Gauge Calibration Plans



The efforts for maintaining master data is one aspect of the introduction of computer-based software that is often neglected. How big this efforts are becomes evident not before the required tasks have been finished. At the end it is realized that the costs have been very high in relation to the actual investment in the software product itself. This is especially true for the planning of gauge calibration. iQ-PMPL (Gauge Inspection Plans) frees you from the burden of creating standard-conform plans for many of the standard measuring and test equipment.

The following table contains the range of inspection plans of directive 2618. These inspection plans require no further planning. You can start the calibration immediately after selecting the corresponding gauge or gauge type without any preparation.

Sheet	VDI/VDE/DGQ 2618 Directive
3.1	Gauge blocks
4.1	Cylindrical domes, mandril gauges and gauging rings
4.2	Test prods/test prods for screw threads
4.4	Adjusting dimension for outside micrometers with co-planar or spherical measuring surfaces and depth gauges
4.6	Testing cylinders and test pins
4.7	Gap gauges
4.8	Cylindrical screw thread readout gauge, screw thread mandril gauges and screw thread test pins
4.9	Cylindrical screw thread setting rin gauges and screw thread gauging rings
4.12	Conic etalon and taper gauges
6	Micrometer depth gauges
6.1	Coplanar inspection windows
7.1	90 degrees angle brackets
7.2	Protractors
9.1	Calliper gauge for outer, inner and depth measuring
9.2	Depth gauges
9.3	Height gauges
10.1	Micrometer gauges
10.2	Micrometer gauges with interchangeable measuring inserts for screw thread measuring and other inspection assignments
10.3	Dial comparator micrometer gauge
10.4	Built-in micrometer gauges
10.5	Depth gauges
10.6	Height gauges
10.7	Internal measuring gauges with two point tangency
10.8	Internal measuring gauges with three line tangency
11	Dial indicators
11.1	Dial indicators
11.2	Mechanical dial comparators
11.3	Dial test indicators (lever-type)
12.1	Lever-type gauges (quick indicator) for external gauging
13.1	Lever-type gauges (quick indicator) for internal gauging
13.2	Internal measuring gauge with two point tangency
14	Internal measuring gauge with two point tangency at the test specimen
14.1	Inspection requirements for electronical length measuring gauges consisting of inductive calliper and measuring tool
16.1	Vertical length measuring tools
18	Flat bed spacer
19	Straightedge
22	90 degrees angle bracket (flat bed, limit stop angle bracket)
26	Electronical length measuring device with inductive caliper and indicator

Regulations marked yellow will also be available after their final release.

The concluded inspection plans of the VDI/VDE/DGQ-regulations can of course be copied and adjusted to your own requirements (e.g. in order to reduce the inspection range). You can also adjust the tolerances to your plant-specific demands.



Due to the gauge details (e.g. screw limit plug gauge M10x1,5-6H) all attributes are generated automatically with the correct set points and dimensions according to DIN charts. During inspection you are presented with the correct wire or spherical diameter.

calibrate gauge						- 0 🔀
3• 📑 🗢 🖊 🗙						
auging order	PU1011:	22 Thread plug gau	te			
easuring task	10	Thread plug gaug	te do/u	ot go end		
esteq.	GEWINDI	EGRENZLEHRDORN M10/1 Thread plug gaug	te M10 1	lo l		
ference standards						
Attributive inspection	Thread gauge					Not to prove
	Scrap					
	61	1. outside diameter fore not go end		9.5005	9.5115 mm	9.5225
H	9,52	U±	77%			
d Da	62	2. outside diameter fore not go end		9.5005	9.5115 mm	9.5225
SI R	9,518	U±	59%			
A R	63	1. outside diameter back not go end		9.5005	9.5115 mm	9.5225
X X	9,521	U±	86%	•		
X X			(m)			
	GU side		🛓 Se	lection of wire-/ball diameter		- 8
	41	1. outside diameter fore go end	- >	٢		
<u>q</u> p	42	2 outside diameter fore do end				
Ц	-10		Test	eq.	Thread plug gauge	
	43	1. outside diameter back go end	Thre	ad description	M10x1.5-6H	
		U±	Most	favorable diameter	0,866 mm	
	20	Wandhaara baab	Mear	suring strength	2.00 N	
Testitem	790	II+		oung ouongui	1100	
Reference value	750		Proc	edure	Three wire method	-
			Refe	rence	Zeiss series	•
			- N	//b-Ø	0.895	
					0.895	
				Infical procedure	1.1	
Texts (s-F12) draw. char. (s-F11) draw. gauge (F8) e			e	pacarprocedule	1.35	
					1.65	
					2.00	

Furthermore there is a variety of more gauges for which no standardized inspection directives are available. The following chart shows all those gauges for which all arrangements have been made, also without any planning, in order to start calibration immediately. Tolerances can be indicated through an easy chart system.

Inspection plans for other gauges	Inspection plans for other gauges			
Torques	Electonical counters			
Pressure, tension and force	Digital multimeter			
Test plates	Oscilloscopes			
Form calipers	Precision balance			
Taper gauge	Tread projector			
Screw thread revolving jaw type gauges	Digital calliper Heidenhain, Sylvac			
Screw thread gap gauge - master gauges	Length measuring dev. (counter) Heidenhain, Sylvac			
Base tangent length comb (analogue)	Digital dial indicator			
Base tangent length micrometer gauges (analogue)	elec. Dial comparator (mech.) SKW 0,01mm			
	elec. Dial comparator (mech.) SKW 0,001 mm			

😰 calibrate gauge								
🖻 🖪 🗢 🖡 🗙								
Gauging order	PU101279		dial gau	ge				
Measuring task	10		dial gau	ges				
Testeg. MESSUHR10/1 Dial gauge		ge DIN878-A						
reference standards								
							📃 Not to prove	
Attributive inspection	variable inspection	dial gauge						
measurement up	oward travel	measurement dow	nward travel					
0 mm	0,001	10 mm	10,001	mm				
1 mm	1,002	9 mm	, 9	0.02				
2 mm	2,002	8 nn	7,999					
3 mm	3,001	7 mm	6,999	0.01-				
4 mm	4	6 mm	5,998					
5 mm	5,001	5 mm	4,999	0.00				
6 mm	6,001	4 mm	3,998	00 1,0	2,0 3,0	40 6,0	9,0 7,0 8,0 9,	0 10,0
7 mm	7,001	3 mm	2,999	0.01				
8 mm	8,001	2 mm	1,999	-0,01				
9 mm	9,002	l nn	1					
10 mm	10,003	0 mm	-0,001	-0,02 T				
	calcul				Iculated characteristic va	lues		
				total deviation :	span ftotal			
				Actual value	5 µ	an. 0µm		17
				Deviation	29 4	e4		· · · ·
				measure return s	pan fu			
				Actual value	3 µ	an. Oµm		3
				Deviation	100 4	4		
Texts (s-E12)	draw, ch	ar (s.F11)	draw, dauge (E8)	event for daur	te (E9)	able data		
10/40 (01/12)				. , orona tor guos				_

Example of a dial indicator calibration:

