DURONTO MICRO FX

3xd to 25xd Micro drills with and without
Internal Coolant holes - Universal application

P M K S N

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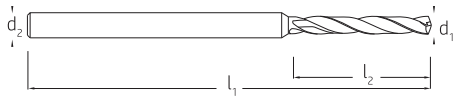
DURONTO-MICRO FX

3xd Without Internal Spiral Coolant Holes

3xd



RH

140°±1°

SM

M	M	K	S
<35HRC	<1100 N/mm²	<300 HB	<1100 N/mm²

Technical Info. Page No. ***150***

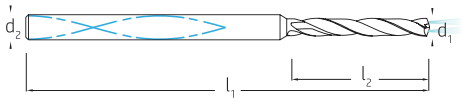
d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
1.00	3	7.0	35	DFMP 0310 0100
1.10	3	7.0	35	DFMP 0310 0110
1.20	3	8.0	35	DFMP 0310 0120
1.30	3	8.0	35	DFMP 0310 0130
140	3	9.0	35	DFMP 0310 0140
1.50	3	9.0	40	DFMP 0310 0150
1.60	3	10.0	40	DFMP 0310 0160
1.70	3	10.0	40	DFMP 0310 0170
1.80	3	11.0	40	DFMP 0310 0180
1.90	3	11.0	40	DFMP 0310 0190

d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
2.00	3	13.0	45	DFMP 0310 0200
2.10	3	13.0	45	DFMP 0310 0210
2.20	3	13.0	45	DFMP 0310 0220
2.30	3	13.0	45	DFMP 0310 0230
240	3	15.0	45	DFMP 0310 0240
2.50	3	15.0	50	DFMP 0310 0250
2.60	3	15.0	50	DFMP 0310 0260
2.70	3	17.0	50	DFMP 0310 0270
2.80	3	17.0	50	DFMP 0310 0280
2.90	3	17.0	50	DFMP 0310 0290

DURONTO-MICRO FX

3xd With Internal Spiral Coolant Holes

3xd IK



140°±1°

SM

M	M	K	S
<35HRC	<1100 N/mm²	<300 HB	<1100 N/mm²

Technical Info. Page No. ***150***

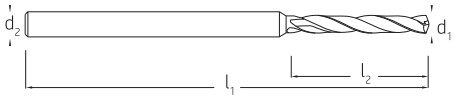
d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
2.20	3	8.6	55	DFMP 0320 0220
2.25	3	8.8	55	DFMP 0320 0225
2.30	3	9.0	55	DFMP 0320 0230
2.35	3	9.2	55	DFMP 0320 0235
240	3	94	55	DFMP 0320 0240
245	3	9.6	55	DFMP 0320 0245
2.50	3	9.8	55	DFMP 0320 0250
2.55	3	10.0	55	DFMP 0320 0255

d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
2.60	3	10.2	55	DFMP 0320 0260
2.65	3	104	55	DFMP 0320 0265
2.70	3	10.6	55	DFMP 0320 0270
2.75	3	10.8	55	DFMP 0320 0275
2.80	3	11.0	55	DFMP 0320 0280
2.85	3	11.2	55	DFMP 0320 0285
2.90	3	114	55	DFMP 0320 0290

DURONTO-MICRO FX

3xd Without Internal Spiral Coolant Holes

5xd



RH

140°±1°

SM

M	M	K	S
<35HRC	<1100 N/mm²	<300 HB	<1100 N/mm²

Technical Info. Page No. ***150***

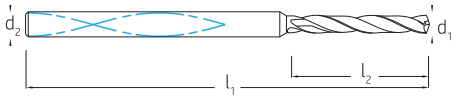
d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
040	3	3.6	38	DFMP 0510 0040
045	3	3.8	38	DFMP 0510 0045
0.50	3	4.0	38	DFMP 0510 0050
0.55	3	4.6	38	DFMP 0510 0055
0.60	3	4.8	38	DFMP 0510 0060
0.65	3	5.0	38	DFMP 0510 0065
0.70	3	6.0	38	DFMP 0510 0070
0.75	3	6.2	38	DFMP 0510 0075
0.80	3	64	38	DFMP 0510 0080
0.85	3	6.7	38	DFMP 0510 0085
0.90	3	7.0	38	DFMP 0510 0090
0.95	3	7.3	38	DFMP 0510 0095
1.00	3	7.5	38	DFMP 0510 0100
1.05	3	7.8	38	DFMP 0510 0105
1.10	3	8.0	38	DFMP 0510 0110
1.15	3	8.3	38	DFMP 0510 0115
1.20	3	8.5	38	DFMP 0510 0120
1.25	3	8.8	38	DFMP 0510 0125
1.30	3	9.0	38	DFMP 0510 0130
1.35	3	9.5	38	DFMP 0510 0135
140	3	10.0	38	DFMP 0510 0140
145	3	10.5	38	DFMP 0510 0145
1.50	3	11.0	38	DFMP 0510 0150
1.55	3	11.3	38	DFMP 0510 0155
1.60	3	11.5	38	DFMP 0510 0160
1.65	3	11.8	38	DFMP 0510 0165

d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
1.70	3	12.0	38	DFMP 0510 0170
1.75	3	12.3	38	DFMP 0510 0175
1.80	3	12.5	38	DFMP 0510 0180
1.85	3	12.8	38	DFMP 0510 0185
1.90	3	13.0	38	DFMP 0510 0190
1.95	3	13.5	38	DFMP 0510 0195
2.00	3	14.0	46	DFMP 0510 0200
2.05	3	14.5	46	DFMP 0510 0205
2.10	3	15.0	46	DFMP 0510 0210
2.15	3	15.5	46	DFMP 0510 0215
2.20	3	16.0	46	DFMP 0510 0220
2.25	3	16.5	46	DFMP 0510 0225
2.30	3	17.0	46	DFMP 0510 0230
2.35	3	17.5	46	DFMP 0510 0235
240	3	18.0	46	DFMP 0510 0240
245	3	18.5	46	DFMP 0510 0245
2.50	3	19.0	46	DFMP 0510 0250
2.55	3	19.5	50	DFMP 0510 0255
2.60	3	20.0	50	DFMP 0510 0260
2.65	3	20.5	50	DFMP 0510 0265
2.70	3	21.0	50	DFMP 0510 0270
2.75	3	21.5	50	DFMP 0510 0275
2.80	3	22.0	50	DFMP 0510 0280
2.85	3	22.5	50	DFMP 0510 0285
2.90	3	23.0	50	DFMP 0510 0290

DURONTO-MICRO FX

5xd With Internal Spiral Coolant Holes

5xd IK



M	M	K	S
<35HRC	<1100 N/mm²	<300 HB	<1100 N/mm²

Technical Info. Page No. ***150***

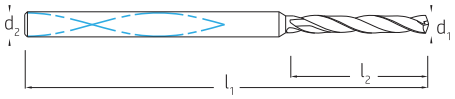
d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
2.20	3	14.3	55	DFMP 0520 0220
2.25	3	14.6	55	DFMP 0520 0225
2.30	3	15.0	55	DFMP 0520 0230
2.35	3	15.3	55	DFMP 0520 0235
240	3	15.6	55	DFMP 0520 0240
245	3	15.9	55	DFMP 0520 0245
2.50	3	16.3	55	DFMP 0520 0250
2.55	3	16.6	55	DFMP 0520 0255

d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
2.60	3	16.9	55	DFMP 0520 0260
2.65	3	17.2	55	DFMP 0520 0265
2.70	3	17.6	55	DFMP 0520 0270
2.75	3	17.9	55	DFMP 0520 0275
2.80	3	18.2	55	DFMP 0520 0280
2.85	3	18.5	55	DFMP 0520 0285
2.90	3	18.9	55	DFMP 0520 0290
2.95	3	19.2	55	DFMP 0520 0295

DURONTO-MICRO FX

8xd With Internal Spiral Coolant Holes

8xd IK



140°±1°

SM

M	M	K	S
<35HRC	<1100 N/mm²	<300 HB	<1100 N/mm²

Technical Info. Page No. ***150***

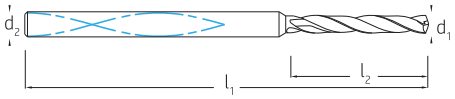
d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
2.20	3	20.9	60	DFMP 0820 0220
2.25	3	21.4	60	DFMP 0820 0225
2.30	3	21.9	60	DFMP 0820 0230
2.35	3	22.3	60	DFMP 0820 0235
240	3	22.8	60	DFMP 0820 0240
245	3	23.3	60	DFMP 0820 0245
2.50	3	23.8	60	DFMP 0820 0250
2.55	3	24.2	60	DFMP 0820 0255

d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
2.60	3	24.7	60	DFMP 0820 0260
2.65	3	25.2	60	DFMP 0820 0265
2.70	3	25.7	60	DFMP 0820 0270
2.75	3	26.1	60	DFMP 0820 0275
2.80	3	26.6	60	DFMP 0820 0280
2.85	3	27.1	60	DFMP 0820 0285
2.90	3	27.6	60	DFMP 0820 0290
2.95	3	28.0	60	DFMP 0820 0295

DURONTO-MICRO FX

12xd With Internal Spiral Coolant Holes

12xd IK



RH

140°±1°

SM

M	M	K	S
<35HRC	<1100 N/mm²	<300 HB	<1100 N/mm²

Technical Info. Page No. ***150***

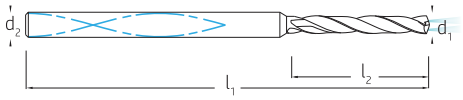
d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
2.20	3	29.7	65	DFMP 1220 0220
2.25	3	304	65	DFMP 1220 0225
2.30	3	31.1	65	DFMP 1220 0230
2.35	3	31.7	75	DFMP 1220 0235
240	3	324	75	DFMP 1220 0240
245	3	33.1	75	DFMP 1220 0245
2.50	3	33.8	75	DFMP 1220 0250
2.55	3	344	75	DFMP 1220 0255

d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
2.60	3	35.1	75	DFMP 1220 0260
2.65	3	35.8	75	DFMP 1220 0265
2.70	3	36.5	75	DFMP 1220 0270
2.75	3	37.1	75	DFMP 1220 0275
2.80	3	37.8	75	DFMP 1220 0280
2.85	3	38.5	75	DFMP 1220 0285
2.90	3	39.2	75	DFMP 1220 0290

DURONTO-MICRO FX

20xd Withou Internal Spiral Coolant Holes

20xd IK



140°±1°

SM

M	M	K	S
<35HRC	<1100 N/mm²	<300 HB	<1100 N/mm²

Technical Info. Page No. ***150***

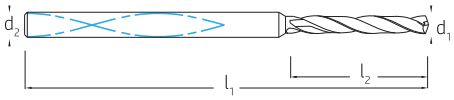
d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
2.20	3	50.6	90	DFMP 2020 0220
2.30	3	52.9	92	DFMP 2020 0230
240	3	55.2	94	DFMP 2020 0240
2.50	3	57.5	96	DFMP 2020 0250

d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
2.60	3	59.8	99	DFMP 2020 0260
2.70	3	62.1	101	DFMP 2020 0270
2.80	3	644	103	DFMP 2020 0280
2.90	3	66.7	105	DFMP 2020 0290

DURONTO-MICRO FX

25xd With Internal Spiral Coolant Holes

25xd IK



M	M	K	S
<35HRC	<1100 N/mm²	<300 HB	<1100 N/mm²

Technical Info. Page No. ***150***

d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
2.20	3	72.6	112	DFMP 2520 0220
2.30	3	75.9	115	DFMP 2520 0230
240	3	79.2	118	DFMP 2520 0240
2.50	3	82.5	121	DFMP 2520 0250

d_1	d_2	l_2	l_1	EDP No. HA
(m7)	*(h6)*	*±0.50*	*±0.80*	PX
2.60	3	85.8	125	DFMP 2520 0260
2.70	3	89.1	128	DFMP 2520 0270
2.80	3	924	131	DFMP 2520 0280
2.90	3	95.7	134	DFMP 2520 0290

	MATERIAL	Hardness	Vc (m/min)	f (mm/rev) Ø 1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	2.90
DFMP 3xd, 5xd, 8xd														
P	Steels, Alloy Steels and Tool Steels	500-850 N/mm²	55-65	0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.07	0.08	0.09	0.09
P	Steels, Alloy Steels and Tool Steels	850-1200 N/mm²	45-55	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.10	0.10
P	Alloy Steels, Tool Steels, Duplex Steels	<1400 N/mm²	40-50	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.08	0.09	0.10	0.12
M	Stainless Steel : Easy To Machine	<750 N/mm²	30-40	0.03	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.10
M	Stainless Difficult, PH Stainless	<950 N/mm²	23-33	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.10	0.10
K	Cast Irons, Grey, Spher, Melleable	<300 HB	56-66	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.13	0.14	0.15
N	Aluminiums, Aluminiums Alloys	<6% Si	80-90	0.04	0.05	0.05	0.07	0.08	0.10	0.11	0.12	0.13	0.15	0.15
H	Titanium , Titanium Alloys	<1100N/mm²	23-33	0.02	0.02	0.03	0.04	0.04	0.05	0.06	0.06	0.07	0.08	0.08
H	HRSA (Nickel Alloys, Co. Alloys)	<1300N/mm²	17-27	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06
DFMP 12xd, 15xd, 20xd														
P	Steels, Alloy Steels and Tool Steels	500-850 N/mm²	52-62	0.06	0.07	0.07	0.08	0.08	0.08	0.09	0.09			
P	Steels, Alloy Steels and Tool Steels	850-1200 N/mm²	42-52	0.07	0.07	0.08	0.09	0.09	0.09	0.10	0.10			
P	Alloy Steels, Tool Steels, Duplex Steels	<1400 N/mm²	37-47	0.07	0.08	0.08	0.09	0.09	0.10	0.10	0.10			
M	Stainless Steel : Easy To Machine	<750 N/mm²	27-37	0.07	0.07	0.08	0.09	0.09	0.09	0.10	0.10			
M	Stainless Difficult, PH Stainless	<950 N/mm²	20-30	0.08	0.08	0.08	0.09	0.09	0.10	0.10	0.11			
K	Cast Irons, Grey, Spher, Melleable	<300 HB	49-59	0.10	0.10	0.11	0.12	0.12	0.13	0.13	0.14			
N	Aluminiums, Aluminiums Alloys	<6% Si	75-85	0.10	0.10	0.10	0.12	0.12	0.13	0.13	0.14			
H	Titanium , Titanium Alloys	<1100N/mm²	21-31	0.06	0.06	0.06	0.07	0.07	0.08	0.08	0.08			
H	HRSA (Nickel Alloys, Co. Alloys)	<1300N/mm²	15-25	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.06			
DFMP 25xd, 30xd														
P	Steels, Alloy Steels and Tool Steels	500-850 N/mm²	47-57	0.07	0.07	0.07	0.08	0.09	0.09	0.09	0.10			
P	Steels, Alloy Steels and Tool Steels	850-1200 N/mm²	37-47	0.07	0.07	0.08	0.09	0.09	0.10	0.10	0.10			
P	Alloy Steels, Tool Steels, Duplex Steels	<1400 N/mm²	32-42	0.08	0.08	0.09	0.10	0.10	0.10	0.11	0.11			
M	Stainless Steel : Easy To Machine	<750 N/mm²	23-33	0.08	0.08	0.08	0.10	0.10	0.10	0.11	0.11			
M	Stainless Difficult, PH Stainless	<950 N/mm²	17-27	0.08	0.08	0.09	0.10	0.10	0.10	0.11	0.11			
K	Cast Irons, Grey, Spher, Melleable	<300 HB	44-54	0.07	0.07	0.07	0.08	0.09	0.09	0.10	0.10			
N	Aluminiums, Aluminiums Alloys	<6% Si	67-77	0.09	0.09	0.10	0.10	0.13	0.13	0.13	0.14			
H	Titanium , Titanium Alloys	<1100N/mm²	19-29	0.06	0.06	0.06	0.07	0.08	0.08	0.08	0.08			
H	HRSA (Nickel Alloys, Co. Alloys)	<1300N/mm²	13-23	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.05			

Technical Data provided should be considered advisory only as variations may be necessary depending on the particular application