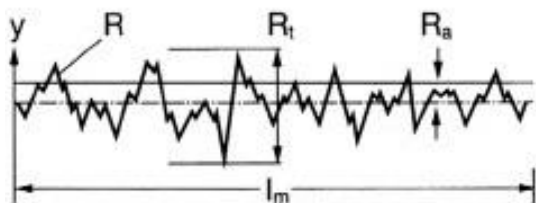


ROUGHNESS CONVERSION CHART

Ra µm ISO 468 e 4287	AA µinch USA ASA B.46.1	Centre Line Average CLA µinch UK BS 1134	Rt µm Germany	Rz µm JIS average in 10 points	Ry µm max. height	UEFCO	ISO 1302	MCC
0.006	0.25						N01	
0.012	0.5			0.05	0.05		N0	
0.025	1		0.25	0.1	0.1		N1	
0.05	2		0.5	0.2	0.2		N2	
0.1	4	4	0.8	0.4	0.4		N3	f5
0.2	8	8	1.6	0.8	0.8	fP	N4	
0.4	16	16	2.5	1.6	1.6	fP	N5	f4
0.8	32	32	4	3.2	3.2	fG	N6	f3
1.6	63	63	8	6.3	6.3	fF	N7	f2
3.2	125	125	16	12.5	12.5	fO	N8	f1
6.3	250	250	25	25	25	fO	N9	f
12.5	500	500	50	50	50	fR	N10	
25	1000	1000	100	100	100	fT	N11	
50	2000			200	200		N12	
100	4000			400	400		N13	
200	8000						N14	

SYMBOLS & FINISHING GRADE

Ra µm	AA - CLA µinch	Conventional symbols	Surface description
0.025 0.05	1 2	▼▼▼▼ ▼▼▼▼	Superfinishing Burnishing diamond paste
0.1 0.2	4 8	▼▼▼▼	Lapped, extremely fine finish, perfectly smooth Lapped for seal joints
0.4 0.8	16 32	▼▼▼	Ground, EDM Machined, extremely fine finish
1.6 3.2	63 125	▼▼	Machined, very smooth Machined, smooth
6.3 12.5	250 500	▼	Machined, medium finish Machined, coarse
25	1000	~	Raw material
50	2000	~	Raw material



$$R_a = \frac{1}{l_m} \int_0^{l_m} |y| dx$$

- Roughness is measured in a trasversal direction to the main grooves.
- The mean arithmetical value "Ra" in µm is assumed for roughness measurements.
- **Rt**: maximum value of roughness from the lowest to the highest point.
- **Rz**: average roughness in 10 points.