastic smooth
(polyurethane)



Tufted rubber
(polyurethane)



O-ring
(NBR70)



Double O-ring
(NBR70)



Plastic corrugated
(polyurethane)

© Fritz Kübler GmbH, subject to errors and changes. 05/2023

Measuring wheel coatings

Selection of the measuring wheel coatings according to the surface of the measured material		 diamond knurl (aluminum)	 rubber / plastic, smooth (polyurethane)	 tufted rubber (polyurethane)	 O-ring (NBR70)	 Double O-ring (NBR70)	 plastic, corrugated (polyurethane)
Surface of the measured material	**Profile measuring wheel**	**1**	**2 / 4**	**6**	**7**	**8**	**9**
Cardboard		✓	✓	✓	✓	✓	✓
Wood		✓	✓	✓	✓	✓	✓
Textile		✓	✓	✓	✓	✓	✓
Plastic (e.g. PVC, PE, ...)		-	✓	✓	✓	✓	✓
Paper		-	✓	✓	✓	✓	✓
Wire, greased metals, steel profiles, leather		-	✓	-	-	-	-
Carpet, cables, nonwoven		-	-	✓	-	-	-
Greased metals, glass, floor coverings		-	-	-	-	-	✓
Painted surfaces		-	✓	-	✓	✓	✓
Rubber, soft plastic		✓	-	-	-	-	-
Surface available for measuring wheel circumference:							
100 mm		✓	✓	-	-	-	-
200 mm (tread 5.5 mm)		✓	✓	-	✓	-	-
200 mm (tread 12 mm)		✓	✓	✓	✓	✓	✓
300 mm		✓	✓	✓	✓	✓	✓
500 mm		✓	✓	✓	-	-	✓
6"(tread 5.5 mm)		✓	✓	-	✓	-	-
6"(tread 12 mm)		✓	-	-	-	-	-
12"		✓	✓	✓	✓	✓	✓

Technical specifications of the measuring wheels:

Max. lateral run-out:	0.2 mm
Max. radial run-out:	0.2 mm
Material:	Aluminum
Temperature range:	-30 °C ... +80 °C [-22 °F ... +176 °F]

© Fritz Kübler GmbH, subject to errors and changes. 05/2023

System components | **Measuring wheels** | **Different coatings, different circumferences**

Order code Measuring wheel 8.0000 . 3 XXX (a) . 00 XX (b)

Measuring wheel circumference	suitable for measuring wheel /measuring wheel system					Tread width	Profil measuring wheels	Coating	Coating hardness Shore A	*Wheel no.* (a)	Weight	*Standard bore* (b) [1]
	MWE11	MWE2x	MWE3x	MWE4x	MWE6x							
100 mm	✓	–	–	–	–	9.5 mm	1	diamond knurl (aluminum)	-	**113**	15.0 g	**06** = 6 mm [0.24"]
							2	natural rubber	60	**123**	16.0 g	
200 mm	–	✓	✓	–	–	5.5 mm	1	diamond knurl (aluminum)	-	**215**	38.5 g	**06** = 6 mm [0.24"]
							4	plastic smooth (polyurethane)	70	**245**	41.5 g	
							7	O-ring (NBR70)	70	**275**	36.0 g	
	–	–	–	✓	✓	12 mm	1	diamond knurl (aluminum)	-	**217**	60.0 g	**06** = 6 mm [0.24"] **10** = 10 mm [0.39"]
							4	plastic smooth (polyurethane)	90	**247**	60.0 g	
							6	tufted rubber (polyurethane)	60	**267**	60.0 g	
							7	O-ring (NBR70)	70	**277**	60.0 g	
							8	double O-ring (NBR70)	70	**287**	60.0 g	
							9	plastic corrugated (polyurethane)	90	**297**	60.0 g	
300 mm	–	–	–	✓	✓	12 mm	1	diamond knurl (aluminum)	-	**317**	115.0 g	**10** = 10 mm [0.39"]
							4	plastic smooth (polyurethane)	90	**347**	115.0 g	
							6	tufted rubber (polyurethane)	60	**367**	115.0 g	
							7	O-ring (NBR70)	70	**377**	115.0 g	
							8	double O-ring (NBR70)	70	**387**	117.0 g	
							9	plastic corrugated (polyurethane)	90	**397**	115.0 g	
500 mm	–	–	–	✓	✓	25 mm	1	diamond knurl (aluminum)	-	**517**	505.0 g	**10** = 10 mm [0.39"]
							4	plastic smooth (polyurethane)	90	**547**	501.0 g	
							6	tufted rubber (polyurethane)	60	**567**	483.0 g	
							9	plastic corrugated (polyurethane)	90	**597**	501.0 g	
6"	–	✓	–	–	–	5.5 mm	1	diamond knurl (aluminum)	-	**615**	25.0 g	**06** = 6 mm [0.24"]
							4	plastic smooth (polyurethane)	70	**645**	23.5 g	
							7	O-ring (NBR70)	70	**675**	21.5 g	
	–	–	–	–	–	12 mm	1	diamond knurl (aluminum)	-	**617**	60.0 g	
12"	–	–	–	✓	✓	12 mm	1	diamond knurl (aluminum)	-	**717**	115.0 g	**10** = 10 mm [0.39"]
							4	plastic smooth (polyurethane)	90	**747**	115.0 g	
							6	tufted rubber (polyurethane)	60	**767**	115.0 g	
							7	O-ring (NBR70)	70	**777**	115.0 g	
							8	double O-ring (NBR70)	70	**787**	117.0 g	
							9	plastic corrugated (polyurethane)	90	**797**	115.0 g	

1) Other bore diameters on request

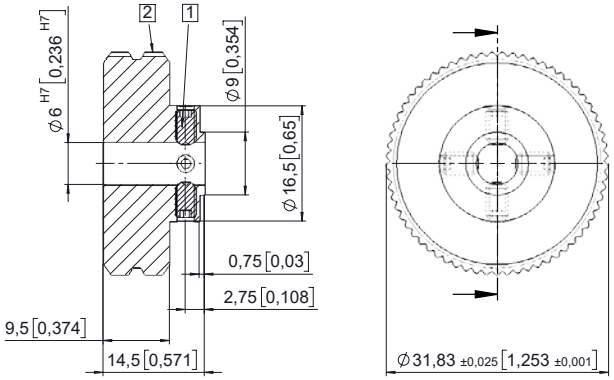
© Fritz Kübler GmbH, subject to errors and changes. 05/2023

Dimensions

Dimensions in mm [inch]

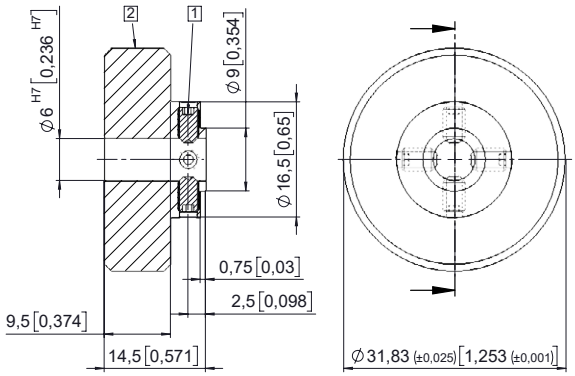
Measuring wheel circumference 100 mm ±0,1 mm
Tread width 9,5 mm

No. 113
diamond knurl
(aluminum)



1 screw M3x5 ISO4029 (4x)
2 diamond knurl

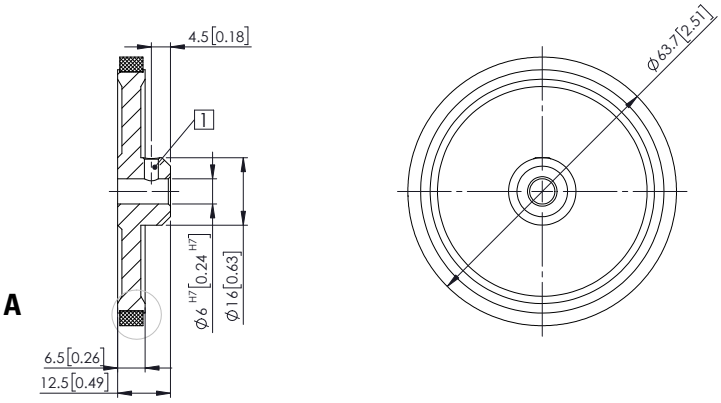
No. 123
natural rubber



1 screw M4x6 ISO4029
2 natural rubber, Shore 60

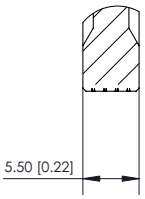
Measuring wheel circumference 200 mm ±0,2 mm
Tread width 5,5 mm

1 screw M4x6 ISO4029

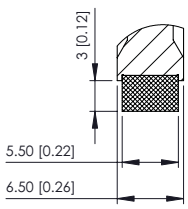


A for measuring wheel no. (with coating):

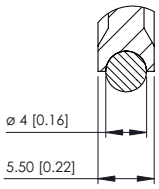
No. 215
diamond knurl
(aluminum)



No. 245
plastic smooth
(polyurethane)



No. 275
O-ring
(NBR)



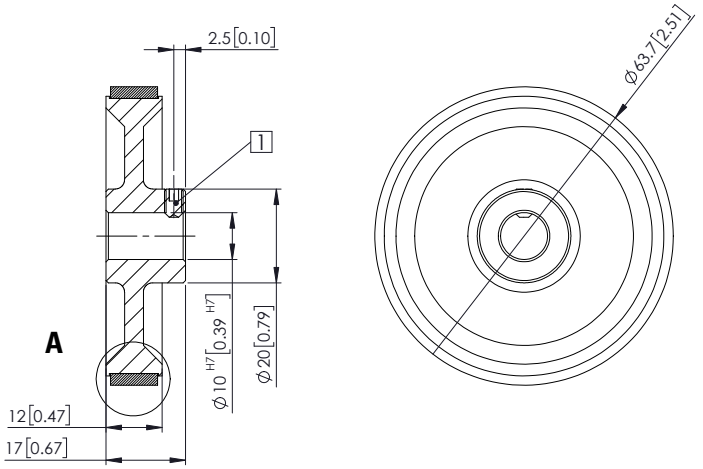
© Fritz Kübler GmbH, subject to errors and changes. 05/2023

Dimensions

Dimensions in mm [inch]

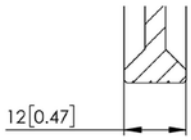
Measuring wheel circumference 200 mm ±0,2 mm (with O-ring ±0,5 mm)
Tread width 12 mm
Bore for shaft 10 mm (also with bore 6 mm)

1 screw M4x6 ISO4029

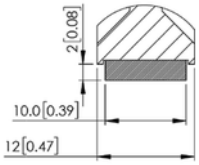


A for measuring wheel no. (with coating):

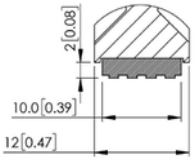
No. 217
diamond knurl
(aluminum)



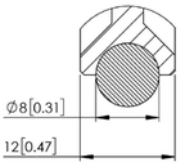
No. 247
plastic smooth
(polyurethane)



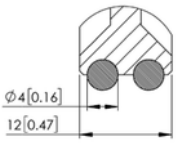
No. 267
tufted rubber
(polyurethane)



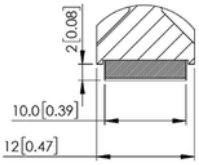
No. 277
O-ring
(NBR)



No. 287
double O-ring
(NBR)

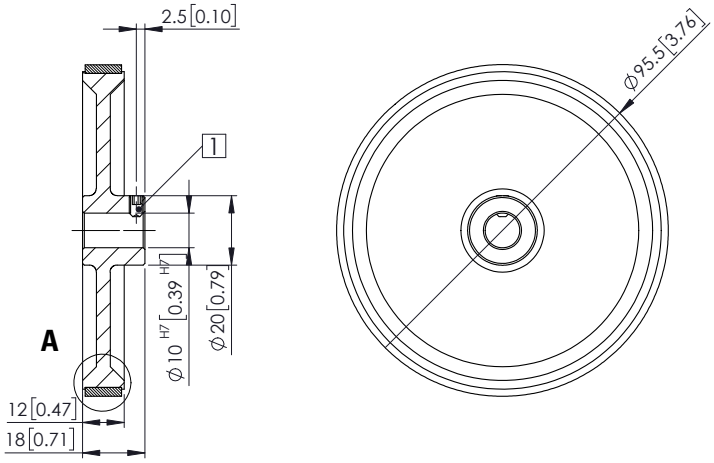


No. 297
plastic corrugated
(polyurethane)



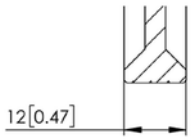
Measuring wheel circumference 300 mm ±0,2 mm (with O-ring ±0,5 mm)
Tread width 12 mm

1 screw M4x6 ISO4029

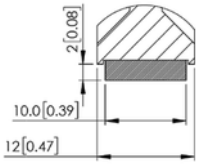


A for measuring wheel no. (with coating):

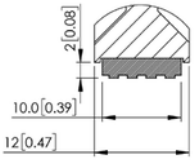
No. 317
diamond knurl
(aluminum)



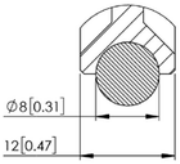
No. 347
plastic smooth
(polyurethane)



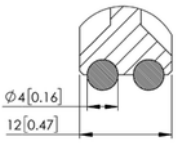
No. 367
tufted rubber
(polyurethane)



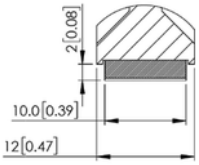
No. 377
O-ring
(NBR)



No. 387
double O-ring
(NBR)



No. 397
plastic corrugated
(polyurethane)



© Fritz Kübler GmbH, subject to errors and changes. 05/2023

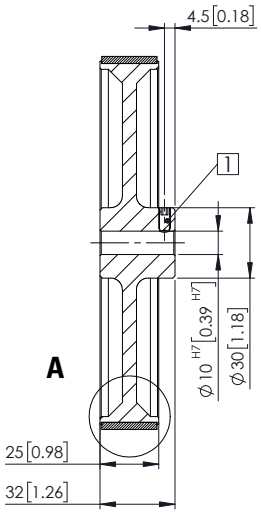
System components | **Measuring wheels** | **Different coatings, different circumferences**

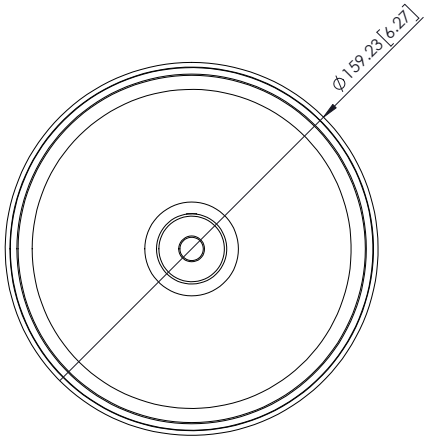
Dimensions

Dimensions in mm [inch]

Measuring wheel circumference 500 mm ±1,0 mm
Tread width 25 mm

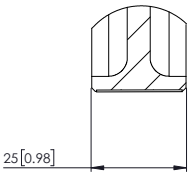
1 screw M5x10 ISO4029



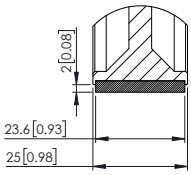


A for measuring wheel no. (with coating):

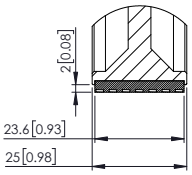
No. 517
diamond knurl
(aluminum)



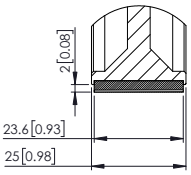
No. 547
plastic smooth
(polyurethane)



No. 567
tufted rubber
(polyurethane)

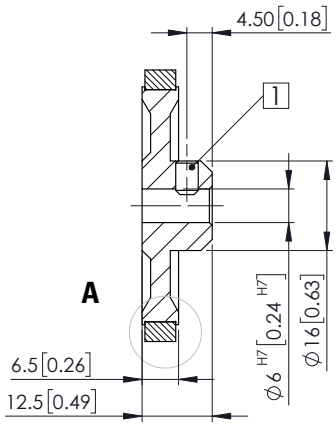


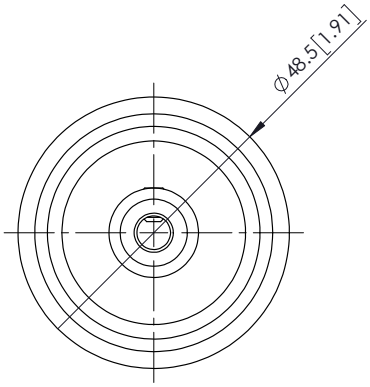
No. 597
plastic corrugated
(polyurethane)



Measuring wheel circumference 6" ±0,2 mm
Tread width 5,5 mm

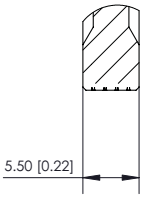
1 screw M4x6 ISO4029



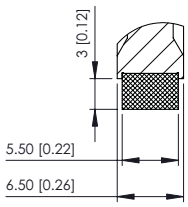


A for measuring wheel no. (with coating):

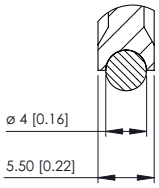
No. 615
diamond knurl
(aluminum)



No. 645
plastic smooth
(polyurethane)



No. 675
O-ring
(NBR)



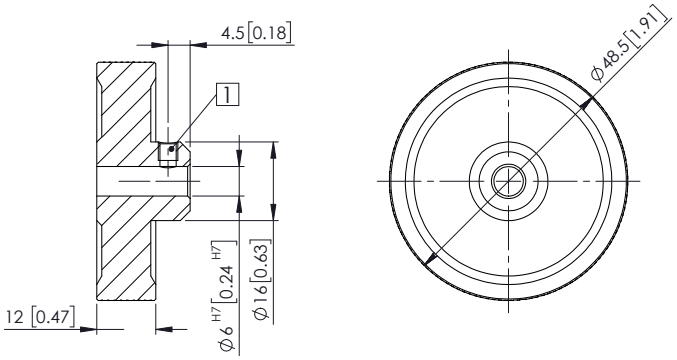
© Fritz Kübler GmbH, subject to errors and changes. 05/2023

Dimensions

Dimensions in mm [inch]

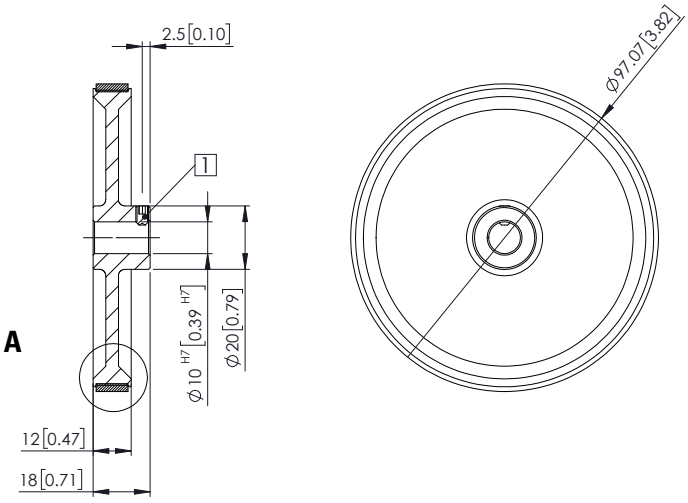
Measuring wheel circumference 6" ±0,2 mm
Tread width 12 mm

1 screw M4x6 ISO4029



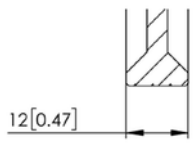
Measuring wheel circumference 12" ±0,2 mm (with O-ring ±0,5 mm)
Tread width 12 mm

1 screw M4x6 ISO4029

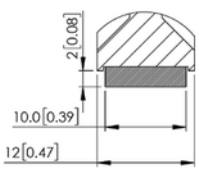


A for measuring wheel no. (with coating):

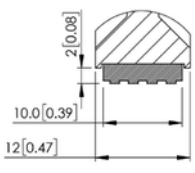
No. 717
diamond knurl
(aluminum)



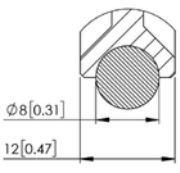
No. 747
plastic smooth
(polyurethane)



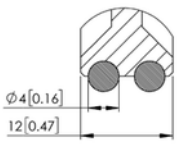
No. 767
tufted rubber
(polyurethane)



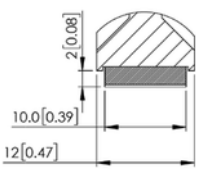
No. 777
O-ring
(NBR)



No. 787
double O-ring
(NBR)



No. 797
plastic corrugated
(polyurethane)



© Fritz Kübler GmbH, subject to errors and changes. 05/2023