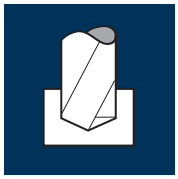
Application



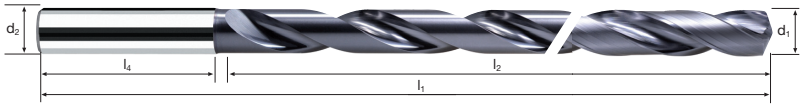
Material	d1 [mm]	v_c [m/min]	f [mm]	n [min⁻¹]	v_f [mm/min]	Q [cm³/min]	T [sek]
Steel < 500 N/mm²	3.00	90	0.120	9550	1145	8.0	4.5
	4.00	90	0.120	7160	860	11.0	7.0
	5.00	90	0.120	5730	690	13.5	11.0
	6.00	90	0.150	4775	715	20.0	12.7
	8.00	90	0.150	3580	535	27.0	22.5
	9.00	90	0.200	3185	635	40.5	21.2
	10.00	90	0.200	2865	575	45.0	26.4
	12.00	90	0.200	2385	475	53.5	37.9
	14.00	90	0.240	2045	490	75.5	43.1
Steel 500 - 850 N/mm²	3.00	70	0.115	7425	855	6.0	6.1
	4.00	70	0.115	5570	640	8.0	9.4
	5.00	70	0.115	4455	510	10.0	14.9
	6.00	70	0.145	3715	540	15.5	16.8
	8.00	70	0.145	2785	405	20.5	29.8
	9.00	70	0.190	2475	470	30.0	28.7
	10.00	70	0.190	2230	425	33.5	35.7
	12.00	70	0.190	1855	350	39.5	51.4
	14.00	70	0.230	1590	365	56.0	57.9
Steel 850 - 1100 N/mm²	3.00	45	0.100	4775	480	3.5	10.8
	4.00	45	0.100	3580	360	4.5	16.7
	5.00	45	0.100	2865	285	5.5	26.6
	6.00	45	0.140	2385	335	9.5	27.0
	8.00	45	0.140	1790	250	12.5	48.2
	9.00	45	0.180	1590	285	18.0	47.3
	10.00	45	0.180	1430	255	20.0	59.5
	12.00	45	0.180	1195	215	24.5	83.7
	14.00	45	0.220	1025	225	34.5	93.9
Steel 1100 - 1300 N/mm²	3.00	30	0.090	3185	285	2.0	18.2
	4.00	30	0.090	2385	215	2.5	27.9
	5.00	30	0.090	1910	170	3.5	44.6
	6.00	30	0.125	1590	200	5.5	45.3
	8.00	30	0.125	1195	150	7.5	80.4
	9.00	30	0.160	1060	170	11.0	79.2
	10.00	30	0.160	955	155	12.0	97.9
	12.00	30	0.160	795	125	14.0	144.0
	14.00	30	0.200	680	135	21.0	156.4

Material	d1 [mm]	v_c [m/min]	f [mm]	n [min⁻¹]	v_f [mm/min]	Q [cm³/min]	T [sek]
Cold work tool steel (12% Cr) high alloyed [1.2379]	3.00	35	0.100	3715	370	2.5	14.0
	4.00	35	0.100	2785	280	3.5	21.4
	5.00	35	0.100	2230	225	4.5	33.7
	6.00	35	0.140	1855	260	7.5	34.8
	8.00	35	0.140	1395	195	10.0	61.8
	9.00	35	0.180	1240	225	14.5	59.9
	10.00	35	0.180	1115	200	15.5	75.9
	12.00	35	0.180	930	165	18.5	109.1
	14.00	35	0.220	795	175	27.0	120.7
Cast iron (lamellar / spheroidal)	3.00	70	0.160	7425	1190	8.5	4.4
	4.00	70	0.160	5570	890	11.0	6.7
	5.00	70	0.160	4455	715	14.0	10.6
	6.00	70	0.210	3715	780	22.0	11.6
	8.00	70	0.210	2785	585	29.5	20.6
	9.00	70	0.260	2475	645	41.0	20.9
	10.00	70	0.260	2230	580	45.5	26.2
	12.00	70	0.260	1855	480	54.5	37.5
	14.00	70	0.320	1590	510	78.5	41.4

Deep hole drills

25xd

HM MGD²



Rm < 850	Rm 850-1100	Rm 1100-1300							GG(G)

Example: **Order-N°.** Article-N°. **B52925** ø-Code **.0300**

ø Code	d_1 h7	d_2 h6	l_1	l_2	l_4	L_{max}	DURO-D² B52925
.0300	3.0	4	125	91	32	86.5	●
.0350	3.5	4	140	106	32	101.0	●
.0400	4.0	4	140	106	32	100.0	●
.0450	4.5	5	155	119	34	112.5	●
.0500	5.0	5	170	134	34	126.5	●
.0550	5.5	6	185	147	36	139.0	●
.0600	6.0	6	200	160	36	151.0	●
.0700	7.0	7	225	185	38	174.5	●
.0800	8.0	8	255	213	40	201.0	●
.0900	9.0	9	280	238	40	224.5	●
.1000	10.0	10	310	268	40	253.0	●
.1100	11.0	11	340	293	45	276.5	●
.1200	12.0	12	365	318	45	300.0	●
.1300	13.0	13	390	343	45	323.5	●
.1400	14.0	14	425	373	50	352.0	●

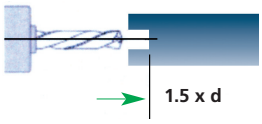
Technical notes, page 428

A pilot hole is required!

Technical notes regarding use of deep hole drills

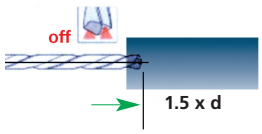
Fraisa SA recommends the following drilling strategy to increase both service life and reliability:

Step 1



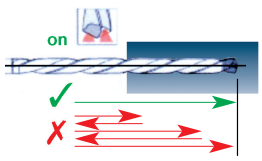
Pilot hole = 1.5 x d.
e.g. Supradrill® U 3xd. B62011.
The pilot hole must be free of chips prior to insertion of the deep-hole drill!

Step 2



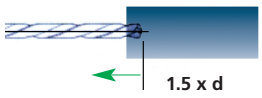
Insert the tool into the hole at max. 300 1/min
and v_f = 1000mm/min.
Without cooling up to 1 mm from the bottom of the pilot hole.

Step 3



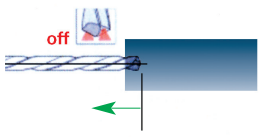
Coolant supply on.
Drill using recommended cutting data and without chip breaking.
When drilling **through-holes**, reduce the feed rate by at least 25% before retracting from the hole.

Step 4



Retract the deep-hole drill with double the feed rate (=2 x v_f) – until 1.5 x d after entering the hole. Position as stated in Step 2.

Step 5



Next reduce the spindle speed to max. 300 1/min.
Coolant feed is switched off.
Withdraw the drill from the drilled hole. (max. 1000 mm/min).

SAFETY NOTE

Outside of the drill hole, long deep-hole drills may only turn at a low speed (max. 300 1/min).
Higher spindle speeds can cause such tools to vibrate, leading to spontaneous failure.