

INS039 : Standards control table

Control mean	Control by measure (M) or by attribute (A)	AQL	Standard	Level	Mode (Switching rules on page 2)	Sample	A	R
Dimensions dependant of a category A process (Pressing – sintering, cylindrical machining, flat machining, tumbling, rolling, brushing)								
Linear pitch, hole location	Optical measurement system	M	fixed			5	0	1
Inner diameter	Go / No go pin gauge	A	ISO 2859	I	Normal			
Outer diameter	Micrometer, dial indicator, optical measurement system	M	ISO 3951	I	Normal			
Thickness	Dial indicator	M	ISO 3951	I	Normal			
Width, length	Caliper, micrometer	M	ISO 3951	I	Normal			
Chamfer, radius, transition	Optical measurement system	M	ISO 3951	S4	Normal			
Dimensions dependant of a category B process (CNC machining, lathing, enlarging, honing flat and cylindrical)								
Linear pitch, hole location	Optical measurement system	M	fixed			10	0	1
Inner diameter	Go / No go pin gauge	A	ISO 2859	II	Normal			
Outer diameter	Micrometer, dial indicator, optical measurement system	M	ISO 3951	II	Normal			
Thickness	Dial indicator	M	ISO 3951	II	Normal			
Width, length	Caliper, micrometer	M	ISO 3951	II	Normal			
Chamfer, radius, transition	Optical measurement system	M	ISO 3951	S4	Normal			
Geometrical tolerance								
Co-axiality	Roller bench, optical measurement system	M	ISO 3951	S4	Normal			
Parallelism, perpendicularity	Dial indicator	M	ISO 3951	S4	Normal			
Circularity	roundness/ cylindricity instrument	M	ISO 3951	S4	Normal			
Other geometrical tolerance		M	ISO 3951	S4	Normal			
Surface finish								
Ra	Rugosimeter	M	fixed			5	0	1
Aspect								
Visual inspection (depending on products)	Eyes, binocular	A	ISO 2859	II	Normal			
Visual inspection - HPLC (pistons, balls & seats)	Binocular					100%		
UV inspection (optional)	Fluorescent Penetrants	A	ISO 2859	S4	Normal			
Other measurements								
Optical Axis	Polarizing binocular	A	fixed			5	0	1
Leakage 0-12 bubbles		A	ISO 2859	II	Normal			
Leakage 0-3 bubbles		A				100%		
Tensile resistance, compression resistance	According to specific customer's requirement							

Exceptions :

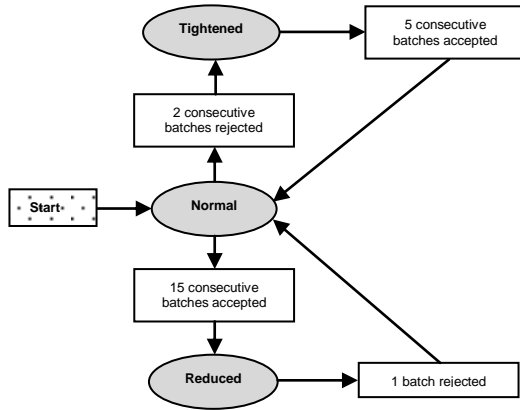
- For other dimensions with a tolerance range greater or equal than 0.2 mm, the sample is reduced to the lower level (from II to I and from I to S4)
- ISO3951 (coef k) is not applicable if, by the share of manufacturing process (for example: machining on batch, turning on train, ...), the distribution of parts don't follow a normal distribution and for a tolerance range less or equal than 10µ. In this case the acceptance at limits of tolerance is applied.

The above specifications correspond to standard Ceramaret procedures and are given only for information purpose. However, the accuracy and completeness thereof are not guaranteed.

Optimal quality and customer satisfaction are guaranteed for each part by submission of a specific control plan before manufacturing.

INS039 : Standards control table

Switching rules between mode Normal – Tightened – Reduced (Only for families 21 – 27 – 28 – 29 – 31 – 32 – 33 – 34 – 35 – 36)



The above specifications correspond to standard Ceramaret procedures and are given only for information purpose. However, the accuracy and completeness thereof are not guaranteed.

Optimal quality and customer satisfaction are guaranteed for each part by submission of a specific control plan before manufacturing.