

Parameter recommendation for drilling of laminates with fillers and halogen-free material up to Tg 185°C Isola IS400 / IS420, Panasonic R-1566 / R-1755

GCT drill type: 1638 / 1640 / 1835 / 1534
Cutting speed: v = 190 m/min

Spindle speed	200.000 rpm max.							
	D1	f	n	F	R	f	n	F
∅	f = chip load		n = spindle speed		F = infeed		R = retract	
[mm]	[µm/1]	[rpm]	[m/min]	[m/min]	[µm/1]	[rpm]	[m/min]	[m/min]
0.30	8	200	1.6	6.0				
0.35	10	172	1.7	7.0				
0.40	12	150	1.8	8.0				
0.45	13	135	1.8	9.0				
0.50	15	120	1.8	10.0				
0.55	16	110	1.8	12.0				
0.60	18	100	1.8	15.0				
0.65	20	93	1.8	15.0				
0.70	21	86	1.8	18.0				
0.75	22	80	1.8	18.0				
0.80	24	75	1.8	20.0				
0.85	26	71	1.8	20.0				
0.90	27	67	1.8	23.0				
0.95	29	63	1.8	23.0				
1.00	30	60	1.8	25.0				
1.05	32	57	1.8	25.0				
1.10	33	55	1.8	25.0				
1.15	35	52	1.8	25.0				
1.20	36	50	1.8	25.0				
1.25	37	48	1.8	25.0				
1.30	39	46	1.8	25.0				
1.35	41	44	1.8	25.0				
1.40	43	43	1.8	25.0				
1.45 - 1.60	46	39	1.8	25.0				
1.65 - 1.80	51	34	1.7	25.0				
1.85 - 2.00	56	31	1.7	25.0				
2.05 - 2.30	60	28	1.6	25.0				
2.35 - 2.60	60	24	1.4	25.0				
2.65 - 2.90	60	22	1.3	25.0				
2.95 - 3.15	60	20	1.2	25.0				
3.175 - 3.95	35	20	0.7	15.0				
4.00 - 4.95	30	20	0.6	15.0				
5.00 - 5.95	25	20	0.5	15.0				
6.00 - 6.40	20	20	0.4	15.0				

General recommendations:

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- ⇒ Use an entry material (e.g. aluminium approx. 0.20 mm thick).
- ⇒ Melamine coated back-up material is preferred.
- ⇒ For drill-∅ > 4.50 mm pre-drilling is recommended with approx. 15% of the final diameter.
- ⇒ Max pressure at pressure foot.