

DESIGN TIPS

Symbol History

HISTORY OF GDT SYMBOLS

	ASME Y14.5-2009	ASME Y14.5-1994	ASME Y14.5-1982	ANSI Y14.5-1973	USASI Y14.5-1966	MIL-STD-8C 1963	MIL-STD-8B 1959	MIL-STD-8A 1953
RFS	<i>understood</i>	<i>understood</i>	(S)	(S)	(S)	(S)	(S)	<i>understood</i>
MMC	(M)	(M)	(M)	(M)	(M)	<i>understood</i>	(M)	
LMC	(L)	(L)	(L)					
Projected Tol Zone	(P)	(P)	(P)	(P)	PROJECT TOL	PROJECT TOL		
Tangent Plane	(T)	(T)	TANGENT PLANE					
Free State	(F)	(F)	FREE STATE	FREE STATE	FREE STATE	FREE STATE	FREE STATE	
Independency	(I)							
Unilateral Zone	(U)							
Circularity	○	○	○	○	○	○	○	
Cylindricity	⌀	⌀	⌀	⌀	⌀			
Straightness	—	—	—	—	—	—	— or ()
Flatness	▭	▭	▭	▭	▭	—	— or ()
Profile of a Line	⌒	⌒	⌒	⌒	⌒	PROFILE	PROFILE	PROFILE
Profile of a Surface	⌒	⌒	⌒	⌒	⌒	ENTIRE PROFILE	ENTIRE PROFILE	ENTIRE PROFILE
Concentricity	◎	◎	◎	◎	◎	◎	◎	◎
Symmetry	≡	≡	<i>discontinued</i>	≡	≡	≡	≡	≡
Position	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
Circular Runout	↗	↗	↗	↗	↗ CIRCULAR			
Total Runout	↗↗	↗↗	↗↗	↗ TOTAL	↗			
Perpendicularity	⊥	⊥	⊥	⊥	⊥	⊥	⊥	⊥
Parallelism	//	//	//	//	//	//	//	//
Angularity	∠	∠	∠	∠	∠	∠	∠	∠
Datum Feature	A or A	A or A	-A-	-A-	-A-	-A-	-A-	-A-
Radius	R	R	R	R	R	R	R	R
Controlled Radius	CR	CR	CR					
Spherical Radius	SR	SR	SR	SPHER R	R SPHER	R SPHER	R SPHER	SPHERICAL
Diameter	∅	∅	∅	∅ or DIA	DIA	DIA	DIA	DIA
Spherical Diameter	S∅	S∅	S∅					
Countersink	∇	∇	∇	CSK	CSK	CSK	CSK	CSK
Counterbore	⊔	⊔	⊔	CBORE	CBORE	CBORE	CBORE	CBORE
Spotface	[SF]	⊔	⊔	SF	SF	SF or SFACE	SF or SFACE	SF
Depth	⌞	⌞	⌞	DEEP	DEEP	DEEP	DEEP	DEEP
Basic Dimension	.XXX	.XXX	.XXX	.XXX	.XXX or BSC	BASIC or BSC	BASIC or BSC	BASIC
Arc Length	X.XX	X.XX	X.XX					
Between	A ↔ B	A ↔ B	BETWEEN	BETWEEN	BETWEEN	BETWEEN	BETWEEN	
Dimension Origin	⊕ →	⊕ →						
All Around (profile)	↻	↻	↻	ALL AROUND	ENTIRE PROFILE	ENTIRE PROFILE	ENTIRE PROFILE	
All Over (profile)	⊕	ALL OVER	ALL OVER	ALL OVER	ENTIRE PROFILE	ENTIRE PROFILE	ENTIRE PROFILE	
Datum Target	∅.XX A1	∅.XX A1	∅.XX A1	A 1				
Moving Datum Target	∅.XX A1							
Datum Target Point	X	X	X	X				
Statistical Tol.	ST	ST						
Continuous Feature	CF							
Number of Places	8X	8X	8X	8 PLC	8 PLC	8 PLC	8 HOLES	8 HOLES
Not to Scale	X.XX	X.XX	X.XX					
Reference Dim.	(X.XX)	(X.XX)	(X.XX)	(X.XX)	REF	REF	REF	REF
Square Shape	□	□	□					
Slope	∇	∇	∇					
Conical Taper	∇	∇	∇					
BY	X	X	X	X	X	X	X	
Translation	▷							