

INTERAPID 312 Dial Test Indicators

Very large measuring span – Ideal for inspecting all significant size variations, e.g. on the surface plate – Measure position, form and shape errors.

- Additional revolution counter for safe reading.
- Bidirectional measuring with automatic reversal inside the movement.
- Thereby pointer rotation is constant.
- Jewelled movement with rubies.
- Ball-bearing lever system with measuring insert swivelling through 210°.
- Full-metal construction giving outstanding robustness.
- Monobloc housing with mounted dovetail attachments as well as a 4 mm swivelling shank.



Regular Model

Time-tested dial test indicator with dial face mounted parallel to the insert axis.

Perpendicular Model

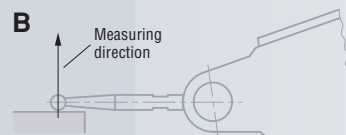
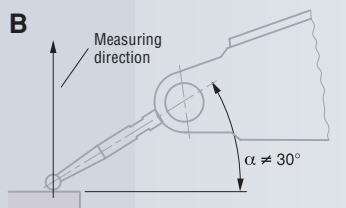
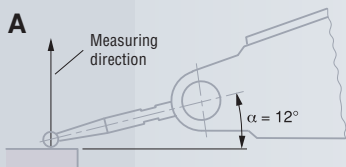
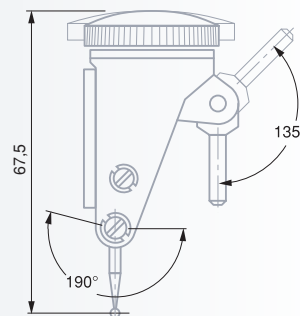
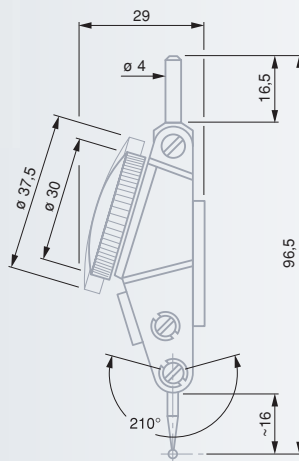
Dial test indicator with dial face mounted at right angle to insert axis.



Stylus insert with angular position of 12°

All models INTERAPID 312 are designed to give a true reading when the angle between the stylus and the workpiece surface is 12° (Fig. A).

In another measuring position, including parallel position of the stylus against the workpiece surface, read values have to be corrected accordingly (Fig. B). With regard to this, also read in the instruction manual.



APermissible limits of a metrological characteristic (MPE/MPL)

	0,01 mm		0,002 mm	
	Pointer Rev 1	Pointer Rev 2	Pointer Rev 1	Pointer Rev 2
Deviation range, f_e	10 μm	20 μm	4 μm	8 μm
Total deviation range, f_{ges}	13 μm	23 μm	6 μm	10 μm
Repeatability limit, f_w	3 μm		1 μm	
Max. hysteresis, f_u	3 μm		2 μm	
Measuring force	0,12 N		0,25 N	

INTERAPID 312 Regular Models

	Ø					Insert
	mm					
074111366	0,01	1,6	37,5	0 ÷ 40 ÷ 0		16,5
074111367	0,01	1,6	30	0 ÷ 40 ÷ 0		16,5
074111368	0,002	0,4	37,5	0 ÷ 10 ÷ 0		15,2
074111369	0,002	0,4	30	0 ÷ 10 ÷ 0		15,2
	in					
074111370	0.0005	0.060	1.5	0 ÷ 15 ÷ 0		0.65
074111371	0.0005	0.060	1.2	0 ÷ 15 ÷ 0		0.65
074111965	0.0005	0.060	1.5	0 ÷ 15 ÷ 0		2.675
074111374	0.001	0.060	1.2	0 ÷ 15 ÷ 0		0.65
074111372	0.0001	0.016	1.5	0 ÷ 4 ÷ 0		0.65
074111373	0.0001	0.016	1.2	0 ÷ 4 ÷ 0		0.65



Rotating dial

Very low measuring force (see table on page F-7)

Lever system with friction drive to prevent overload

Accuracy: see table on page F-7

Supplied in a plastic case along with:
1 steel insert with a 2 mm diameter, hardened.
1 key No. 01860307

Identification number

Declaration of conformity



INTERAPID 312 Perpendicular Models

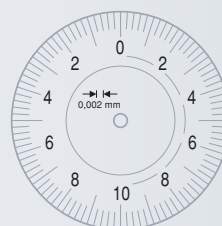
	Ø					Insert
	mm					
074111375	0,01	1,6	37,5	0 ÷ 40 ÷ 0		16,5
074111376	0,01	1,6	30	0 ÷ 40 ÷ 0		16,5
	in					
074111377	0.0005	0.060	1.5	0 ÷ 15 ÷ 0		0.65
074111378	0.0005	0.060	1.2	0 ÷ 15 ÷ 0		0.65
074111958	0.0005	0.060	1.5	0 ÷ 15 ÷ 0		2.675
074111379	0.001	0.060	1.2	0 ÷ 15 ÷ 0		0.65
074111957	0.0001	0.016	1.5	0 ÷ 4 ÷ 0		0.65



074111366



074111367



074111368



074111369



Technical data as listed under: each single product

Plastic case

Identification number

Declaration of conformity

Dial Test Indicator Sets, Complete with Accessories

Each full set consists of:



INTERAPID 312 as listed in the tables below

- 074106331** Rectangular attachment
- 074108942** Reducing sleeve, metric or
- 074108943** Reducing sleeve, inch
- 074106026** Swivel holder, metric or
- 074106931** Swivel holder, inch
- 074111474** Storage case for measuring inserts
- 01860307** Wrench for measuring inserts



INTERAPID 312 Regular Models



mm	074111366	074111367	074111368	074111369	074106331	074108942	074106026	074111474	01860307
074111502	●				●	●	●	●	●
074111503		●			●	●	●	●	●
074111504			●		●	●	●	●	●
074111505				●	●	●	●	●	●



in	074111370	074111371	074111372	074111373	074106331	074108943	074106931	074111474	01860307
074111508	●				●	●	●	●	●
074111509		●			●	●	●	●	●
074111510			●		●	●	●	●	●
074111511				●	●	●	●	●	●

INTERAPID 312 Perpendicular Models

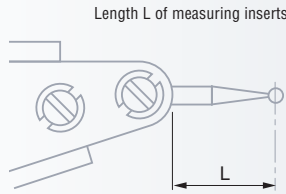


mm	074111375	074111376	074106331	074108942	074106026	074111474	01860307
074111506	●		●	●	●	●	●
074111507		●	●	●	●	●	●



in	074111377	074111378	074106331	074108943	074106931	074111474	01860307
074111513	●		●	●	●	●	●
074111514		●	●	●	●	●	●

Measuring Inserts for INTERRAPID 312



Steel ball tips	Carbide ball tips			L
mm				
074107893	074105993	0,01	2	16,5
074107895	074105994	0,01	1,5	16,5
074107897	074105995	0,01	0,8	16,5
	074106358	0,01	2	36,6*
	074106360	0,01	0,8	36,6*

074110481	074110482	0,002	2	15,2
074110492	074110491	0,002	1,5	15,2
074110493	074110507	0,002	0,8	15,2
	074110494	0,002	2	34*
	074110508	0,002	0,8	34*

in				
074107899	074105996	all**	0.080	0.650
074107901	074105997	all**	0.060	0.650
074107903	074105998	all**	0.031	0.650
	074106361	all**	0.080	1.375*
	074106363	all**	0.031	1.375*

	074111913***		0.080	2.675
	074111912****		0.100	2.675

mm/in				
01860307	Wrench for measuring inserts			
074111474	Storage case for measuring inserts			



Ball tips in hardened steel or tungsten carbide



M1.7 coupling thread

- * The length of the used insert changes the amplification factor of the lever system. Therefore, each read value must be doubled.
- ** Except for both models No. 074111965 and 074111958.
- *** Model No. 074111965 only.
- **** Model No. 074111958 only.

Note

The original measuring insert mounted on every INTERRAPID 312 as well as any other insert with same nominal length but having different ball tip diameters are fully interchangeable.

Accessories for INTERRAPID 312



		mm		in
074106331	Rectangular clamping attachment, complete		074106331	
01840203	Rectangular attachment with clamp	13 x 6 x 50 Ø 5,6	01850203	1/2 x 1/4 x 2 Ø 7/32
074108603	Double attachment with clamping point and dovetail	Ø 4	074108603	
074106026	Swivel holder with clamping points and dovetail	Ø 8 x 133 Ø 4	074106931	Ø 3/8 x 5.25
074108942	Reducing sleeve	Ø 8 / Ø 4	074108943	Ø 3/8 / Ø 5/32
	Rectangular mounting rod		074111481	3/16 x 5/16