

CHART CUTTING SPEED



Cutting speed in meter/second V_c [m/s]																									
		15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	35	40	45	50	60	70	80	90
Wheel diameter ϕ [mm]	500	573	611	649	688	726	764	802	840	879	917	955	993	1.031	1.070	1.108	1.146	1.337	1.528	1.719	1.910	2.292	2.674	3.056	3.438
	450	637	679	722	764	806	849	891	934	976	1.019	1.061	1.103	1.146	1.188	1.231	1.273	1.485	1.698	1.910	2.122	2.546	2.971	3.395	3.820
	400	716	764	812	859	907	955	1.003	1.050	1.098	1.146	1.194	1.241	1.289	1.337	1.385	1.432	1.671	1.910	2.149	2.387	2.865	3.342	3.820	4.297
	350	819	873	928	982	1.037	1.091	1.146	1.200	1.255	1.310	1.364	1.419	1.473	1.528	1.582	1.637	1.910	2.183	2.456	2.728	3.274	3.820	4.365	4.911
	300	955	1.019	1.082	1.146	1.210	1.273	1.337	1.401	1.464	1.528	1.592	1.655	1.719	1.783	1.846	1.910	2.228	2.546	2.865	3.183	3.820	4.456	5.093	5.730
	250	1.146	1.222	1.299	1.375	1.451	1.528	1.604	1.681	1.757	1.833	1.910	1.986	2.063	2.139	2.215	2.292	2.674	3.056	3.438	3.820	4.584	5.348	6.112	6.875
	200	1.432	1.528	1.623	1.719	1.814	1.910	2.005	2.101	2.196	2.292	2.387	2.483	2.578	2.674	2.769	2.865	3.342	3.820	4.297	4.775	5.730	6.685	7.639	8.594
	175	1.637	1.746	1.855	1.964	2.074	2.183	2.292	2.401	2.510	2.619	2.728	2.838	2.947	3.056	3.165	3.274	3.820	4.365	4.911	5.457	6.548	7.639	8.731	9.822
	150	1.910	2.037	2.165	2.292	2.419	2.546	2.674	2.801	2.928	3.056	3.183	3.310	3.438	3.565	3.692	3.820	4.456	5.093	5.730	6.366	7.639	8.913	10.186	11.459
	125	2.292	2.445	2.597	2.750	2.903	3.056	3.209	3.361	3.514	3.667	3.820	3.973	4.125	4.278	4.431	4.584	5.348	6.112	6.875	7.639	9.167	10.695	12.223	13.751
	100	2.865	3.056	3.247	3.438	3.629	3.820	4.011	4.202	4.393	4.584	4.775	4.966	5.157	5.348	5.539	5.730	6.685	7.639	8.594	9.549	11.459	13.369	15.279	17.189
	75	3.820	4.074	4.329	4.584	4.838	5.093	5.348	5.602	5.857	6.112	6.366	6.621	6.875	7.130	7.385	7.639	8.913	10.186	11.459	12.732	15.279	17.825	20.372	22.918
	50	5.730	6.112	6.494	6.875	7.257	7.639	8.021	8.403	8.785	9.167	9.549	9.931	10.313	10.695	11.077	11.459	13.369	15.279	17.189	19.099	22.918	26.738	30.558	34.377
	40	7.162	7.639	8.117	8.594	9.072	9.549	10.027	10.504	10.982	11.459	11.937	12.414	12.892	13.369	13.846	14.324	16.711	19.099	21.486	23.873	28.648	33.423	38.197	42.972
	Revolution per minute n_s [tr/min]																								

V_c = Cutting speed in metre/second

n_s = Revolution per minute

ϕ = Wheel diameter

$$n_s = \frac{V_c \cdot 1000 \cdot 60}{\phi \cdot \pi}$$

$$V_c = \frac{n_s \cdot \phi \cdot \pi}{1000 \cdot 60}$$