



INFO

CARBIDE
DRILLS

PU-HPU
TA-4HTA
SUH
ALH
HRC
SUH MINI
HL
HSD
C-SD-TA

HSS
DRILLS

LFTA
SUTA
HSS-HSS/CO

SUTA

HIGH PERFORMANCE

✚ High performance and self-centering geometry. Featuring premium HSSE+PV10 coating and special edge design, enables very low cutting pressure and outstanding performance on stainless steel, steel and non-ferrous materials.

🇮🇹 Alto rendimento e affilatura autocentrante. Costruita con i migliori HSSE+PV10 e speciale geometria del tagliente, garantisce un bassissimo sforzo di taglio e prestazioni eccezionali nella foratura di acciaio inossidabile, acciaio e materiali non ferrosi.

🇩🇪 Hohe Leistungen und selbstzentrierende Schnittgeometrie. Aus hervorragendem HSSE mit PV10 Beschichtung. Dank des sehr geringen Schneiddrucks, sind unschlagbare Leistungen auf rostfreien Stählen, Stählen und NE-Metall-Werkstoffe möglich.

🇫🇷 Haute performance et affûtage autocentré. Fabriquée avec les meilleurs HSSE+PV10 et une géométrie spécifique de l'arête, elle permet de minimiser les efforts de coupe en garantissant des performances exceptionnelles dans le perçage des aciers inoxydables, des aciers et des matériaux non ferreux.

🇪🇸 Broca de alto rendimiento con afilado autocentrante. Fabricada en HSSE Premium con recubrimiento PV10 y geometría especial, minimiza el esfuerzo de corte y permite lograr un altísimo rendimiento en aceros inoxidable, aceros y materiales no ferrosos.

🇷🇺 Высокопроизводительная и самоцентрирующаяся геометрия. Высококачественная быстрорежущая сталь с покрытием PV10 и специальная геометрия режущих кромок обеспечивает низкие силы резания и непревзойденную производительность при работе по нержавеющей стали, конструкционной стали и цветным металлам.

CARBIDE
END-MILLS

G2
MDTA
HF-VH/UP
MEF
ALU
MEX/MH
UH/MH

HSS
END-MILLS

CARBIDE
BURRS

INFO

980SUTA

self centering, stainless steel, extra-short



CARBIDE DRILLS

PU-HPU

TA-4HTA

SUH

ALH

HRC

SUH MINI

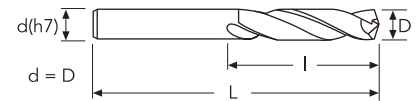
HL

HSD

C-SD-TA

P	M	K	N	S	H
★	★	★	★	☆	☆

★ 1st choice ☆ suitable



D(h8)	D Tol.	d(h7)	l	L	PACKAGING	EDP No.	Stock
2.00	0/-0.014	2	12	44	1	P980SUTA0200	●
2.10	0/-0.014	2.1	12	44	1	P980SUTA0210	●
2.20	0/-0.014	2.2	13	45	1	P980SUTA0220	●
2.30	0/-0.014	2.3	13	45	1	P980SUTA0230	●
2.40	0/-0.014	2.4	14	46	1	P980SUTA0240	●
2.50	0/-0.014	2.5	14	46	1	P980SUTA0250	●
2.60	0/-0.014	2.6	14	46	1	P980SUTA0260	●
2.70	0/-0.014	2.7	16	48	1	P980SUTA0270	●
2.80	0/-0.014	2.8	16	48	1	P980SUTA0280	●
2.90	0/-0.014	2.9	16	48	1	P980SUTA0290	●
3.00	0/-0.014	3	16	48	1	P980SUTA0300	●
3.10	0/-0.018	3.1	18	50	1	P980SUTA0310	●
3.20	0/-0.018	3.2	18	50	1	P980SUTA0320	●
3.30	0/-0.018	3.3	18	50	1	P980SUTA0330	●
3.40	0/-0.018	3.4	20	52	1	P980SUTA0340	●
3.50	0/-0.018	3.5	20	52	1	P980SUTA0350	●
3.60	0/-0.018	3.6	20	52	1	P980SUTA0360	●
3.70	0/-0.018	3.7	20	52	1	P980SUTA0370	●
3.80	0/-0.018	3.8	22	54	1	P980SUTA0380	●
3.90	0/-0.018	3.9	22	54	1	P980SUTA0390	●
4.00	0/-0.018	4	22	54	1	P980SUTA0400	●
4.10	0/-0.018	4.1	22	66	1	P980SUTA0410	●
4.20	0/-0.018	4.2	22	66	1	P980SUTA0420	●
4.30	0/-0.018	4.3	24	68	1	P980SUTA0430	●
4.40	0/-0.018	4.4	24	68	1	P980SUTA0440	●
4.50	0/-0.018	4.5	24	68	1	P980SUTA0450	●
4.60	0/-0.018	4.6	24	68	1	P980SUTA0460	●
4.70	0/-0.018	4.7	24	68	1	P980SUTA0470	●
4.80	0/-0.018	4.8	26	70	1	P980SUTA0480	●
4.90	0/-0.018	4.9	26	70	1	P980SUTA0490	●
5.00	0/-0.018	5	26	70	1	P980SUTA0500	●
5.10	0/-0.018	5.1	26	70	1	P980SUTA0510	●
5.20	0/-0.018	5.2	26	70	1	P980SUTA0520	●
5.30	0/-0.018	5.3	26	70	1	P980SUTA0530	●
5.40	0/-0.018	5.4	28	72	1	P980SUTA0540	●
5.50	0/-0.018	5.5	28	72	1	P980SUTA0550	●
5.60	0/-0.018	5.6	28	72	1	P980SUTA0560	●
5.70	0/-0.018	5.7	28	72	1	P980SUTA0570	●
5.80	0/-0.018	5.8	28	72	1	P980SUTA0580	●

HSS DRILLS

LFTA

SUTA

HSS-HSS/CO

CARBIDE END-MILLS

G2

MDTA

HFVH/UP

MEF

ALU

MEX/MH

UH/MH

HSS END-MILLS

CARBIDE BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

980SUTA

self centering, stainless steel, extra-short



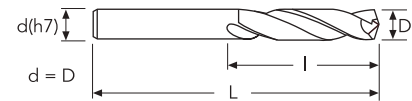
INFO



★ 1st choice ☆ suitable

CARBIDE DRILLS

PU-HPU
TA-4HTA
SUH
ALH
HRC
SUH MINI
HL
HSD
C-SD-TA



D(h8)	D Tol.	d(h7)	I	L	PACKAGING	EDP No.	Stock
5.90	0/-0.018	5.9	28	72	1	P980SUTA0590	●
6.00	0/-0.018	6	28	72	1	P980SUTA0600	●
6.10	0/-0.022	6.1	31	75	1	P980SUTA0610	●
6.20	0/-0.022	6.2	31	75	1	P980SUTA0620	●
6.30	0/-0.022	6.3	31	75	1	P980SUTA0630	●
6.40	0/-0.022	6.4	31	75	1	P980SUTA0640	●
6.50	0/-0.022	6.5	31	75	1	P980SUTA0650	●
6.60	0/-0.022	6.6	31	75	1	P980SUTA0660	●
6.70	0/-0.022	6.7	31	75	1	P980SUTA0670	●
6.80	0/-0.022	6.8	34	78	1	P980SUTA0680	●
6.90	0/-0.022	6.9	34	78	1	P980SUTA0690	●
7.00	0/-0.022	7	34	78	1	P980SUTA0700	●
7.10	0/-0.022	7.1	34	78	1	P980SUTA0710	●
7.20	0/-0.022	7.2	34	78	1	P980SUTA0720	●
7.30	0/-0.022	7.3	34	78	1	P980SUTA0730	●
7.40	0/-0.022	7.4	34	78	1	P980SUTA0740	●
7.50	0/-0.022	7.5	34	78	1	P980SUTA0750	●
7.60	0/-0.022	7.6	37	81	1	P980SUTA0760	●
7.70	0/-0.022	7.7	37	81	1	P980SUTA0770	●
7.80	0/-0.022	7.8	37	81	1	P980SUTA0780	●
7.90	0/-0.022	7.9	37	81	1	P980SUTA0790	●
8.00	0/-0.022	8	37	81	1	P980SUTA0800	●
8.10	0/-0.022	8.1	37	87	1	P980SUTA0810	●
8.20	0/-0.022	8.2	37	87	1	P980SUTA0820	●
8.30	0/-0.022	8.3	37	87	1	P980SUTA0830	●
8.40	0/-0.022	8.4	37	87	1	P980SUTA0840	●
8.50	0/-0.022	8.5	37	87	1	P980SUTA0850	●
8.60	0/-0.022	8.6	40	90	1	P980SUTA0860	●
8.70	0/-0.022	8.7	40	90	1	P980SUTA0870	●
8.80	0/-0.022	8.8	40	90	1	P980SUTA0880	●
8.90	0/-0.022	8.9	40	90	1	P980SUTA0890	●
9.00	0/-0.022	9	40	90	1	P980SUTA0900	●
9.10	0/-0.022	9.1	40	90	1	P980SUTA0910	●
9.20	0/-0.022	9.2	40	90	1	P980SUTA0920	●
9.30	0/-0.022	9.3	40	90	1	P980SUTA0930	●
9.40	0/-0.022	9.4	40	90	1	P980SUTA0940	●
9.50	0/-0.022	9.5	40	90	1	P980SUTA0950	●
9.60	0/-0.022	9.6	43	93	1	P980SUTA0960	●
9.70	0/-0.022	9.7	43	93	1	P980SUTA0970	●

HSS DRILLS

LFTA
SUTA
HSS-HSS/CO

CARBIDE END-MILLS

G2
MDTA
HF-VH/UP
MEF
ALU
MEX/MH
UH/MH

HSS END-MILLS

CARBIDE BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

CUTTING PARAMETERS

980SUTA

Material Group ISO 513	P1 P2	P7	M1	M2	N1 N2 N4	N3	S1 S2	S4
Hardness/Rm	500÷700 N/mm ²	400÷700 N/mm ²					<30 HRC	
Vc (m/min)	35÷45	18÷22	18÷22	12÷16	60÷80	30÷40	8÷12	12÷16
D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)
2	0.060	0.060	0.060	0.042	0.066	0.051	0.024	0.042
3	0.080	0.080	0.080	0.056	0.088	0.068	0.032	0.056
4	0.100	0.100	0.100	0.070	0.120	0.085	0.040	0.070
5	0.120	0.120	0.120	0.084	0.144	0.102	0.060	0.084
6	0.140	0.140	0.140	0.098	0.182	0.119	0.070	0.098
7	0.160	0.160	0.160	0.112	0.208	0.136	0.096	0.128
8	0.180	0.180	0.180	0.126	0.252	0.153	0.108	0.144
9	0.200	0.200	0.200	0.140	0.280	0.170	0.120	0.160
10	0.230	0.230	0.230	0.161	0.322	0.196	0.138	0.184
11	0.260	0.260	0.260	0.169	0.364	0.221	0.156	0.208
12	0.300	0.300	0.300	0.195	0.420	0.255	0.180	0.240
13	0.340	0.340	0.340	0.221	0.476	0.289	0.204	0.272
14	0.360	0.360	0.360	0.234	0.504	0.306	0.216	0.288
15	0.380	0.380	0.380	0.247	0.532	0.323	0.228	0.304
16	0.400	0.400	0.400	0.260	0.560	0.340	0.240	0.320
17	0.425	0.425	0.425	0.276	0.595	0.361	0.255	0.340
18	0.450	0.450	0.450	0.293	0.630	0.383	0.270	0.360
19	0.460	0.460	0.460	0.299	0.644	0.391	0.276	0.368
20	0.470	0.470	0.470	0.306	0.658	0.400	0.282	0.376

INFO

CARBIDE
DRILLS
 PU-HPU
 TA-4HTA
 SUH
 ALH
 HRC
 SUH MINI
 HL
 HSD
 C-SD-TA
HSS
DRILLS
 LFTA
 SUTA
 HSS-HSS/CO
CARBIDE
END-MILLS
 G2
 MDTA
 HF-VH/UP
 MEF
 ALU
 MEX/MH
 UH/MH
HSS
END-MILLSCARBIDE
BURRS

INFO

990SUTA

self centering, stainless steel, short



CARBIDE DRILLS

PU-HPU
TA-4HTA

SUH

ALH

HRC

SUH MINI

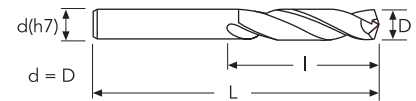
HL

HSD

C-SD-TA

P	M	K	N	S	H
★	★		★	☆	

★ 1st choice ☆ suitable



HSS DRILLS

LFTA

SUTA

HSS-HSS/CO

CARBIDE END-MILLS

G2

MDTA

HFVH/UP

MEF

ALU

MEX/MH

UH/MH

HSS END-MILLS

CARBIDE BURRS

D(h8)	D Tol.	d(h7)	l	L	PACKAGING	EDP No.	Stock
2.00	0/-0.014	2	24	56	1	P990SUTA0200	●
2.10	0/-0.014	2.1	24	56	1	P990SUTA0210	●
2.20	0/-0.014	2.2	27	59	1	P990SUTA0220	●
2.30	0/-0.014	2.3	27	59	1	P990SUTA0230	●
2.40	0/-0.014	2.4	30	62	1	P990SUTA0240	●
2.50	0/-0.014	2.5	30	62	1	P990SUTA0250	●
2.60	0/-0.014	2.6	30	62	1	P990SUTA0260	●
2.70	0/-0.014	2.7	33	65	1	P990SUTA0270	●
2.80	0/-0.014	2.8	33	65	1	P990SUTA0280	●
2.90	0/-0.014	2.9	33	65	1	P990SUTA0290	●
3.00	0/-0.014	3	33	65	1	P990SUTA0300	●
3.10	0/-0.018	3.1	36	68	1	P990SUTA0310	●
3.20	0/-0.018	3.2	36	68	1	P990SUTA0320	●
3.30	0/-0.018	3.3	36	68	1	P990SUTA0330	●
3.40	0/-0.018	3.4	39	71	1	P990SUTA0340	●
3.50	0/-0.018	3.5	39	71	1	P990SUTA0350	●
3.60	0/-0.018	3.6	39	71	1	P990SUTA0360	●
3.70	0/-0.018	3.7	39	71	1	P990SUTA0370	●
3.80	0/-0.018	3.8	43	75	1	P990SUTA0380	●
3.90	0/-0.018	3.9	43	75	1	P990SUTA0390	●
4.00	0/-0.018	4	43	75	1	P990SUTA0400	●
4.10	0/-0.018	4.1	43	87	1	P990SUTA0410	●
4.20	0/-0.018	4.2	43	87	1	P990SUTA0420	●
4.30	0/-0.018	4.3	47	91	1	P990SUTA0430	●
4.40	0/-0.018	4.4	47	91	1	P990SUTA0440	●
4.50	0/-0.018	4.5	47	91	1	P990SUTA0450	●
4.60	0/-0.018	4.6	47	91	1	P990SUTA0460	●
4.70	0/-0.018	4.7	47	91	1	P990SUTA0470	●
4.80	0/-0.018	4.8	52	96	1	P990SUTA0480	●
4.90	0/-0.018	4.9	52	96	1	P990SUTA0490	●
5.00	0/-0.018	5	52	96	1	P990SUTA0500	●
5.10	0/-0.018	5.1	52	96	1	P990SUTA0510	●
5.20	0/-0.018	5.2	52	96	1	P990SUTA0520	●
5.30	0/-0.018	5.3	52	96	1	P990SUTA0530	●
5.40	0/-0.018	5.4	57	101	1	P990SUTA0540	●
5.50	0/-0.018	5.5	57	101	1	P990SUTA0550	●
5.60	0/-0.018	5.6	57	101	1	P990SUTA0560	●
5.70	0/-0.018	5.7	57	101	1	P990SUTA0570	●
5.80	0/-0.018	5.8	57	101	1	P990SUTA0580	●

● stock standard ○ non-standard stock ▽ stock exhaustion

990SUTA

self centering, stainless steel, short



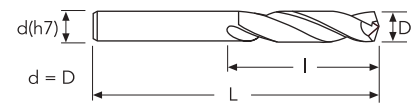
INFO

P	M	K	N	S	H
★	★		★	☆	

★ 1st choice ☆ suitable

CARBIDE DRILLS

PU-HPU
TA-4HTA
SUH
ALH
HRC
SUH MINI
HL
HSD
C-SD-TA



D(h8)	D Tol.	d(h7)	I	L	PACKAGING	EDP No.	Stock
5.90	0/-0.018	5.9	57	101	1	P990SUTA0590	●
6.00	0/-0.018	6	57	101	1	P990SUTA0600	●
6.10	0/-0.022	6.1	63	107	1	P990SUTA0610	●
6.20	0/-0.022	6.2	63	107	1	P990SUTA0620	●
6.30	0/-0.022	6.3	63	107	1	P990SUTA0630	●
6.40	0/-0.022	6.4	63	107	1	P990SUTA0640	●
6.50	0/-0.022	6.5	63	107	1	P990SUTA0650	●
6.60	0/-0.022	6.6	63	107	1	P990SUTA0660	●
6.70	0/-0.022	6.7	63	107	1	P990SUTA0670	●
6.80	0/-0.022	6.8	69	113	1	P990SUTA0680	●
6.90	0/-0.022	6.9	69	113	1	P990SUTA0690	●
7.00	0/-0.022	7	69	113	1	P990SUTA0700	●
7.10	0/-0.022	7.1	69	113	1	P990SUTA0710	●
7.20	0/-0.022	7.2	69	113	1	P990SUTA0720	●
7.30	0/-0.022	7.3	69	113	1	P990SUTA0730	●
7.40	0/-0.022	7.4	69	113	1	P990SUTA0740	●
7.50	0/-0.022	7.5	69	113	1	P990SUTA0750	●
7.60	0/-0.022	7.6	75	119	1	P990SUTA0760	●
7.70	0/-0.022	7.7	75	119	1	P990SUTA0770	●
7.80	0/-0.022	7.8	75	119	1	P990SUTA0780	●
7.90	0/-0.022	7.9	75	119	1	P990SUTA0790	●
8.00	0/-0.022	8	75	119	1	P990SUTA0800	●
8.10	0/-0.022	8.1	75	125	1	P990SUTA0810	●
8.20	0/-0.022	8.2	75	125	1	P990SUTA0820	●
8.30	0/-0.022	8.3	75	125	1	P990SUTA0830	●
8.40	0/-0.022	8.4	75	125	1	P990SUTA0840	●
8.50	0/-0.022	8.5	75	125	1	P990SUTA0850	●
8.60	0/-0.022	8.6	81	131	1	P990SUTA0860	●
8.70	0/-0.022	8.7	81	131	1	P990SUTA0870	●
8.80	0/-0.022	8.8	81	131	1	P990SUTA0880	●
8.90	0/-0.022	8.9	81	131	1	P990SUTA0890	●
9.00	0/-0.022	9	81	131	1	P990SUTA0900	●
9.10	0/-0.022	9.1	81	131	1	P990SUTA0910	●
9.20	0/-0.022	9.2	81	131	1	P990SUTA0920	●
9.30	0/-0.022	9.3	81	131	1	P990SUTA0930	●
9.40	0/-0.022	9.4	81	131	1	P990SUTA0940	●
9.50	0/-0.022	9.5	81	131	1	P990SUTA0950	●
9.60	0/-0.022	9.6	87	137	1	P990SUTA0960	●
9.70	0/-0.022	9.7	87	137	1	P990SUTA0970	●

HSS DRILLS

LFTA
SUTA
HSS-HSS/CO

CARBIDE END-MILLS

G2
MDTA
HF-VH/UP
MEF
ALU
MEX/MH
UH/MH

HSS END-MILLS

CARBIDE BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

INFO

990SUTA

self centering, stainless steel, short

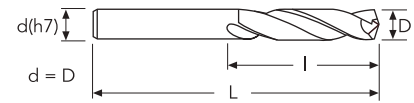


CARBIDE DRILLS

- PU-HPU
- TA-4HTA
- SUH
- ALH
- HRC
- SUH MINI
- HL
- HSD
- C-SD-TA

P	M	K	N	S	H
★	★		★	☆	

★ 1st choice ☆ suitable



D(h8)	D Tol.	d(h7)	l	L	PACKAGING	EDP No.	Stock
9.80	0/-0.022	9.8	87	137	1	P990SUTA0980	●
9.90	0/-0.022	9.9	87	137	1	P990SUTA0990	●
10.00	0/-0.022	10	87	137	1	P990SUTA1000	●
10.10	0/-0.027	10.1	87	144	1	P990SUTA1010	●
10.20	0/-0.027	10.2	87	144	1	P990SUTA1020	●
10.30	0/-0.027	10.3	87	144	1	P990SUTA1030	●
10.40	0/-0.027	10.4	87	144	1	P990SUTA1040	●
10.50	0/-0.027	10.5	87	144	1	P990SUTA1050	●
10.60	0/-0.027	10.6	87	144	1	P990SUTA1060	●
10.70	0/-0.027	10.7	94	151	1	P990SUTA1070	●
10.80	0/-0.027	10.8	94	151	1	P990SUTA1080	●
10.90	0/-0.027	10.9	94	151	1	P990SUTA1090	●
11.00	0/-0.027	11	94	151	1	P990SUTA1100	●
11.10	0/-0.027	11.1	94	151	1	P990SUTA1110	●
11.20	0/-0.027	11.2	94	151	1	P990SUTA1120	●
11.30	0/-0.027	11.3	94	151	1	P990SUTA1130	●
11.40	0/-0.027	11.4	94	151	1	P990SUTA1140	●
11.50	0/-0.027	11.5	94	151	1	P990SUTA1150	●
11.60	0/-0.027	11.6	94	151	1	P990SUTA1160	●
11.70	0/-0.027	11.7	94	151	1	P990SUTA1170	●
11.80	0/-0.027	11.8	94	151	1	P990SUTA1180	●
11.90	0/-0.027	11.9	101	158	1	P990SUTA1190	●
12.00	0/-0.027	12	101	158	1	P990SUTA1200	●
12.10	0/-0.027	12.1	101	158	1	P990SUTA1210	●
12.20	0/-0.027	12.2	101	158	1	P990SUTA1220	●
12.30	0/-0.027	12.3	101	158	1	P990SUTA1230	●
12.40	0/-0.027	12.4	101	158	1	P990SUTA1240	●
12.50	0/-0.027	12.5	101	158	1	P990SUTA1250	●
12.60	0/-0.027	12.6	101	158	1	P990SUTA1260	●
12.70	0/-0.027	12.7	101	158	1	P990SUTA1270	●
12.80	0/-0.027	12.8	101	158	1	P990SUTA1280	●
12.90	0/-0.027	12.9	101	158	1	P990SUTA1290	●
13.00	0/-0.027	13	101	158	1	P990SUTA1300	●
13.50	0/-0.027	13.5	106	166	1	P990SUTA1350	●
14.00	0/-0.027	14	106	166	1	P990SUTA1400	●
14.10	0/-0.027	14.1	109	169	1	P990SUTA1410	●
14.50	0/-0.027	14.5	109	169	1	P990SUTA1450	●
15.00	0/-0.027	15	109	169	1	P990SUTA1500	●
15.50	0/-0.027	15.5	112	172	1	P990SUTA1550	●

HSS DRILLS

- LFTA
- SUTA**
- HSS-HSS/CO

CARBIDE END-MILLS

- G2
- MDTA
- HF VH/UP
- MEF
- ALU
- MEX/MH
- UH/MH

HSS END-MILLS

CARBIDE BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

INFO

990SUTA

CARBIDE
DRILLS

PU-HPU
TA-4HTA
SUH
ALH
HRC
SUH MINI
HL
HSD
C-SD-TA

HSS
DRILLS

LFTA
SUTA
HSS-HSS/CO

CARBIDE
END-MILLS

G2
MDTA
HF VH/UP
MEF
ALU
MEX/MH
UH/MH

HSS
END-MILLS

CARBIDE
BURRS

Material Group ISO 513	P1 P2	P7	M1	M2	N1 N2 N4	N3	S1 S2	S4
Hardness/Rm	500÷700 N/mm ²	400÷700 N/mm ²					<30 HRC	
Vc (m/min)	35÷45	18÷22	18÷22	12÷16	60÷80	30÷40	8÷12	12÷16
D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)
2	0.057	0.057	0.057	0.040	0.063	0.048	0.023	0.040
3	0.076	0.076	0.076	0.053	0.084	0.065	0.030	0.053
4	0.095	0.095	0.095	0.067	0.105	0.081	0.038	0.067
5	0.114	0.114	0.114	0.080	0.125	0.097	0.057	0.080
6	0.133	0.133	0.133	0.093	0.146	0.113	0.067	0.093
7	0.152	0.152	0.152	0.106	0.167	0.129	0.091	0.122
8	0.171	0.171	0.171	0.120	0.188	0.145	0.103	0.137
9	0.190	0.190	0.190	0.133	0.209	0.162	0.114	0.152
10	0.219	0.219	0.219	0.153	0.240	0.186	0.131	0.175
11	0.247	0.247	0.247	0.161	0.272	0.210	0.148	0.198
12	0.285	0.285	0.285	0.185	0.314	0.242	0.171	0.228
13	0.323	0.323	0.323	0.203	0.355	0.275	0.194	0.258
14	0.342	0.342	0.342	0.215	0.376	0.291	0.205	0.274
15	0.361	0.361	0.361	0.217	0.397	0.307	0.217	0.289
16	0.380	0.380	0.380	0.228	0.418	0.323	0.228	0.304
17	0.404	0.404	0.404	0.242	0.444	0.343	0.242	0.323
18	0.428	0.428	0.428	0.257	0.470	0.363	0.257	0.342
19	0.437	0.437	0.437	0.262	0.481	0.371	0.262	0.350
20	0.447	0.447	0.447	0.268	0.491	0.380	0.268	0.357