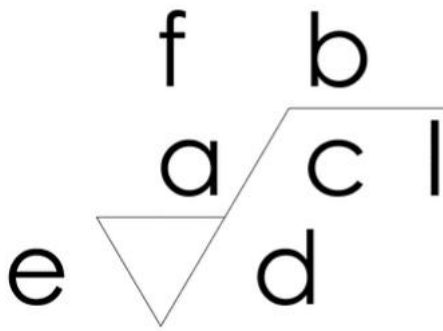


Surface finish symbol

Surface finish call-out

A surface finish callout specifies the desired surface texture or quality for a particular part or component on an engineering drawing.



Graphical Symbol	Description
a	Minimum Roughness
b	Production Method/ Treatment
c	Sampling Length
d	Roughness Spacing
e	Material Removal Allowances
f	Maximum Roughness
l	Other Roughness Values

Roughness value (Ra) μm	Roughness value(Ra) μin	Roughness grade numbers
0.025	1	N1
0.05	2	N2
0.1	4	N3
0.2	8	N4
0.4	16	N5
0.8	32	N6
1.6	63	N7
3.2	125	N8
6.3	250	N9
12.5	500	N10
25	1000	N11

N Grade	Arithmetic Average (AA)	Center Line Average (CLA)	Ra	Rt	Rz	Ry	Root Mean Square (RMS)	Peak to Valley Average (PVA)
01	0.25		0.0006					
0	0.5		0.012		0.05	0.05		
1	1		0.025	0.25	0.1	0.1	1.1	6.3
2	2		0.05	0.5	0.2	0.2	2.2	12
3	4	4	0.1	0.8	0.4	0.4	4.4	25
4	8	8	0.2	1.6	0.8	0.8	8.8	50
5	16	16	0.4	2.5	1.6	1.6	17.6	100
6	32	32	0.8	4	3.2	3.2	32.5	200
7	63	63	1.6	8	6.3	6.3	64.3	400
8	125	125	3.2	16	12.5	12.5	127.5	
9	250	250	6.3	25	25	25	275	
10	500	500	12.5	50	50	50	550	
11	1000	1000	25	100	100	100	1100	
12	2000		50		200	200	2200	
13	4000		100		400	400		
14	8000		200					

Other Type of surface Finish Symbols

R _a Micrometer	Roughness Grade Numbers	Finish Marks
50	N12	▽
25	N11	
12.5	N10	
6.2	N9	▽▽
3.2	N8	
1.6	N7	
0.8	N6	▽▽▽
0.4	N5	
0.2	N4	
0.1	N3	▽▽▽▽
0.05	N2	
0.025	N1	