

## VIOLET SERIES, HIGH PRECISION DRILLS

**NEW SIZES**  
VA-PDS  
VA-PDM

**VA-PDS**  
**VA-PDM**

**VA-PDS-SUS**  
**VA-PDM-SUS**

A new standard for high precision drills!

# "Violet" drill series.

- Stable, long life
- Consistent hole diameter
- High precision drilling with good chip disposability

■ **VA-PDS**

Short flute, High precision  
Size  $\phi 0.5 - \phi 13.0$

■ **VA-PDM**

Medium flute, High precision  
Size  $\phi 0.5 - \phi 32.0$

For stainless steel

■ **VA-PDS-SUS**

Short flute, High precision,  
For stainless steel  
Size  $\phi 0.5 - \phi 13.0$

■ **VA-PDM-SUS**

Medium flute, High precision,  
For stainless steel  
Size  $\phi 0.5 - \phi 13.0$



# VIOLET SERIES, HIGH PRECISION DRILLS

## VA-PDS

Short flute, High precision

## VA-PDM

Medium flute, High precision

## VA-PDS-SUS

Short flute, High precision, For stainless steel

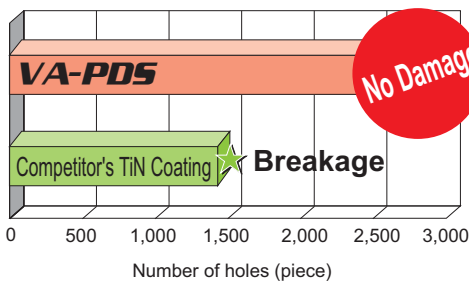
## VA-PDM-SUS

Medium flute, High precision, For stainless steel

### Features.....1 High adhesion resistance and long tool life.

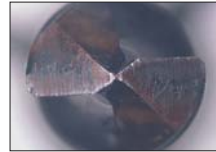
#### Machining Example : VA-PDS

A much higher wear resistance and longer tool life than conventional TiN coated drills.



Adhesion comparison (1,600 holes 0.3mm/rev)

VA-PDS



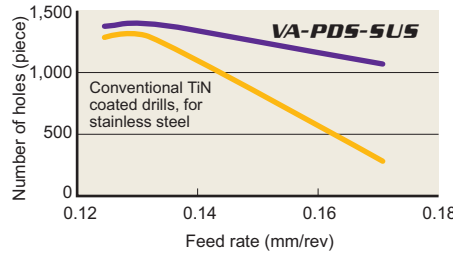
Competitor's TiN coated drills



Drill	VA-PDS $\phi$ 6.0
Work material	AISI 1049
Revolution	1,800min <sup>-1</sup> (35m/min)
Feed rate	0.3mm/rev
Drilling depth	16mm through
Coolant	Emulsion

#### Machining Example : VA-PDS-SUS

The feed rate for drilling typical hard-to-cut materials such as stainless steel, AISI 304, is low because of poor machinability. The tool life of VA-PDS-SUS will not be affected even under these tough conditions, ensuring a more stable and longer tool life and a wider range of optimal cutting conditions than conventional drills can provide.

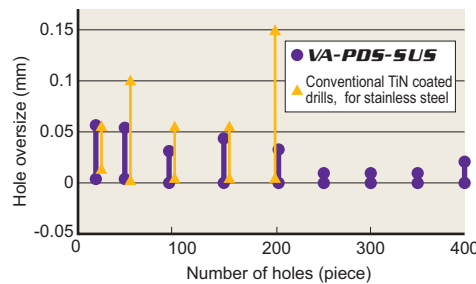


Drill	VA-PDS-SUS $\phi$ 6.0
Work material	AISI 304
Revolution	800min <sup>-1</sup> (15m/min)
Drilling depth	16mm through
Coolant	Emulsion

### Features.....2 Consistent hole diameter

Long tool life and consistent hole diameters can be achieved regardless of the number of holes drilled.

#### Machining Example : VA-PDS-SUS

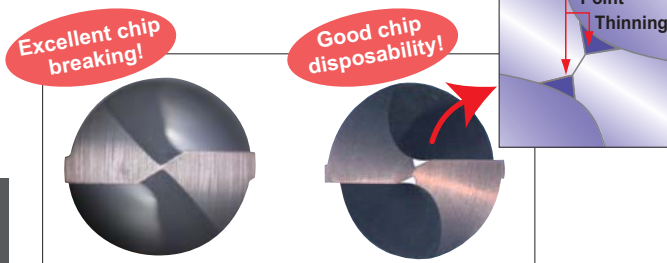


Drill	VA-PDS-SUS $\phi$ 10.0
Work material	AISI 304
Revolution	480min <sup>-1</sup> (15m/min)
Feed rate	0.22mm/rev
Drilling depth	16mm through
Coolant	Emulsion

### Features.....3 High precision drilling and good chip disposability

High precision machining is achieved with the optimum cutting edge.

Cutting edge :



#### Machining Example : VA-PDM-SUS

Chip shape



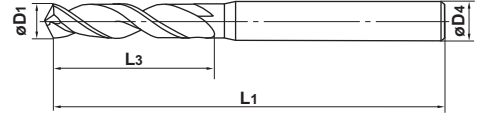
Drill	VA-PDM-SUS $\phi$ 5.0
Work material	SUS304
Revolution	950min <sup>-1</sup> (15m/min)
Feed rate	0.12mm/rev
Drilling depth	15mm
Coolant	Emulsion

# VA-PDS Expand

Short flute, High precision



All drills except those with intervals of 0.1mm and under dia. 2.0mm have a tolerance of 0 - -0.009mm.



D1<2

2?D1

- Highly efficient drilling and long tool life have been achieved with the newly developed Violet coating.  
(Standard drilling depth : 3 x D or less)

Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDS D0050</b>	0.5	3	50	3	●
<small>Expand</small> D0051	0.51	3	50	3	●
<small>Expand</small> D0052	0.52	3	50	3	●
<small>Expand</small> D0053	0.53	3	50	3	●
<small>Expand</small> D0054	0.54	3	50	3	●
<small>Expand</small> D0055	0.55	3	50	3	●
<small>Expand</small> D0056	0.56	4	50	3	●
<small>Expand</small> D0057	0.57	4	50	3	●
<small>Expand</small> D0058	0.58	4	50	3	●
<small>Expand</small> D0059	0.59	4	50	3	●
D0060	0.6	5	50	3	●
<small>Expand</small> D0061	0.61	5	50	3	●
<small>Expand</small> D0062	0.62	5	50	3	●
<small>Expand</small> D0063	0.63	5	50	3	●
<small>Expand</small> D0064	0.64	5	50	3	●
<small>Expand</small> D0065	0.65	5	50	3	●
<small>Expand</small> D0066	0.66	5	50	3	●
<small>Expand</small> D0067	0.67	5	50	3	●
<small>Expand</small> D0068	0.68	5	50	3	●
<small>Expand</small> D0069	0.69	5	50	3	●
D0070	0.7	5	50	3	●
<small>Expand</small> D0071	0.71	5	50	3	●
<small>Expand</small> D0072	0.72	5	50	3	●
<small>Expand</small> D0073	0.73	5	50	3	●
<small>Expand</small> D0074	0.74	5	50	3	●
<small>Expand</small> D0075	0.75	5	50	3	●
<small>Expand</small> D0076	0.76	5	50	3	●
<small>Expand</small> D0077	0.77	5	50	3	●
<small>Expand</small> D0078	0.78	5	50	3	●
<small>Expand</small> D0079	0.79	5	50	3	●
D0080	0.8	5	50	3	●
<small>Expand</small> D0081	0.81	5	50	3	●
<small>Expand</small> D0082	0.82	5	50	3	●
<small>Expand</small> D0083	0.83	5	50	3	●
<small>Expand</small> D0084	0.84	5	50	3	●
<small>Expand</small> D0085	0.85	5	50	3	●
<small>Expand</small> D0086	0.86	6	50	3	●
<small>Expand</small> D0087	0.87	6	50	3	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<small>Expand</small> <b>VAPDS D0088</b>	0.88	6	50	3	●
<small>Expand</small> D0089	0.89	6	50	3	●
<small>Expand</small> D0090	0.9	6	50	3	●
<small>Expand</small> D0091	0.91	6	50	3	●
<small>Expand</small> D0092	0.92	6	50	3	●
<small>Expand</small> D0093	0.93	6	50	3	●
<small>Expand</small> D0094	0.94	6	50	3	●
<small>Expand</small> D0095	0.95	6	50	3	●
<small>Expand</small> D0096	0.96	6	50	3	●
<small>Expand</small> D0097	0.97	6	50	3	●
<small>Expand</small> D0098	0.98	6	50	3	●
<small>Expand</small> D0099	0.99	6	50	3	●
D0100	1.0	6	50	3	●
<small>Expand</small> D0101	1.01	6	50	3	●
<small>Expand</small> D0102	1.02	6	50	3	●
<small>Expand</small> D0103	1.03	6	50	3	●
<small>Expand</small> D0104	1.04	6	50	3	●
<small>Expand</small> D0105	1.05	6	50	3	●
<small>Expand</small> D0106	1.06	6	50	3	●
<small>Expand</small> D0107	1.07	8	55	3	●
<small>Expand</small> D0108	1.08	8	55	3	●
<small>Expand</small> D0109	1.09	8	55	3	●
D0110	1.1	8	55	3	●
<small>Expand</small> D0111	1.11	8	55	3	●
<small>Expand</small> D0112	1.12	8	55	3	●
<small>Expand</small> D0113	1.13	8	55	3	●
<small>Expand</small> D0114	1.14	8	55	3	●
<small>Expand</small> D0115	1.15	8	55	3	●
<small>Expand</small> D0116	1.16	8	55	3	●
<small>Expand</small> D0117	1.17	8	55	3	●
<small>Expand</small> D0118	1.18	8	55	3	●
<small>Expand</small> D0119	1.19	8	55	3	●
D0120	1.2	8	55	3	●
<small>Expand</small> D0121	1.21	8	55	3	●
<small>Expand</small> D0122	1.22	8	55	3	●
<small>Expand</small> D0123	1.23	8	55	3	●
<small>Expand</small> D0124	1.24	8	55	3	●
<small>Expand</small> D0125	1.25	8	55	3	●

● : Inventory maintained.

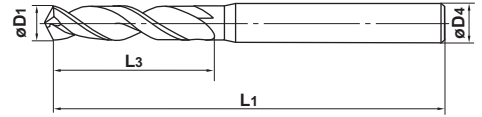
# VIOLET DRILLS

## VA-PDS Expand

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D1<2

2?D1

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(Standard drilling depth : 3 x D or less)

Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<small>Expand</small> VAPDS D0126	1.26	8	55	3	●
<small>Expand</small> D0127	1.27	8	55	3	●
<small>Expand</small> D0128	1.28	8	55	3	●
<small>Expand</small> D0129	1.29	8	55	3	●
D0130	1.3	9	55	3	●
<small>Expand</small> D0131	1.31	9	55	3	●
<small>Expand</small> D0132	1.32	9	55	3	●
<small>Expand</small> D0133	1.33	9	55	3	●
<small>Expand</small> D0134	1.34	9	55	3	●
<small>Expand</small> D0135	1.35	9	55	3	●
<small>Expand</small> D0136	1.36	9	55	3	●
<small>Expand</small> D0137	1.37	9	55	3	●
<small>Expand</small> D0138	1.38	9	55	3	●
<small>Expand</small> D0139	1.39	9	55	3	●
D0140	1.4	9	55	3	●
<small>Expand</small> D0141	1.41	9	55	3	●
<small>Expand</small> D0142	1.42	9	55	3	●
<small>Expand</small> D0143	1.43	9	55	3	●
<small>Expand</small> D0144	1.44	9	55	3	●
<small>Expand</small> D0145	1.45	9	55	3	●
<small>Expand</small> D0146	1.46	9	55	3	●
<small>Expand</small> D0147	1.47	9	55	3	●
<small>Expand</small> D0148	1.48	9	55	3	●
<small>Expand</small> D0149	1.49	9	55	3	●
D0150	1.5	9	55	3	●
<small>Expand</small> D0151	1.51	11	55	3	●
<small>Expand</small> D0152	1.52	11	55	3	●
<small>Expand</small> D0153	1.53	11	55	3	●
<small>Expand</small> D0154	1.54	11	55	3	●
<small>Expand</small> D0155	1.55	11	55	3	●
<small>Expand</small> D0156	1.56	11	55	3	●
<small>Expand</small> D0157	1.57	11	55	3	●
<small>Expand</small> D0158	1.58	11	55	3	●
<small>Expand</small> D0159	1.59	11	55	3	●
D0160	1.6	11	55	3	●
<small>Expand</small> D0161	1.61	11	55	3	●
<small>Expand</small> D0162	1.62	11	55	3	●
<small>Expand</small> D0163	1.63	11	55	3	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<small>Expand</small> VAPDSD0164	1.64	11	55	3	●
<small>Expand</small> D0165	1.65	11	55	3	●
<small>Expand</small> D0166	1.66	11	55	3	●
<small>Expand</small> D0167	1.67	11	55	3	●
<small>Expand</small> D0168	1.68	11	55	3	●
<small>Expand</small> D0169	1.69	11	55	3	●
D0170	1.7	11	55	3	●
<small>Expand</small> D0171	1.71	11	55	3	●
<small>Expand</small> D0172	1.72	11	55	3	●
<small>Expand</small> D0173	1.73	11	55	3	●
<small>Expand</small> D0174	1.74	11	55	3	●
<small>Expand</small> D0175	1.75	11	55	3	●
<small>Expand</small> D0176	1.76	11	55	3	●
<small>Expand</small> D0177	1.77	11	55	3	●
<small>Expand</small> D0178	1.78	11	55	3	●
<small>Expand</small> D0179	1.79	11	55	3	●
D0180	1.8	11	55	3	●
<small>Expand</small> D0181	1.81	11	55	3	●
<small>Expand</small> D0182	1.82	11	55	3	●
<small>Expand</small> D0183	1.83	11	55	3	●
<small>Expand</small> D0184	1.84	11	55	3	●
<small>Expand</small> D0185	1.85	11	55	3	●
<small>Expand</small> D0186	1.86	11	55	3	●
<small>Expand</small> D0187	1.87	11	55	3	●
<small>Expand</small> D0188	1.88	11	55	3	●
<small>Expand</small> D0189	1.89	11	55	3	●
D0190	1.9	12	55	3	●
<small>Expand</small> D0191	1.91	12	60	3	●
<small>Expand</small> D0192	1.92	12	60	3	●
<small>Expand</small> D0193	1.93	12	60	3	●
<small>Expand</small> D0194	1.94	12	60	3	●
<small>Expand</small> D0195	1.95	12	60	3	●
<small>Expand</small> D0196	1.96	12	60	3	●
<small>Expand</small> D0197	1.97	12	60	3	●
<small>Expand</small> D0198	1.98	12	60	3	●
<small>Expand</small> D0199	1.99	12	60	3	●
D0200	2.0	12	60	3	●
<small>Expand</small> D0205	2.05	12	60	3	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDS D0210</b>	2.1	12	60	3	●
<b>Expand D0215</b>	2.15	12	60	3	●
<b>D0220</b>	2.2	12	60	3	●
<b>Expand D0225</b>	2.25	12	60	3	●
<b>D0230</b>	2.3	13	60	3	●
<b>Expand D0235</b>	2.35	13	60	3	●
<b>D0240</b>	2.4	13	60	3	●
<b>Expand D0245</b>	2.45	13	60	3	●
<b>D0250</b>	2.5	13	60	3	●
<b>Expand D0255</b>	2.55	13	60	3	●
<b>D0260</b>	2.6	15	60	3	●
<b>Expand D0265</b>	2.65	15	60	3	●
<b>D0270</b>	2.7	15	60	3	●
<b>Expand D0275</b>	2.75	15	60	3	●
<b>D0280</b>	2.8	15	60	3	●
<b>Expand D0285</b>	2.85	15	60	3	●
<b>D0290</b>	2.9	15	60	3	●
<b>Expand D0295</b>	2.95	15	60	3	●
<b>D0300</b>	3.0	15	60	3	●
<b>Expand D0305</b>	3.05	17	70	4	●
<b>D0310</b>	3.1	17	70	4	●
<b>Expand D0315</b>	3.15	17	70	4	●
<b>D0320</b>	3.2	17	70	4	●
<b>Expand D0325</b>	3.25	17	70	4	●
<b>D0330</b>	3.3	19	70	4	●
<b>Expand D0335</b>	3.35	19	70	4	●
<b>D0340</b>	3.4	19	70	4	●
<b>Expand D0345</b>	3.45	19	70	4	●
<b>D0350</b>	3.5	19	70	4	●
<b>Expand D0355</b>	3.55	19	70	4	●
<b>D0360</b>	3.6	21	70	4	●
<b>Expand D0365</b>	3.65	21	70	4	●
<b>D0370</b>	3.7	21	70	4	●
<b>Expand D0375</b>	3.75	21	70	4	●
<b>D0380</b>	3.8	21	70	4	●
<b>Expand D0385</b>	3.85	21	70	4	●
<b>D0390</b>	3.9	21	70	4	●
<b>Expand D0395</b>	3.95	21	70	4	●
<b>D0400</b>	4.0	21	70	4	●
<b>Expand D0405</b>	4.05	21	80	6	●
<b>D0410</b>	4.1	21	80	6	●
<b>Expand D0415</b>	4.15	21	80	6	●
<b>D0420</b>	4.2	21	80	6	●
<b>Expand D0425</b>	4.25	21	80	6	●
<b>D0430</b>	4.3	23	80	6	●
<b>Expand D0435</b>	4.35	23	80	6	●
<b>D0440</b>	4.4	23	80	6	●
<b>Expand D0445</b>	4.45	23	80	6	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDS D0450</b>	4.5	23	80	6	●
<b>Expand D0455</b>	4.55	23	80	6	●
<b>D0460</b>	4.6	25	80	6	●
<b>Expand D0465</b>	4.65	25	80	6	●
<b>D0470</b>	4.7	25	80	6	●
<b>Expand D0475</b>	4.75	25	80	6	●
<b>D0480</b>	4.8	25	80	6	●
<b>Expand D0485</b>	4.85	25	80	6	●
<b>D0490</b>	4.9	25	80	6	●
<b>Expand D0495</b>	4.95	25	80	6	●
<b>D0500</b>	5.0	25	80	6	●
<b>Expand D0505</b>	5.05	25	80	6	●
<b>D0510</b>	5.1	25	80	6	●
<b>Expand D0515</b>	5.15	25	80	6	●
<b>D0520</b>	5.2	25	80	6	●
<b>Expand D0525</b>	5.25	25	80	6	●
<b>D0530</b>	5.3	25	80	6	●
<b>Expand D0535</b>	5.35	27	80	6	●
<b>D0540</b>	5.4	27	80	6	●
<b>Expand D0545</b>	5.45	27	80	6	●
<b>D0550</b>	5.5	27	80	6	●
<b>Expand D0555</b>	5.55	27	80	6	●
<b>D0560</b>	5.6	27	80	6	●
<b>Expand D0565</b>	5.65	27	80	6	●
<b>D0570</b>	5.7	27	80	6	●
<b>Expand D0575</b>	5.75	27	80	6	●
<b>D0580</b>	5.8	27	80	6	●
<b>Expand D0585</b>	5.85	27	80	6	●
<b>D0590</b>	5.9	27	80	6	●
<b>Expand D0595</b>	5.95	27	80	6	●
<b>D0600</b>	6.0	27	80	6	●
<b>Expand D0605</b>	6.05	30	80	8	●
<b>D0610</b>	6.1	30	80	8	●
<b>Expand D0615</b>	6.15	30	80	8	●
<b>D0620</b>	6.2	30	80	8	●
<b>Expand D0625</b>	6.25	30	80	8	●
<b>D0630</b>	6.3	30	80	8	●
<b>Expand D0635</b>	6.35	30	80	8	●
<b>D0640</b>	6.4	30	80	8	●
<b>Expand D0645</b>	6.45	30	80	8	●
<b>D0650</b>	6.5	30	80	8	●
<b>Expand D0655</b>	6.55	30	80	8	●
<b>D0660</b>	6.6	30	80	8	●
<b>Expand D0665</b>	6.65	30	80	8	●
<b>D0670</b>	6.7	30	80	8	●
<b>Expand D0675</b>	6.75	32	80	8	●
<b>D0680</b>	6.8	32	80	8	●
<b>Expand D0685</b>	6.85	32	80	8	●



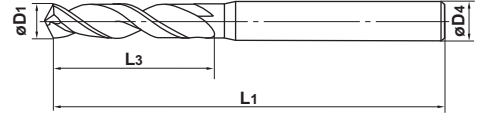
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## VA-PDS Expand

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D1<2

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(Standard drilling depth : 3 x D or less)

Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDSD0690</b>	6.9	32	80	8	●
<small>Expand</small> <b>D0695</b>	6.95	32	80	8	●
<b>D0700</b>	7.0	32	80	8	●
<small>Expand</small> <b>D0705</b>	7.05	32	80	8	●
<b>D0710</b>	7.1	32	80	8	●
<small>Expand</small> <b>D0715</b>	7.15	32	80	8	●
<b>D0720</b>	7.2	32	80	8	●
<small>Expand</small> <b>D0725</b>	7.25	32	80	8	●
<b>D0730</b>	7.3	32	80	8	●
<small>Expand</small> <b>D0735</b>	7.35	32	80	8	●
<b>D0740</b>	7.4	32	80	8	●
<small>Expand</small> <b>D0745</b>	7.45	32	80	8	●
<b>D0750</b>	7.5	32	80	8	●
<small>Expand</small> <b>D0755</b>	7.55	35	85	8	●
<b>D0760</b>	7.6	35	85	8	●
<small>Expand</small> <b>D0765</b>	7.65	35	85	8	●
<b>D0770</b>	7.7	35	85	8	●
<small>Expand</small> <b>D0775</b>	7.75	35	85	8	●
<b>D0780</b>	7.8	35	85	8	●
<small>Expand</small> <b>D0785</b>	7.85	35	85	8	●
<b>D0790</b>	7.9	35	85	8	●
<small>Expand</small> <b>D0795</b>	7.95	35	85	8	●
<b>D0800</b>	8.0	35	85	8	●
<small>Expand</small> <b>D0805</b>	8.05	35	90	10	●
<b>D0810</b>	8.1	35	90	10	●
<small>Expand</small> <b>D0815</b>	8.15	35	90	10	●
<b>D0820</b>	8.2	35	90	10	●
<small>Expand</small> <b>D0825</b>	8.25	35	90	10	●
<b>D0830</b>	8.3	35	90	10	●
<small>Expand</small> <b>D0835</b>	8.35	35	90	10	●
<b>D0840</b>	8.4	35	90	10	●
<small>Expand</small> <b>D0845</b>	8.45	35	90	10	●
<b>D0850</b>	8.5	35	90	10	●
<small>Expand</small> <b>D0855</b>	8.55	38	93	10	●
<b>D0860</b>	8.6	38	93	10	●
<small>Expand</small> <b>D0865</b>	8.65	38	93	10	●
<b>D0870</b>	8.7	38	93	10	●
<small>Expand</small> <b>D0875</b>	8.75	38	93	10	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDSD0880</b>	8.8	38	93	10	●
<small>Expand</small> <b>D0885</b>	8.85	38	93	10	●
<b>D0890</b>	8.9	38	93	10	●
<small>Expand</small> <b>D0895</b>	8.95	38	93	10	●
<b>D0900</b>	9.0	38	93	10	●
<small>Expand</small> <b>D0905</b>	9.05	38	93	10	●
<b>D0910</b>	9.1	38	93	10	●
<small>Expand</small> <b>D0915</b>	9.15	38	93	10	●
<b>D0920</b>	9.2	38	93	10	●
<small>Expand</small> <b>D0925</b>	9.25	38	93	10	●
<b>D0930</b>	9.3	38	93	10	●
<small>Expand</small> <b>D0935</b>	9.35	38	93	10	●
<b>D0940</b>	9.4	38	93	10	●
<small>Expand</small> <b>D0945</b>	9.45	38	93	10	●
<b>D0950</b>	9.5	38	93	10	●
<small>Expand</small> <b>D0955</b>	9.55	41	96	10	●
<b>D0960</b>	9.6	41	96	10	●
<small>Expand</small> <b>D0965</b>	9.65	41	96	10	●
<b>D0970</b>	9.7	41	96	10	●
<small>Expand</small> <b>D0975</b>	9.75	41	96	10	●
<b>D0980</b>	9.8	41	96	10	●
<small>Expand</small> <b>D0985</b>	9.85	41	96	10	●
<b>D0990</b>	9.9	41	96	10	●
<small>Expand</small> <b>D0995</b>	9.95	41	96	10	●
<b>D1000</b>	10.0	41	96	10	●
<small>Expand</small> <b>D1005</b>	10.05	41	101	12	●
<b>D1010</b>	10.1	41	101	12	●
<small>Expand</small> <b>D1015</b>	10.15	41	101	12	●
<b>D1020</b>	10.2	41	101	12	●
<small>Expand</small> <b>D1025</b>	10.25	41	101	12	●
<b>D1030</b>	10.3	41	101	12	●
<small>Expand</small> <b>D1035</b>	10.35	41	101	12	●
<b>D1040</b>	10.4	41	101	12	●
<small>Expand</small> <b>D1045</b>	10.45	41	101	12	●
<b>D1050</b>	10.5	41	101	12	●
<small>Expand</small> <b>D1055</b>	10.55	41	101	12	●
<b>D1060</b>	10.6	41	101	12	●
<small>Expand</small> <b>D1065</b>	10.65	45	105	12	●

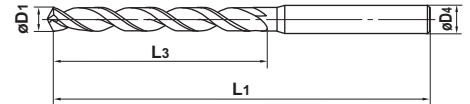
Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDSD1070</b>	10.70	45	105	12	●
<i>Expand</i> <b>D1075</b>	10.75	45	105	12	●
<b>D1080</b>	10.80	45	105	12	●
<i>Expand</i> <b>D1085</b>	10.85	45	105	12	●
<b>D1090</b>	10.90	45	105	12	●
<i>Expand</i> <b>D1095</b>	10.95	45	105	12	●
<b>D1100</b>	11.00	45	105	12	●
<i>Expand</i> <b>D1105</b>	11.05	45	105	12	●
<b>D1110</b>	11.10	45	105	12	●
<i>Expand</i> <b>D1115</b>	11.15	45	105	12	●
<b>D1120</b>	11.20	45	105	12	●
<i>Expand</i> <b>D1125</b>	11.25	45	105	12	●
<b>D1130</b>	11.30	45	105	12	●
<i>Expand</i> <b>D1135</b>	11.35	45	105	12	●
<b>D1140</b>	11.40	45	105	12	●
<i>Expand</i> <b>D1145</b>	11.45	45	105	12	●
<b>D1150</b>	11.50	45	105	12	●
<i>Expand</i> <b>D1155</b>	11.55	45	105	12	●
<b>D1160</b>	11.60	45	105	12	●
<i>Expand</i> <b>D1165</b>	11.65	45	105	12	●
<b>D1170</b>	11.70	45	105	12	●
<i>Expand</i> <b>D1175</b>	11.75	45	105	12	●
<b>D1180</b>	11.80	45	105	12	●
<i>Expand</i> <b>D1185</b>	11.85	49	109	12	●
<b>D1190</b>	11.90	49	109	12	●
<i>Expand</i> <b>D1195</b>	11.95	49	109	12	●
<b>D1200</b>	12.00	49	109	12	●
<b>D1210</b>	12.10	49	109	12	●
<b>D1220</b>	12.20	49	109	12	●
<b>D1230</b>	12.30	49	109	12	●
<b>D1240</b>	12.40	49	109	12	●
<b>D1250</b>	12.50	49	109	12	●
<b>D1260</b>	12.60	49	109	12	●
<b>D1270</b>	12.70	49	109	12	●
<b>D1280</b>	12.80	49	109	12	●
<b>D1290</b>	12.90	49	109	12	●
<b>D1300</b>	13.00	49	109	12	●

# VIOLET DRILLS

## VA-PDM Expand

Medium flute, High precision



D1<2

2?D1

- Highly efficient drilling and long tool life have been achieved with the newly developed Violet coating.  
(Standard drilling depth : 5 x D or less)

Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> VAPDM D0050	0.5	6	50	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0055	0.55	6	50	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0060	0.6	8	50	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0065	0.65	8	50	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0070	0.7	10	50	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0075	0.75	10	50	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0080	0.8	10	50	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0085	0.85	10	50	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0090	0.9	12	50	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0095	0.95	12	50	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0100	1.0	12	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0105	1.05	12	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0110	1.1	16	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0115	1.15	16	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0120	1.2	16	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0125	1.25	16	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0130	1.3	16	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0135	1.35	18	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0140	1.4	18	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0145	1.45	18	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0150	1.5	18	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0155	1.55	20	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0160	1.6	20	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0165	1.65	20	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0170	1.7	20	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0175	1.75	20	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0180	1.8	22	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0185	1.85	22	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0190	1.9	22	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0195	1.95	23	60	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0200	2.0	23	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0205	2.05	23	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0210	2.1	23	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0215	2.15	23	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0220	2.2	26	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0225	2.25	26	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0230	2.3	26	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0235	2.35	26	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0240	2.4	29	70	3	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> VAPDM D0245	2.45	29	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0250	2.5	29	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0255	2.55	29	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0260	2.6	29	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0265	2.65	29	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0270	2.7	32	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0275	2.75	32	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0280	2.8	32	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0285	2.85	32	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0290	2.9	32	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0295	2.95	32	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0300	3.0	32	70	3	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0305	3.05	35	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0310	3.1	35	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0315	3.15	35	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0320	3.2	35	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0325	3.25	35	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0330	3.3	35	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0335	3.35	35	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0340	3.4	38	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0345	3.45	38	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0350	3.5	38	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0355	3.55	38	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0360	3.6	38	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0365	3.65	38	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0370	3.7	38	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0375	3.75	42	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0380	3.8	42	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0385	3.85	42	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0390	3.9	42	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0395	3.95	42	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0400	4.0	42	85	4	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0405	4.05	42	100	6	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0410	4.1	42	100	6	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0415	4.15	42	100	6	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0420	4.2	42	100	6	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0425	4.25	46	100	6	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0430	4.3	46	100	6	●
<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">Expand</span> D0435	4.35	46	100	6	●



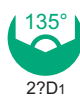
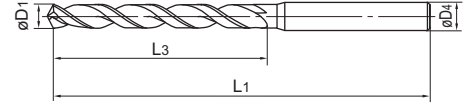
Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDM D0440</b>	4.4	46	100	6	●
<b>Expand D0445</b>	4.45	46	100	6	●
<b>D0450</b>	4.5	46	100	6	●
<b>Expand D0455</b>	4.55	46	100	6	●
<b>D0460</b>	4.6	46	100	6	●
<b>Expand D0465</b>	4.65	46	100	6	●
<b>D0470</b>	4.7	46	100	6	●
<b>Expand D0475</b>	4.75	46	100	6	●
<b>D0480</b>	4.8	51	100	6	●
<b>Expand D0485</b>	4.85	51	100	6	●
<b>D0490</b>	4.9	51	100	6	●
<b>Expand D0495</b>	4.95	51	100	6	●
<b>D0500</b>	5.0	51	100	6	●
<b>Expand D0505</b>	5.05	51	100	6	●
<b>D0510</b>	5.1	51	100	6	●
<b>Expand D0515</b>	5.15	51	100	6	●
<b>D0520</b>	5.2	51	100	6	●
<b>Expand D0525</b>	5.25	51	100	6	●
<b>D0530</b>	5.3	51	100	6	●
<b>Expand D0535</b>	5.35	56	106	6	●
<b>D0540</b>	5.4	56	106	6	●
<b>Expand D0545</b>	5.45	56	106	6	●
<b>D0550</b>	5.5	56	106	6	●
<b>Expand D0555</b>	5.55	56	106	6	●
<b>D0560</b>	5.6	56	106	6	●
<b>Expand D0565</b>	5.65	56	106	6	●
<b>D0570</b>	5.7	56	106	6	●
<b>Expand D0575</b>	5.75	56	106	6	●
<b>D0580</b>	5.8	56	106	6	●
<b>Expand D0585</b>	5.85	56	106	6	●
<b>D0590</b>	5.9	56	106	6	●
<b>Expand D0595</b>	5.95	56	106	6	●
<b>D0600</b>	6.0	56	106	6	●
<b>Expand D0605</b>	6.05	62	112	8	●
<b>D0610</b>	6.1	62	112	8	●
<b>Expand D0615</b>	6.15	62	112	8	●
<b>D0620</b>	6.2	62	112	8	●
<b>Expand D0625</b>	6.25	62	112	8	●
<b>D0630</b>	6.3	62	112	8	●
<b>Expand D0635</b>	6.35	62	112	8	●
<b>D0640</b>	6.4	62	112	8	●
<b>Expand D0645</b>	6.45	62	112	8	●
<b>D0650</b>	6.5	62	112	8	●
<b>Expand D0655</b>	6.55	62	112	8	●
<b>D0660</b>	6.6	62	112	8	●
<b>Expand D0665</b>	6.65	62	112	8	●
<b>D0670</b>	6.7	62	112	8	●
<b>Expand D0675</b>	6.75	67	117	8	●
<b>D0680</b>	6.8	67	117	8	●
<b>Expand D0685</b>	6.85	67	117	8	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDM D0690</b>	6.9	67	117	8	●
<b>Expand D0695</b>	6.95	67	117	8	●
<b>D0700</b>	7.0	67	117	8	●
<b>Expand D0705</b>	7.05	67	117	8	●
<b>D0710</b>	7.1	67	117	8	●
<b>Expand D0715</b>	7.15	67	117	8	●
<b>D0720</b>	7.2	67	117	8	●
<b>Expand D0725</b>	7.25	67	117	8	●
<b>D0730</b>	7.3	67	117	8	●
<b>Expand D0735</b>	7.35	67	117	8	●
<b>D0740</b>	7.4	67	117	8	●
<b>Expand D0745</b>	7.45	67	117	8	●
<b>D0750</b>	7.5	67	117	8	●
<b>Expand D0755</b>	7.55	73	123	8	●
<b>D0760</b>	7.6	73	123	8	●
<b>Expand D0765</b>	7.65	73	123	8	●
<b>D0770</b>	7.7	73	123	8	●
<b>Expand D0775</b>	7.75	73	123	8	●
<b>D0780</b>	7.8	73	123	8	●
<b>Expand D0785</b>	7.85	73	123	8	●
<b>D0790</b>	7.9	73	123	8	●
<b>Expand D0795</b>	7.95	73	123	8	●
<b>D0800</b>	8.0	73	123	8	●
<b>Expand D0805</b>	8.05	73	128	10	●
<b>D0810</b>	8.1	73	128	10	●
<b>Expand D0815</b>	8.15	73	128	10	●
<b>D0820</b>	8.2	73	128	10	●
<b>Expand D0825</b>	8.25	73	128	10	●
<b>D0830</b>	8.3	73	128	10	●
<b>Expand D0835</b>	8.35	73	128	10	●
<b>D0840</b>	8.4	73	128	10	●
<b>Expand D0845</b>	8.45	73	128	10	●
<b>D0850</b>	8.5	73	128	10	●
<b>Expand D0855</b>	8.55	79	134	10	●
<b>D0860</b>	8.6	79	134	10	●
<b>Expand D0865</b>	8.65	79	134	10	●
<b>D0870</b>	8.7	79	134	10	●
<b>Expand D0875</b>	8.75	79	134	10	●
<b>D0880</b>	8.8	79	134	10	●
<b>Expand D0885</b>	8.85	79	134	10	●
<b>D0890</b>	8.9	79	134	10	●
<b>Expand D0895</b>	8.95	79	134	10	●
<b>D0900</b>	9.0	79	134	10	●
<b>D0910</b>	9.1	79	134	10	●
<b>D0920</b>	9.2	79	134	10	●
<b>D0930</b>	9.3	79	134	10	●
<b>D0940</b>	9.4	79	134	10	●
<b>D0950</b>	9.5	79	134	10	●
<b>D0960</b>	9.6	85	140	10	●
<b>D0970</b>	9.7	85	140	10	●

# VIOLET DRILLS

## VA-PDM Expand

Medium flute, High precision



D1<2

2??D1

X Thinning

- Highly efficient drilling and long tool life have been achieved with the newly developed Violet coating.  
(Standard drilling depth : 5 x D or less)

Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDM D0980</b>	9.8	85	140	10	●
<b>D0990</b>	9.9	85	140	10	●
<b>D1000</b>	10.0	85	140	10	●
<b>D1010</b>	10.1	85	145	12	●
<b>D1020</b>	10.2	85	145	12	●
<b>D1030</b>	10.3	85	145	12	●
<b>D1040</b>	10.4	85	145	12	●
<b>D1050</b>	10.5	85	145	12	●
<b>D1060</b>	10.6	85	145	12	●
<b>D1070</b>	10.7	92	152	12	●
<b>D1080</b>	10.8	92	152	12	●
<b>D1090</b>	10.9	92	152	12	●
<b>D1100</b>	11.0	92	152	12	●
<b>D1110</b>	11.1	92	152	12	●
<b>D1120</b>	11.2	92	152	12	●
<b>D1130</b>	11.3	92	152	12	●
<b>D1140</b>	11.4	92	152	12	●
<b>D1150</b>	11.5	92	152	12	●
<b>D1160</b>	11.6	92	152	12	●
<b>D1170</b>	11.7	92	152	12	●
<b>D1180</b>	11.8	92	152	12	●
<b>D1190</b>	11.9	99	159	12	●
<b>D1200</b>	12.0	99	159	12	●
<b>D1210</b>	12.1	99	159	12	●
<b>D1220</b>	12.2	99	159	12	●
<b>D1230</b>	12.3	99	159	12	●
<b>D1240</b>	12.4	99	159	12	●
<b>D1250</b>	12.5	99	159	12	●
<b>D1260</b>	12.6	99	159	12	●
<b>D1270</b>	12.7	99	159	12	●
<b>D1280</b>	12.8	99	159	12	●
<b>D1290</b>	12.9	99	159	12	●
<b>D1300</b>	13.0	99	159	12	●
<b>D1350</b>	13.5	100	160	16	●
<b>D1400</b>	14.0	100	160	16	●
<b>D1410</b>	14.1	105	165	16	●
<b>D1420</b>	14.2	105	165	16	●
<b>D1450</b>	14.5	105	165	16	●
<b>D1500</b>	15.0	105	165	16	●

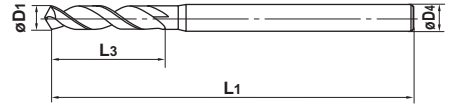
Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDMD1550</b>	15.5	110	170	16	●
<b>D1560</b>	15.6	110	170	16	●
<b>D1570</b>	15.7	110	170	16	●
<b>D1600</b>	16.0	110	170	16	●
<b>D1650</b>	16.5	110	175	20	●
<b>D1700</b>	17.0	110	175	20	●
<b>D1750</b>	17.5	115	180	20	●
<b>D1760</b>	17.6	115	180	20	●
<b>D1770</b>	17.7	115	180	20	●
<b>D1800</b>	18.0	115	180	20	●
<b>D1850</b>	18.5	120	185	20	●
<b>D1900</b>	19.0	120	185	20	●
<b>D1950</b>	19.5	120	185	20	●
<b>D1960</b>	19.6	120	185	20	●
<b>D1970</b>	19.7	120	185	20	●
<b>D2000</b>	20.0	120	185	20	●
<b>D2050</b>	20.5	125	200	25	●
<b>D2100</b>	21.0	125	200	25	●
<b>D2110</b>	21.1	125	200	25	●
<b>D2120</b>	21.2	125	200	25	●
<b>D2150</b>	21.5	125	200	25	●
<b>D2200</b>	22.0	125	200	25	●
<b>D2250</b>	22.5	130	205	25	●
<b>D2300</b>	23.0	130	205	25	●
<b>D2350</b>	23.5	130	205	25	●
<b>D2400</b>	24.0	135	210	25	●
<b>D2450</b>	24.5	135	210	25	●
<b>D2500</b>	25.0	135	210	25	●
<b>D2550</b>	25.5	140	220	32	●
<b>D2600</b>	26.0	140	220	32	●
<b>D2650</b>	26.5	140	220	32	●
<b>D2700</b>	27.0	140	220	32	●
<b>D2800</b>	28.0	140	220	32	●
<b>D2900</b>	29.0	145	225	32	●
<b>D3000</b>	30.0	145	225	32	●
<b>D3100</b>	31.0	150	230	32	●
<b>D3200</b>	32.0	155	235	32	●

# VA-PDS-SUS

Short flute, High precision, For stainless steel



All drills except those with intervals of 0.1mm and under dia. 4mm have a tolerance of 0 - -0.009mm.



1?D1

- New design and the Violet coating combination enable high efficiency drilling and long tool life for drilling of stainless steels.

Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDSSUSD0050</b>	0.5	3	50	3	●
<b>D0051</b>	0.51	3	50	3	●
<b>D0052</b>	0.52	3	50	3	●
<b>D0053</b>	0.53	3	50	3	●
<b>D0054</b>	0.54	3	50	3	●
<b>D0055</b>	0.55	3	50	3	●
<b>D0056</b>	0.56	4	50	3	●
<b>D0057</b>	0.57	4	50	3	●
<b>D0058</b>	0.58	4	50	3	●
<b>D0059</b>	0.59	4	50	3	●
<b>D0060</b>	0.6	5	50	3	●
<b>D0061</b>	0.61	5	50	3	●
<b>D0062</b>	0.62	5	50	3	●
<b>D0063</b>	0.63	5	50	3	●
<b>D0064</b>	0.64	5	50	3	●
<b>D0065</b>	0.65	5	50	3	●
<b>D0066</b>	0.66	5	50	3	●
<b>D0067</b>	0.67	5	50	3	●
<b>D0068</b>	0.68	5	50	3	●
<b>D0069</b>	0.69	5	50	3	●
<b>D0070</b>	0.7	5	50	3	●
<b>D0071</b>	0.71	5	50	3	●
<b>D0072</b>	0.72	5	50	3	●
<b>D0073</b>	0.73	5	50	3	●
<b>D0074</b>	0.74	5	50	3	●
<b>D0075</b>	0.75	5	50	3	●
<b>D0076</b>	0.76	5	50	3	●
<b>D0077</b>	0.77	5	50	3	●
<b>D0078</b>	0.78	5	50	3	●
<b>D0079</b>	0.79	5	50	3	●
<b>D0080</b>	0.8	5	50	3	●
<b>D0081</b>	0.81	5	50	3	●
<b>D0082</b>	0.82	5	50	3	●
<b>D0083</b>	0.83	5	50	3	●
<b>D0084</b>	0.84	5	50	3	●
<b>D0085</b>	0.85	5	50	3	●
<b>D0086</b>	0.86	6	50	3	●
<b>D0087</b>	0.87	6	50	3	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDSSUSD0088</b>	0.88	6	50	3	●
<b>D0089</b>	0.89	6	50	3	●
<b>D0090</b>	0.9	6	50	3	●
<b>D0091</b>	0.91	6	50	3	●
<b>D0092</b>	0.92	6	50	3	●
<b>D0093</b>	0.93	6	50	3	●
<b>D0094</b>	0.94	6	50	3	●
<b>D0095</b>	0.95	6	50	3	●
<b>D0096</b>	0.96	6	50	3	●
<b>D0097</b>	0.97	6	50	3	●
<b>D0098</b>	0.98	6	50	3	●
<b>D0099</b>	0.99	6	50	3	●
<b>D0100</b>	1.0	6	50	3	●
<b>D0101</b>	1.01	6	50	3	●
<b>D0102</b>	1.02	6	50	3	●
<b>D0103</b>	1.03	6	50	3	●
<b>D0104</b>	1.04	6	50	3	●
<b>D0105</b>	1.05	6	50	3	●
<b>D0106</b>	1.06	6	50	3	●
<b>D0107</b>	1.07	8	55	3	●
<b>D0108</b>	1.08	8	55	3	●
<b>D0109</b>	1.09	8	55	3	●
<b>D0110</b>	1.1	8	55	3	●
<b>D0111</b>	1.11	8	55	3	●
<b>D0112</b>	1.12	8	55	3	●
<b>D0113</b>	1.13	8	55	3	●
<b>D0114</b>	1.14	8	55	3	●
<b>D0115</b>	1.15	8	55	3	●
<b>D0116</b>	1.16	8	55	3	●
<b>D0117</b>	1.17	8	55	3	●
<b>D0118</b>	1.18	8	55	3	●
<b>D0119</b>	1.19	8	55	3	●
<b>D0120</b>	1.2	8	55	3	●
<b>D0121</b>	1.21	8	55	3	●
<b>D0122</b>	1.22	8	55	3	●
<b>D0123</b>	1.23	8	55	3	●
<b>D0124</b>	1.24	8	55	3	●
<b>D0125</b>	1.25	8	55	3	●

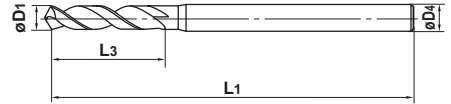
# VIOLET DRILLS

## VA-PDS-SUS

Short flute, High precision, For stainless steel



All drills except those with intervals of 0.1mm and under dia. 4mm have a tolerance of 0 - -0.009mm.



1?D1

- New design and the Violet coating combination enable high efficiency drilling and long tool life for drilling of stainless steels.

Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
VAPDSSUSD0126	1.26	8	55	3	●
D0127	1.27	8	55	3	●
D0128	1.28	8	55	3	●
D0129	1.29	8	55	3	●
D0130	1.3	9	55	3	●
D0131	1.31	9	55	3	●
D0132	1.32	9	55	3	●
D0133	1.33	9	55	3	●
D0134	1.34	9	55	3	●
D0135	1.35	9	55	3	●
D0136	1.36	9	55	3	●
D0137	1.37	9	55	3	●
D0138	1.38	9	55	3	●
D0139	1.39	9	55	3	●
D0140	1.4	9	55	3	●
D0141	1.41	9	55	3	●
D0142	1.42	9	55	3	●
D0143	1.43	9	55	3	●
D0144	1.44	9	55	3	●
D0145	1.45	9	55	3	●
D0146	1.46	9	55	3	●
D0147	1.47	9	55	3	●
D0148	1.48	9	55	3	●
D0149	1.49	9	55	3	●
D0150	1.5	9	55	3	●
D0151	1.51	11	55	3	●
D0152	1.52	11	55	3	●
D0153	1.53	11	55	3	●
D0154	1.54	11	55	3	●
D0155	1.55	11	55	3	●
D0156	1.56	11	55	3	●
D0157	1.57	11	55	3	●
D0158	1.58	11	55	3	●
D0159	1.59	11	55	3	●
D0160	1.6	11	55	3	●
D0161	1.61	11	55	3	●
D0162	1.62	11	55	3	●
D0163	1.63	11	55	3	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
VAPDSSUSD0164	1.64	11	55	3	●
D0165	1.65	11	55	3	●
D0166	1.66	11	55	3	●
D0167	1.67	11	55	3	●
D0168	1.68	11	55	3	●
D0169	1.69	11	55	3	●
D0170	1.7	11	55	3	●
D0171	1.71	11	55	3	●
D0172	1.72	11	55	3	●
D0173	1.73	11	55	3	●
D0174	1.74	11	55	3	●
D0175	1.75	11	55	3	●
D0176	1.76	11	55	3	●
D0177	1.77	11	55	3	●
D0178	1.78	11	55	3	●
D0179	1.79	11	55	3	●
D0180	1.8	11	55	3	●
D0181	1.81	11	55	3	●
D0182	1.82	11	55	3	●
D0183	1.83	11	55	3	●
D0184	1.84	11	55	3	●
D0185	1.85	11	55	3	●
D0186	1.86	11	55	3	●
D0187	1.87	11	55	3	●
D0188	1.88	11	55	3	●
D0189	1.89	11	55	3	●
D0190	1.9	12	55	3	●
D0191	1.91	12	60	3	●
D0192	1.92	12	60	3	●
D0193	1.93	12	60	3	●
D0194	1.94	12	60	3	●
D0195	1.95	12	60	3	●
D0196	1.96	12	60	3	●
D0197	1.97	12	60	3	●
D0198	1.98	12	60	3	●
D0199	1.99	12	60	3	●
D0200	2.0	12	60	3	●
D0201	2.01	12	60	3	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDSSUSD0202</b>	2.02	12	60	3	●
<b>D0203</b>	2.03	12	60	3	●
<b>D0204</b>	2.04	12	60	3	●
<b>D0205</b>	2.05	12	60	3	●
<b>D0206</b>	2.06	12	60	3	●
<b>D0207</b>	2.07	12	60	3	●
<b>D0208</b>	2.08	12	60	3	●
<b>D0209</b>	2.09	12	60	3	●
<b>D0210</b>	2.1	12	60	3	●
<b>D0211</b>	2.11	12	60	3	●
<b>D0212</b>	2.12	12	60	3	●
<b>D0213</b>	2.13	12	60	3	●
<b>D0214</b>	2.14	12	60	3	●
<b>D0215</b>	2.15	12	60	3	●
<b>D0216</b>	2.16	12	60	3	●
<b>D0217</b>	2.17	12	60	3	●
<b>D0218</b>	2.18	12	60	3	●
<b>D0219</b>	2.19	12	60	3	●
<b>D0220</b>	2.2	12	60	3	●
<b>D0221</b>	2.21	12	60	3	●
<b>D0222</b>	2.22	12	60	3	●
<b>D0223</b>	2.23	12	60	3	●
<b>D0224</b>	2.24	12	60	3	●
<b>D0225</b>	2.25	12	60	3	●
<b>D0226</b>	2.26	12	60	3	●
<b>D0227</b>	2.27	12	60	3	●
<b>D0228</b>	2.28	12	60	3	●
<b>D0229</b>	2.29	12	60	3	●
<b>D0230</b>	2.3	13	60	3	●
<b>D0231</b>	2.31	13	60	3	●
<b>D0232</b>	2.32	13	60	3	●
<b>D0233</b>	2.33	13	60	3	●
<b>D0234</b>	2.34	13	60	3	●
<b>D0235</b>	2.35	13	60	3	●
<b>D0236</b>	2.36	13	60	3	●
<b>D0237</b>	2.37	13	60	3	●
<b>D0238</b>	2.38	13	60	3	●
<b>D0239</b>	2.39	13	60	3	●
<b>D0240</b>	2.4	13	60	3	●
<b>D0241</b>	2.41	13	60	3	●
<b>D0242</b>	2.42	13	60	3	●
<b>D0243</b>	2.43	13	60	3	●
<b>D0244</b>	2.44	13	60	3	●
<b>D0245</b>	2.45	13	60	3	●
<b>D0246</b>	2.46	13	60	3	●
<b>D0247</b>	2.47	13	60	3	●
<b>D0248</b>	2.48	13	60	3	●
<b>D0249</b>	2.49	13	60	3	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDSSUSD0250</b>	2.5	13	60	3	●
<b>D0251</b>	2.51	13	60	3	●
<b>D0252</b>	2.52	13	60	3	●
<b>D0253</b>	2.53	13	60	3	●
<b>D0254</b>	2.54	13	60	3	●
<b>D0255</b>	2.55	13	60	3	●
<b>D0256</b>	2.56	13	60	3	●
<b>D0257</b>	2.57	13	60	3	●
<b>D0258</b>	2.58	13	60	3	●
<b>D0259</b>	2.59	13	60	3	●
<b>D0260</b>	2.6	15	60	3	●
<b>D0261</b>	2.61	15	60	3	●
<b>D0262</b>	2.62	15	60	3	●
<b>D0263</b>	2.63	15	60	3	●
<b>D0264</b>	2.64	15	60	3	●
<b>D0265</b>	2.65	15	60	3	●
<b>D0266</b>	2.66	15	60	3	●
<b>D0267</b>	2.67	15	60	3	●
<b>D0268</b>	2.68	15	60	3	●
<b>D0269</b>	2.69	15	60	3	●
<b>D0270</b>	2.7	15	60	3	●
<b>D0271</b>	2.71	15	60	3	●
<b>D0272</b>	2.72	15	60	3	●
<b>D0273</b>	2.73	15	60	3	●
<b>D0274</b>	2.74	15	60	3	●
<b>D0275</b>	2.75	15	60	3	●
<b>D0276</b>	2.76	15	60	3	●
<b>D0277</b>	2.77	15	60	3	●
<b>D0278</b>	2.78	15	60	3	●
<b>D0279</b>	2.79	15	60	3	●
<b>D0280</b>	2.8	15	60	3	●
<b>D0281</b>	2.81	15	60	3	●
<b>D0282</b>	2.82	15	60	3	●
<b>D0283</b>	2.83	15	60	3	●
<b>D0284</b>	2.84	15	60	3	●
<b>D0285</b>	2.85	15	60	3	●
<b>D0286</b>	2.86	15	60	3	●
<b>D0287</b>	2.87	15	60	3	●
<b>D0288</b>	2.88	15	60	3	●
<b>D0289</b>	2.89	15	60	3	●
<b>D0290</b>	2.9	15	60	3	●
<b>D0291</b>	2.91	15	60	3	●
<b>D0292</b>	2.92	15	60	3	●
<b>D0293</b>	2.93	15	60	3	●
<b>D0294</b>	2.94	15	60	3	●
<b>D0295</b>	2.95	15	60	3	●
<b>D0296</b>	2.96	15	60	3	●
<b>D0297</b>	2.97	15	60	3	●



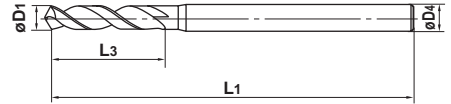
# VIOLET DRILLS

## VA-PDS-SUS

Short flute, High precision, For stainless steel



All drills except those with intervals of 0.1mm and under dia. 4mm have a tolerance of 0 - -0.009mm.



1?D1

- New design and the Violet coating combination enable high efficiency drilling and long tool life for drilling of stainless steels.

Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
VAPDSSUSD0298	2.98	15	60	3	●
D0299	2.99	15	60	3	●
D0300	3.0	15	60	3	●
D0301	3.01	17	70	4	●
D0302	3.02	17	70	4	●
D0303	3.03	17	70	4	●
D0304	3.04	17	70	4	●
D0305	3.05	17	70	4	●
D0306	3.06	17	70	4	●
D0307	3.07	17	70	4	●
D0308	3.08	17	70	4	●
D0309	3.09	17	70	4	●
D0310	3.1	17	70	4	●
D0311	3.11	17	70	4	●
D0312	3.12	17	70	4	●
D0313	3.13	17	70	4	●
D0314	3.14	17	70	4	●
D0315	3.15	17	70	4	●
D0316	3.16	17	70	4	●
D0317	3.17	17	70	4	●
D0318	3.18	17	70	4	●
D0319	3.19	17	70	4	●
D0320	3.2	17	70	4	●
D0321	3.21	17	70	4	●
D0322	3.22	17	70	4	●
D0323	3.23	17	70	4	●
D0324	3.24	17	70	4	●
D0325	3.25	17	70	4	●
D0326	3.26	17	70	4	●
D0327	3.27	17	70	4	●
D0328	3.28	17	70	4	●
D0329	3.29	17	70	4	●
D0330	3.3	19	70	4	●
D0331	3.31	19	70	4	●
D0332	3.32	19	70	4	●
D0333	3.33	19	70	4	●
D0334	3.34	19	70	4	●
D0335	3.35	19	70	4	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
VAPDSSUSD0336	3.36	19	70	4	●
D0337	3.37	19	70	4	●
D0338	3.38	19	70	4	●
D0339	3.39	19	70	4	●
D0340	3.4	19	70	4	●
D0341	3.41	19	70	4	●
D0342	3.42	19	70	4	●
D0343	3.43	19	70	4	●
D0344	3.44	19	70	4	●
D0345	3.45	19	70	4	●
D0346	3.46	19	70	4	●
D0347	3.47	19	70	4	●
D0348	3.48	19	70	4	●
D0349	3.49	19	70	4	●
D0350	3.5	19	70	4	●
D0351	3.51	19	70	4	●
D0352	3.52	19	70	4	●
D0353	3.53	19	70	4	●
D0354	3.54	19	70	4	●
D0355	3.55	19	70	4	●
D0356	3.56	19	70	4	●
D0357	3.57	19	70	4	●
D0358	3.58	19	70	4	●
D0359	3.59	19	70	4	●
D0360	3.6	21	70	4	●
D0361	3.61	21	70	4	●
D0362	3.62	21	70	4	●
D0363	3.63	21	70	4	●
D0364	3.64	21	70	4	●
D0365	3.65	21	70	4	●
D0366	3.66	21	70	4	●
D0367	3.67	21	70	4	●
D0368	3.68	21	70	4	●
D0369	3.69	21	70	4	●
D0370	3.7	21	70	4	●
D0371	3.71	21	70	4	●
D0372	3.72	21	70	4	●
D0373	3.73	21	70	4	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDSSUSD0374</b>	3.74	21	70	4	●
<b>D0375</b>	3.75	21	70	4	●
<b>D0376</b>	3.76	21	70	4	●
<b>D0377</b>	3.77	21	70	4	●
<b>D0378</b>	3.78	21	70	4	●
<b>D0379</b>	3.79	21	70	4	●
<b>D0380</b>	3.8	21	70	4	●
<b>D0381</b>	3.81	21	70	4	●
<b>D0382</b>	3.82	21	70	4	●
<b>D0383</b>	3.83	21	70	4	●
<b>D0384</b>	3.84	21	70	4	●
<b>D0385</b>	3.85	21	70	4	●
<b>D0386</b>	3.86	21	70	4	●
<b>D0387</b>	3.87	21	70	4	●
<b>D0388</b>	3.88	21	70	4	●
<b>D0389</b>	3.89	21	70	4	●
<b>D0390</b>	3.9	21	70	4	●
<b>D0391</b>	3.91	21	70	4	●
<b>D0392</b>	3.92	21	70	4	●
<b>D0393</b>	3.93	21	70	4	●
<b>D0394</b>	3.94	21	70	4	●
<b>D0395</b>	3.95	21	70	4	●
<b>D0396</b>	3.96	21	70	4	●
<b>D0397</b>	3.97	21	70	4	●
<b>D0398</b>	3.98	21	70	4	●
<b>D0399</b>	3.99	21	70	4	●
<b>D0400</b>	4.0	21	70	4	●
<b>D0405</b>	4.05	21	80	6	●
<b>D0410</b>	4.1	21	80	6	●
<b>D0415</b>	4.15	21	80	6	●
<b>D0420</b>	4.2	21	80	6	●
<b>D0425</b>	4.25	21	80	6	●
<b>D0430</b>	4.3	23	80	6	●
<b>D0435</b>	4.35	23	80	6	●
<b>D0440</b>	4.4	23	80	6	●
<b>D0445</b>	4.45	23	80	6	●
<b>D0450</b>	4.5	23	80	6	●
<b>D0455</b>	4.55	23	80	6	●
<b>D0460</b>	4.6	25	80	6	●
<b>D0465</b>	4.65	25	80	6	●
<b>D0470</b>	4.7	25	80	6	●
<b>D0475</b>	4.75	25	80	6	●
<b>D0480</b>	4.8	25	80	6	●
<b>D0485</b>	4.85	25	80	6	●
<b>D0490</b>	4.9	25	80	6	●
<b>D0495</b>	4.95	25	80	6	●
<b>D0500</b>	5.0	25	80	6	●
<b>D0505</b>	5.05	25	80	6	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDSSUSD0510</b>	5.1	25	80	6	●
<b>D0515</b>	5.15	25	80	6	●
<b>D0520</b>	5.2	25	80	6	●
<b>D0525</b>	5.25	25	80	6	●
<b>D0530</b>	5.3	25	80	6	●
<b>D0535</b>	5.35	27	80	6	●
<b>D0540</b>	5.4	27	80	6	●
<b>D0545</b>	5.45	27	80	6	●
<b>D0550</b>	5.5	27	80	6	●
<b>D0555</b>	5.55	27	80	6	●
<b>D0560</b>	5.6	27	80	6	●
<b>D0565</b>	5.65	27	80	6	●
<b>D0570</b>	5.7	27	80	6	●
<b>D0575</b>	5.75	27	80	6	●
<b>D0580</b>	5.8	27	80	6	●
<b>D0585</b>	5.85	27	80	6	●
<b>D0590</b>	5.9	27	80	6	●
<b>D0595</b>	5.95	27	80	6	●
<b>D0600</b>	6.0	27	80	6	●
<b>D0605</b>	6.05	30	80	8	●
<b>D0610</b>	6.1	30	80	8	●
<b>D0615</b>	6.15	30	80	8	●
<b>D0620</b>	6.2	30	80	8	●
<b>D0625</b>	6.25	30	80	8	●
<b>D0630</b>	6.3	30	80	8	●
<b>D0635</b>	6.35	30	80	8	●
<b>D0640</b>	6.4	30	80	8	●
<b>D0645</b>	6.45	30	80	8	●
<b>D0650</b>	6.5	30	80	8	●
<b>D0655</b>	6.55	30	80	8	●
<b>D0660</b>	6.6	30	80	8	●
<b>D0665</b>	6.65	30	80	8	●
<b>D0670</b>	6.7	30	80	8	●
<b>D0675</b>	6.75	32	80	8	●
<b>D0680</b>	6.8	32	80	8	●
<b>D0685</b>	6.85	32	80	8	●
<b>D0690</b>	6.9	32	80	8	●
<b>D0695</b>	6.95	32	80	8	●
<b>D0700</b>	7.0	32	80	8	●
<b>D0705</b>	7.05	32	80	8	●
<b>D0710</b>	7.1	32	80	8	●
<b>D0715</b>	7.15	32	80	8	●
<b>D0720</b>	7.2	32	80	8	●
<b>D0725</b>	7.25	32	80	8	●
<b>D0730</b>	7.3	32	80	8	●
<b>D0735</b>	7.35	32	80	8	●
<b>D0740</b>	7.4	32	80	8	●
<b>D0745</b>	7.45	32	80	8	●

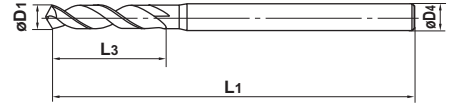
# VIOLET DRILLS

## VA-PDS-SUS

Short flute, High precision, For stainless steel



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1?D1

- New design and the Violet coating combination enable high efficiency drilling and long tool life for drilling of stainless steels.

Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
VAPDSSUSD0750	7.5	32	80	8	●
D0755	7.55	35	85	8	●
D0760	7.6	35	85	8	●
D0765	7.65	35	85	8	●
D0770	7.7	35	85	8	●
D0775	7.75	35	85	8	●
D0780	7.8	35	85	8	●
D0785	7.85	35	85	8	●
D0790	7.9	35	85	8	●
D0795	7.95	35	85	8	●
D0800	8.0	35	85	8	●
D0805	8.05	35	90	10	●
D0810	8.1	35	90	10	●
D0815	8.15	35	90	10	●
D0820	8.2	35	90	10	●
D0825	8.25	35	90	10	●
D0830	8.3	35	90	10	●
D0835	8.35	35	90	10	●
D0840	8.4	35	90	10	●
D0845	8.45	35	90	10	●
D0850	8.5	35	90	10	●
D0855	8.55	38	93	10	●
D0860	8.6	38	93	10	●
D0865	8.65	38	93	10	●
D0870	8.7	38	93	10	●
D0875	8.75	38	93	10	●
D0880	8.8	38	93	10	●
D0885	8.85	38	93	10	●
D0890	8.9	38	93	10	●
D0895	8.95	38	93	10	●
D0900	9.0	38	93	10	●
D0910	9.1	38	93	10	●
D0920	9.2	38	93	10	●
D0930	9.3	38	93	10	●
D0940	9.4	38	93	10	●
D0950	9.5	38	93	10	●
D0960	9.6	41	96	10	●
D0970	9.7	41	96	10	●

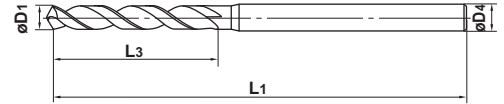
Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
VAPDSSUSD0980	9.8	41	96	10	●
D0990	9.9	41	96	10	●
D1000	10.0	41	96	10	●
D1010	10.1	41	101	12	●
D1020	10.2	41	101	12	●
D1030	10.3	41	101	12	●
D1040	10.4	41	101	12	●
D1050	10.5	41	101	12	●
D1060	10.6	41	101	12	●
D1070	10.7	45	105	12	●
D1080	10.8	45	105	12	●
D1090	10.9	45	105	12	●
D1100	11.0	45	105	12	●
D1110	11.1	45	105	12	●
D1120	11.2	45	105	12	●
D1130	11.3	45	105	12	●
D1140	11.4	45	105	12	●
D1150	11.5	45	105	12	●
D1160	11.6	45	105	12	●
D1170	11.7	45	105	12	●
D1180	11.8	45	105	12	●
D1190	11.9	49	109	12	●
D1200	12.0	49	109	12	●
D1210	12.1	49	109	12	●
D1220	12.2	49	109	12	●
D1230	12.3	49	109	12	●
D1240	12.4	49	109	12	●
D1250	12.5	49	109	12	●
D1260	12.6	49	109	12	●
D1270	12.7	49	109	12	●
D1280	12.8	49	109	12	●
D1290	12.9	49	109	12	●
D1300	13.0	49	109	12	●

# VA-PDM-SUS

Medium flute, High precision, For stainless steel



All drills except those with intervals of 0.1mm and under dia. 4mm have a tolerance of 0 - -0.009mm.



- New design and the Violet coating combination enable high efficiency drilling and long tool life for drilling of stainless steels.

Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDMSUSD0050</b>	0.5	6	50	3	●
<b>D0051</b>	0.51	6	50	3	●
<b>D0052</b>	0.52	6	50	3	●
<b>D0053</b>	0.53	6	50	3	●
<b>D0054</b>	0.54	6	50	3	●
<b>D0055</b>	0.55	6	50	3	●
<b>D0056</b>	0.56	8	50	3	●
<b>D0057</b>	0.57	8	50	3	●
<b>D0058</b>	0.58	8	50	3	●
<b>D0059</b>	0.59	8	50	3	●
<b>D0060</b>	0.6	8	50	3	●
<b>D0061</b>	0.61	8	50	3	●
<b>D0062</b>	0.62	8	50	3	●
<b>D0063</b>	0.63	8	50	3	●
<b>D0064</b>	0.64	8	50	3	●
<b>D0065</b>	0.65	8	50	3	●
<b>D0066</b>	0.66	8	50	3	●
<b>D0067</b>	0.67	8	50	3	●
<b>D0068</b>	0.68	8	50	3	●
<b>D0069</b>	0.69	8	50	3	●
<b>D0070</b>	0.7	10	50	3	●
<b>D0071</b>	0.71	10	50	3	●
<b>D0072</b>	0.72	10	50	3	●
<b>D0073</b>	0.73	10	50	3	●
<b>D0074</b>	0.74	10	50	3	●
<b>D0075</b>	0.75	10	50	3	●
<b>D0076</b>	0.76	10	50	3	●
<b>D0077</b>	0.77	10	50	3	●
<b>D0078</b>	0.78	10	50	3	●
<b>D0079</b>	0.79	10	50	3	●
<b>D0080</b>	0.8	10	50	3	●
<b>D0081</b>	0.81	10	50	3	●
<b>D0082</b>	0.82	10	50	3	●
<b>D0083</b>	0.83	10	50	3	●
<b>D0084</b>	0.84	10	50	3	●
<b>D0085</b>	0.85	10	50	3	●
<b>D0086</b>	0.86	12	50	3	●
<b>D0087</b>	0.87	12	50	3	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDMSUSD0088</b>	0.88	12	50	3	●
<b>D0089</b>	0.89	12	50	3	●
<b>D0090</b>	0.9	12	50	3	●
<b>D0091</b>	0.91	12	50	3	●
<b>D0092</b>	0.92	12	50	3	●
<b>D0093</b>	0.93	12	50	3	●
<b>D0094</b>	0.94	12	50	3	●
<b>D0095</b>	0.95	12	50	3	●
<b>D0096</b>	0.96	12	50	3	●
<b>D0097</b>	0.97	12	50	3	●
<b>D0098</b>	0.98	12	50	3	●
<b>D0099</b>	0.99	12	50	3	●
<b>D0100</b>	1.0	12	60	3	●
<b>D0101</b>	1.01	12	60	3	●
<b>D0102</b>	1.02	12	60	3	●
<b>D0103</b>	1.03	12	60	3	●
<b>D0104</b>	1.04	12	60	3	●
<b>D0105</b>	1.05	12	60	3	●
<b>D0106</b>	1.06	12	60	3	●
<b>D0107</b>	1.07	16	60	3	●
<b>D0108</b>	1.08	16	60	3	●
<b>D0109</b>	1.09	16	60	3	●
<b>D0110</b>	1.1	16	60	3	●
<b>D0111</b>	1.11	16	60	3	●
<b>D0112</b>	1.12	16	60	3	●
<b>D0113</b>	1.13	16	60	3	●
<b>D0114</b>	1.14	16	60	3	●
<b>D0115</b>	1.15	16	60	3	●
<b>D0116</b>	1.16	16	60	3	●
<b>D0117</b>	1.17	16	60	3	●
<b>D0118</b>	1.18	16	60	3	●
<b>D0119</b>	1.19	16	60	3	●
<b>D0120</b>	1.2	16	60	3	●
<b>D0121</b>	1.21	16	60	3	●
<b>D0122</b>	1.22	16	60	3	●
<b>D0123</b>	1.23	16	60	3	●
<b>D0124</b>	1.24	16	60	3	●
<b>D0125</b>	1.25	16	60	3	●

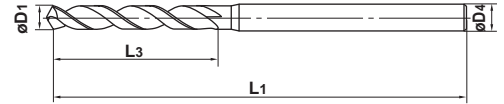
# VIOLET DRILLS

## VA-PDM-SUS

Medium flute, High precision, For stainless steel



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Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
VAPDMSUSD0126	1.26	16	60	3	●
D0127	1.27	16	60	3	●
D0128	1.28	16	60	3	●
D0129	1.29	16	60	3	●
D0130	1.3	16	60	3	●
D0131	1.31	18	60	3	●
D0132	1.32	18	60	3	●
D0133	1.33	18	60	3	●
D0134	1.34	18	60	3	●
D0135	1.35	18	60	3	●
D0136	1.36	18	60	3	●
D0137	1.37	18	60	3	●
D0138	1.38	18	60	3	●
D0139	1.39	18	60	3	●
D0140	1.4	18	60	3	●
D0141	1.41	18	60	3	●
D0142	1.42	18	60	3	●
D0143	1.43	18	60	3	●
D0144	1.44	18	60	3	●
D0145	1.45	18	60	3	●
D0146	1.46	18	60	3	●
D0147	1.47	18	60	3	●
D0148	1.48	18	60	3	●
D0149	1.49	18	60	3	●
D0150	1.5	18	60	3	●
D0151	1.51	20	60	3	●
D0152	1.52	20	60	3	●
D0153	1.53	20	60	3	●
D0154	1.54	20	60	3	●
D0155	1.55	20	60	3	●
D0156	1.56	20	60	3	●
D0157	1.57	20	60	3	●
D0158	1.58	20	60	3	●
D0159	1.59	20	60	3	●
D0160	1.6	20	60	3	●
D0161	1.61	20	60	3	●
D0162	1.62	20	60	3	●
D0163	1.63	20	60	3	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
VAPDMSUSD0164	1.64	20	60	3	●
D0165	1.65	20	60	3	●
D0166	1.66	20	60	3	●
D0167	1.67	20	60	3	●
D0168	1.68	20	60	3	●
D0169	1.69	20	60	3	●
D0170	1.7	20	60	3	●
D0171	1.71	20	60	3	●
D0172	1.72	20	60	3	●
D0173	1.73	20	60	3	●
D0174	1.74	20	60	3	●
D0175	1.75	20	60	3	●
D0176	1.76	20	60	3	●
D0177	1.77	20	60	3	●
D0178	1.78	20	60	3	●
D0179	1.79	20	60	3	●
D0180	1.8	22	60	3	●
D0181	1.81	22	60	3	●
D0182	1.82	22	60	3	●
D0183	1.83	22	60	3	●
D0184	1.84	22	60	3	●
D0185	1.85	22	60	3	●
D0186	1.86	22	60	3	●
D0187	1.87	22	60	3	●
D0188	1.88	22	60	3	●
D0189	1.89	22	60	3	●
D0190	1.9	22	60	3	●
D0191	1.91	23	60	3	●
D0192	1.92	23	60	3	●
D0193	1.93	23	60	3	●
D0194	1.94	23	60	3	●
D0195	1.95	23	60	3	●
D0196	1.96	23	60	3	●
D0197	1.97	23	60	3	●
D0198	1.98	23	60	3	●
D0199	1.99	23	60	3	●
D0200	2.0	23	70	3	●
D0201	2.01	23	70	3	●



Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDMSUSD0202</b>	2.02	23	70	3	●
<b>D0203</b>	2.03	23	70	3	●
<b>D0204</b>	2.04	23	70	3	●
<b>D0205</b>	2.05	23	70	3	●
<b>D0206</b>	2.06	23	70	3	●
<b>D0207</b>	2.07	23	70	3	●
<b>D0208</b>	2.08	23	70	3	●
<b>D0209</b>	2.09	23	70	3	●
<b>D0210</b>	2.1	23	70	3	●
<b>D0211</b>	2.11	23	70	3	●
<b>D0212</b>	2.12	23	70	3	●
<b>D0213</b>	2.13	23	70	3	●
<b>D0214</b>	2.14	23	70	3	●
<b>D0215</b>	2.15	23	70	3	●
<b>D0216</b>	2.16	23	70	3	●
<b>D0217</b>	2.17	23	70	3	●
<b>D0218</b>	2.18	23	70	3	●
<b>D0219</b>	2.19	23	70	3	●
<b>D0220</b>	2.2	26	70	3	●
<b>D0221</b>	2.21	26	70	3	●
<b>D0222</b>	2.22	26	70	3	●
<b>D0223</b>	2.23	26	70	3	●
<b>D0224</b>	2.24	26	70	3	●
<b>D0225</b>	2.25	26	70	3	●
<b>D0226</b>	2.26	26	70	3	●
<b>D0227</b>	2.27	26	70	3	●
<b>D0228</b>	2.28	26	70	3	●
<b>D0229</b>	2.29	26	70	3	●
<b>D0230</b>	2.3	26	70	3	●
<b>D0231</b>	2.31	26	70	3	●
<b>D0232</b>	2.32	26	70	3	●
<b>D0233</b>	2.33	26	70	3	●
<b>D0234</b>	2.34	26	70	3	●
<b>D0235</b>	2.35	26	70	3	●
<b>D0236</b>	2.36	26	70	3	●
<b>D0237</b>	2.37	26	70	3	●
<b>D0238</b>	2.38	26	70	3	●
<b>D0239</b>	2.39	26	70	3	●
<b>D0240</b>	2.4	29	70	3	●
<b>D0241</b>	2.41	29	70	3	●
<b>D0242</b>	2.42	29	70	3	●
<b>D0243</b>	2.43	29	70	3	●
<b>D0244</b>	2.44	29	70	3	●
<b>D0245</b>	2.45	29	70	3	●
<b>D0246</b>	2.46	29	70	3	●
<b>D0247</b>	2.47	29	70	3	●
<b>D0248</b>	2.48	29	70	3	●
<b>D0249</b>	2.49	29	70	3	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDMSUSD0250</b>	2.5	29	70	3	●
<b>D0251</b>	2.51	29	70	3	●
<b>D0252</b>	2.52	29	70	3	●
<b>D0253</b>	2.53	29	70	3	●
<b>D0254</b>	2.54	29	70	3	●
<b>D0255</b>	2.55	29	70	3	●
<b>D0256</b>	2.56	29	70	3	●
<b>D0257</b>	2.57	29	70	3	●
<b>D0258</b>	2.58	29	70	3	●
<b>D0259</b>	2.59	29	70	3	●
<b>D0260</b>	2.6	29	70	3	●
<b>D0261</b>	2.61	29	70	3	●
<b>D0262</b>	2.62	29	70	3	●
<b>D0263</b>	2.63	29	70	3	●
<b>D0264</b>	2.64	29	70	3	●
<b>D0265</b>	2.65	29	70	3	●
<b>D0266</b>	2.66	29	70	3	●
<b>D0267</b>	2.67	29	70	3	●
<b>D0268</b>	2.68	29	70	3	●
<b>D0269</b>	2.69	29	70	3	●
<b>D0270</b>	2.7	32	70	3	●
<b>D0271</b>	2.71	32	70	3	●
<b>D0272</b>	2.72	32	70	3	●
<b>D0273</b>	2.73	32	70	3	●
<b>D0274</b>	2.74	32	70	3	●
<b>D0275</b>	2.75	32	70	3	●
<b>D0276</b>	2.76	32	70	3	●
<b>D0277</b>	2.77	32	70	3	●
<b>D0278</b>	2.78	32	70	3	●
<b>D0279</b>	2.79	32	70	3	●
<b>D0280</b>	2.8	32	70	3	●
<b>D0281</b>	2.81	32	70	3	●
<b>D0282</b>	2.82	32	70	3	●
<b>D0283</b>	2.83	32	70	3	●
<b>D0284</b>	2.84	32	70	3	●
<b>D0285</b>	2.85	32	70	3	●
<b>D0286</b>	2.86	32	70	3	●
<b>D0287</b>	2.87	32	70	3	●
<b>D0288</b>	2.88	32	70	3	●
<b>D0289</b>	2.89	32	70	3	●
<b>D0290</b>	2.9	32	70	3	●
<b>D0291</b>	2.91	32	70	3	●
<b>D0292</b>	2.92	32	70	3	●
<b>D0293</b>	2.93	32	70	3	●
<b>D0294</b>	2.94	32	70	3	●
<b>D0295</b>	2.95	32	70	3	●
<b>D0296</b>	2.96	32	70	3	●
<b>D0297</b>	2.97	32	70	3	●

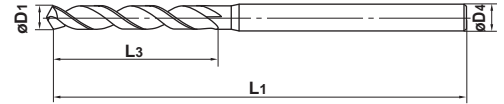
# VIOLET DRILLS

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Medium flute, High precision, For stainless steel



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Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
VAPDMSUSD0298	2.98	32	70	3	●
D0299	2.99	32	70	3	●
D0300	3.0	32	70	3	●
D0301	3.01	35	85	4	●
D0302	3.02	35	85	4	●
D0303	3.03	35	85	4	●
D0304	3.04	35	85	4	●
D0305	3.05	35	85	4	●
D0306	3.06	35	85	4	●
D0307	3.07	35	85	4	●
D0308	3.08	35	85	4	●
D0309	3.09	35	85	4	●
D0310	3.1	35	85	4	●
D0311	3.11	35	85	4	●
D0312	3.12	35	85	4	●
D0313	3.13	35	85	4	●
D0314	3.14	35	85	4	●
D0315	3.15	35	85	4	●
D0316	3.16	35	85	4	●
D0317	3.17	35	85	4	●
D0318	3.18	35	85	4	●
D0319	3.19	35	85	4	●
D0320	3.2	35	85	4	●
D0321	3.21	35	85	4	●
D0322	3.22	35	85	4	●
D0323	3.23	35	85	4	●
D0324	3.24	35	85	4	●
D0325	3.25	35	85	4	●
D0326	3.26	35	85	4	●
D0327	3.27	35	85	4	●
D0328	3.28	35	85	4	●
D0329	3.29	35	85	4	●
D0330	3.3	35	85	4	●
D0331	3.31	38	85	4	●
D0332	3.32	38	85	4	●
D0333	3.33	38	85	4	●
D0334	3.34	38	85	4	●
D0335	3.35	38	85	4	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
VAPDMSUSD0336	3.36	38	85	4	●
D0337	3.37	38	85	4	●
D0338	3.38	38	85	4	●
D0339	3.39	38	85	4	●
D0340	3.4	38	85	4	●
D0341	3.41	38	85	4	●
D0342	3.42	38	85	4	●
D0343	3.43	38	85	4	●
D0344	3.44	38	85	4	●
D0345	3.45	38	85	4	●
D0346	3.46	38	85	4	●
D0347	3.47	38	85	4	●
D0348	3.48	38	85	4	●
D0349	3.49	38	85	4	●
D0350	3.5	38	85	4	●
D0351	3.51	38	85	4	●
D0352	3.52	38	85	4	●
D0353	3.53	38	85	4	●
D0354	3.54	38	85	4	●
D0355	3.55	38	85	4	●
D0356	3.56	38	85	4	●
D0357	3.57	38	85	4	●
D0358	3.58	38	85	4	●
D0359	3.59	38	85	4	●
D0360	3.6	38	85	4	●
D0361	3.61	38	85	4	●
D0362	3.62	38	85	4	●
D0363	3.63	38	85	4	●
D0364	3.64	38	85	4	●
D0365	3.65	38	85	4	●
D0366	3.66	38	85	4	●
D0367	3.67	38	85	4	●
D0368	3.68	38	85	4	●
D0369	3.69	38	85	4	●
D0370	3.7	38	85	4	●
D0371	3.71	42	85	4	●
D0372	3.72	42	85	4	●
D0373	3.73	42	85	4	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDMSUSD0374</b>	3.74	42	85	4	●
<b>D0375</b>	3.75	42	85	4	●
<b>D0376</b>	3.76	42	85	4	●
<b>D0377</b>	3.77	42	85	4	●
<b>D0378</b>	3.78	42	85	4	●
<b>D0379</b>	3.79	42	85	4	●
<b>D0380</b>	3.8	42	85	4	●
<b>D0381</b>	3.81	42	85	4	●
<b>D0382</b>	3.82	42	85	4	●
<b>D0383</b>	3.83	42	85	4	●
<b>D0384</b>	3.84	42	85	4	●
<b>D0385</b>	3.85	42	85	4	●
<b>D0386</b>	3.86	42	85	4	●
<b>D0387</b>	3.87	42	85	4	●
<b>D0388</b>	3.88	42	85	4	●
<b>D0389</b>	3.89	42	85	4	●
<b>D0390</b>	3.9	42	85	4	●
<b>D0391</b>	3.91	42	85	4	●
<b>D0392</b>	3.92	42	85	4	●
<b>D0393</b>	3.93	42	85	4	●
<b>D0394</b>	3.94	42	85	4	●
<b>D0395</b>	3.95	42	85	4	●
<b>D0396</b>	3.96	42	85	4	●
<b>D0397</b>	3.97	42	85	4	●
<b>D0398</b>	3.98	42	85	4	●
<b>D0399</b>	3.99	42	85	4	●
<b>D0400</b>	4.0	42	85	4	●
<b>D0405</b>	4.05	42	100	6	●
<b>D0410</b>	4.1	42	100	6	●
<b>D0415</b>	4.15	42	100	6	●
<b>D0420</b>	4.2	42	100	6	●
<b>D0425</b>	4.25	46	100	6	●
<b>D0430</b>	4.3	46	100	6	●
<b>D0435</b>	4.35	46	100	6	●
<b>D0440</b>	4.4	46	100	6	●
<b>D0445</b>	4.45	46	100	6	●
<b>D0450</b>	4.5	46	100	6	●
<b>D0455</b>	4.55	46	100	6	●
<b>D0460</b>	4.6	46	100	6	●
<b>D0465</b>	4.65	46	100	6	●
<b>D0470</b>	4.7	46	100	6	●
<b>D0475</b>	4.75	46	100	6	●
<b>D0480</b>	4.8	51	100	6	●
<b>D0485</b>	4.85	51	100	6	●
<b>D0490</b>	4.9	51	100	6	●
<b>D0495</b>	4.95	51	100	6	●
<b>D0500</b>	5.0	51	100	6	●
<b>D0505</b>	5.05	51	100	6	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
<b>VAPDMSUSD0510</b>	5.1	51	100	6	●
<b>D0515</b>	5.15	51	100	6	●
<b>D0520</b>	5.2	51	100	6	●
<b>D0525</b>	5.25	51	100	6	●
<b>D0530</b>	5.3	51	100	6	●
<b>D0535</b>	5.35	56	106	6	●
<b>D0540</b>	5.4	56	106	6	●
<b>D0545</b>	5.45	56	106	6	●
<b>D0550</b>	5.5	56	106	6	●
<b>D0555</b>	5.55	56	106	6	●
<b>D0560</b>	5.6	56	106	6	●
<b>D0565</b>	5.65	56	106	6	●
<b>D0570</b>	5.7	56	106	6	●
<b>D0575</b>	5.75	56	106	6	●
<b>D0580</b>	5.8	56	106	6	●
<b>D0585</b>	5.85	56	106	6	●
<b>D0590</b>	5.9	56	106	6	●
<b>D0595</b>	5.95	56	106	6	●
<b>D0600</b>	6.0	56	106	6	●
<b>D0605</b>	6.05	62	112	8	●
<b>D0610</b>	6.1	62	112	8	●
<b>D0615</b>	6.15	62	112	8	●
<b>D0620</b>	6.2	62	112	8	●
<b>D0625</b>	6.25	62	112	8	●
<b>D0630</b>	6.3	62	112	8	●
<b>D0635</b>	6.35	62	112	8	●
<b>D0640</b>	6.4	62	112	8	●
<b>D0645</b>	6.45	62	112	8	●
<b>D0650</b>	6.5	62	112	8	●
<b>D0655</b>	6.55	62	112	8	●
<b>D0660</b>	6.6	62	112	8	●
<b>D0665</b>	6.65	62	112	8	●
<b>D0670</b>	6.7	62	112	8	●
<b>D0675</b>	6.75	67	117	8	●
<b>D0680</b>	6.8	67	117	8	●
<b>D0685</b>	6.85	67	117	8	●
<b>D0690</b>	6.9	67	117	8	●
<b>D0695</b>	6.95	67	117	8	●
<b>D0700</b>	7.0	67	117	8	●
<b>D0705</b>	7.05	67	117	8	●
<b>D0710</b>	7.1	67	117	8	●
<b>D0715</b>	7.15	67	117	8	●
<b>D0720</b>	7.2	67	117	8	●
<b>D0725</b>	7.25	67	117	8	●
<b>D0730</b>	7.3	67	117	8	●
<b>D0735</b>	7.35	67	117	8	●
<b>D0740</b>	7.4	67	117	8	●
<b>D0745</b>	7.45	67	117	8	●

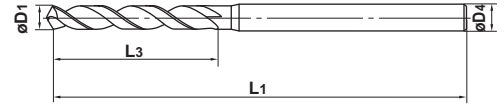
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Unit : mm

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
VAPDMSUSD0750	7.5	67	117	8	●
D0755	7.55	73	123	8	●
D0760	7.6	73	123	8	●
D0765	7.65	73	123	8	●
D0770	7.7	73	123	8	●
D0775	7.75	73	123	8	●
D0780	7.8	73	123	8	●
D0785	7.85	73	123	8	●
D0790	7.9	73	123	8	●
D0795	7.95	73	123	8	●
D0800	8.0	73	123	8	●
D0805	8.05	73	128	10	●
D0810	8.1	73	128	10	●
D0815	8.15	73	128	10	●
D0820	8.2	73	128	10	●
D0825	8.25	73	128	10	●
D0830	8.3	73	128	10	●
D0835	8.35	73	128	10	●
D0840	8.4	73	128	10	●
D0845	8.45	73	128	10	●
D0850	8.5	73	128	10	●
D0855	8.55	79	134	10	●
D0860	8.6	79	134	10	●
D0865	8.65	79	134	10	●
D0870	8.7	79	134	10	●
D0875	8.75	79	134	10	●
D0880	8.8	79	134	10	●
D0885	8.85	79	134	10	●
D0890	8.9	79	134	10	●
D0895	8.95	79	134	10	●
D0900	9.0	79	134	10	●
D0910	9.1	79	134	10	●
D0920	9.2	79	134	10	●
D0930	9.3	79	134	10	●
D0940	9.4	79	134	10	●
D0950	9.5	79	134	10	●
D0960	9.6	85	140	10	●
D0970	9.7	85	140	10	●

Order Number	Dia. D1	Flute Length L3	Overall Length L1	Shank Dia. D4	Stock
VAPDMSUSD0980	9.8	85	140	10	●
D0990	9.9	85	140	10	●
D1000	10.0	85	140	10	●
D1010	10.1	85	145	12	●
D1020	10.2	85	145	12	●
D1030	10.3	85	145	12	●
D1040	10.4	85	145	12	●
D1050	10.5	85	145	12	●
D1060	10.6	85	145	12	●
D1070	10.7	92	152	12	●
D1080	10.8	92	152	12	●
D1090	10.9	92	152	12	●
D1100	11.0	92	152	12	●
D1110	11.1	92	152	12	●
D1120	11.2	92	152	12	●
D1130	11.3	92	152	12	●
D1140	11.4	92	152	12	●
D1150	11.5	92	152	12	●
D1160	11.6	92	152	12	●
D1170	11.7	92	152	12	●
D1180	11.8	92	152	12	●
D1190	11.9	99	159	12	●
D1200	12.0	99	159	12	●
D1210	12.1	99	159	12	●
D1220	12.2	99	159	12	●
D1230	12.3	99	159	12	●
D1240	12.4	99	159	12	●
D1250	12.5	99	159	12	●
D1260	12.6	99	159	12	●
D1270	12.7	99	159	12	●
D1280	12.8	99	159	12	●
D1290	12.9	99	159	12	●
D1300	13.0	99	159	12	●

# VA-PDS VA-PDM

VIOLET DRILLS, High precision

## VA-PDS (Standard drilling depth : 3 x D or less)

Work material	Structural steel SS400		Carbon steel S50C Alloy steel SCM Cast iron FC		Alloy tool steel SKD11 (Low-hardness materials) Ferritic stainless steel SUS430, 405 Martensitic stainless steel SUS420, 440		Alloy tool steel SKD61 (-40HRC) Precipitation hardeningstainless steel SUS630, 631	
	Dia. (mm)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	Revolution (min <sup>-1</sup> )
0.5	18,000	0.02	16,000	0.02	9,000	0.02	8,200	0.02
1.0	12,000	0.05	10,000	0.05	6,300	0.05	5,500	0.04
2.0	6,400	0.09	5,500	0.09	3,200	0.09	2,900	0.05
3.0	4,300	0.13	3,700	0.13	2,100	0.13	1,900	0.06
4.0	3,200	0.15	2,800	0.15	1,600	0.15	1,400	0.08
5.0	2,600	0.18	2,200	0.18	1,300	0.18	1,100	0.10
6.0	2,100	0.19	1,800	0.19	1,100	0.20	950	0.11
8.0	1,600	0.24	1,400	0.24	800	0.22	720	0.13
10.0	1,300	0.28	1,100	0.28	640	0.25	570	0.15
12.0	1,100	0.34	930	0.34	530	0.30	480	0.17

## VA-PDM (Standard drilling depth : 5 x D or less)

Work material	Structural steel SS400		Carbon steel S50C Alloy steel SCM Cast iron FC		Alloy tool steel SKD11 (Low-hardness materials) Ferritic stainless steel SUS430, 405 Martensitic stainless steel SUS420, 440		Alloy tool steel SKD61 (40HRC) Precipitation hardeningstainless steel SUS630, 631	
	Dia. (mm)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	Revolution (min <sup>-1</sup> )
0.5	17,000	0.01	12,800	0.01	8,000	0.01	6,600	0.01
1.0	11,000	0.05	8,300	0.05	5,000	0.05	4,100	0.04
2.0	6,400	0.09	4,800	0.09	2,900	0.06	2,400	0.05
3.0	4,300	0.13	3,200	0.13	1,900	0.10	1,600	0.06
4.0	3,200	0.15	2,400	0.15	1,400	0.10	1,200	0.08
5.0	2,600	0.18	1,900	0.18	1,100	0.13	950	0.10
6.0	2,100	0.19	1,600	0.20	950	0.15	800	0.11
8.0	1,600	0.24	1,200	0.22	720	0.18	600	0.13
10.0	1,300	0.28	950	0.25	570	0.21	480	0.15
12.0	1,100	0.34	800	0.30	480	0.25	400	0.17
14.0	910	0.39	680	0.35	410	0.30	340	0.21
15.0	850	0.40	640	0.36	380	0.31	320	0.22
16.0	800	0.42	600	0.38	360	0.32	300	0.23
18.0	710	0.44	530	0.40	320	0.34	270	0.24
20.0	570	0.44	450	0.40	250	0.34	220	0.24
22.0	520	0.46	410	0.42	230	0.36	200	0.25
24.0	480	0.48	370	0.44	210	0.37	190	0.26
26.0	440	0.51	340	0.46	200	0.39	170	0.28
28.0	410	0.53	320	0.48	180	0.41	160	0.29
30.0	380	0.55	300	0.50	170	0.43	150	0.30
32.0	360	0.55	280	0.50	160	0.43	140	0.30

- 1) Please reduce the revolution and feed rate depending on the drilling situation when the installation of workpiece or machine lacks rigidity.
- 2) Please use a collet type drill chuck or a milling chuck.
- 3) Use sufficient cutting fluid.
- 4) VA-PDS-SUS and VA-PDM-SUS are recommended for austenitic stainless steels (AISI 304).
- 5) Do not peck drill when drilling depths exceed 3XD(D:drill diameter).

The above-mentioned cutting condition is standard when using water-soluble cutting fluid.  
Please reduce the revolution when using non-water-soluble cutting fluid.



### VA-PDS-SUS, VA-PDM-SUS

Work material	Stainless steel				Carbon steel S50C Alloy steel SCM Cast iron FC Copper, Copper alloy	Structural steel SS400 Aluminium alloy		
	Austenitic SUS304, SUS316		Martensitic SUS 420 Ferritic SUS430			Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	
Dia. (mm)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)
0.5	7,600	0.01	8,800	0.01	11,250	0.01	15,000	0.02
1.0	4,800	0.02	6,300	0.05	10,000	0.05	12,000	0.05
2.0	2,400	0.04	3,200	0.06	5,500	0.09	6,400	0.09
3.0	1,600	0.07	2,100	0.10	3,700	0.13	4,300	0.13
4.0	1,200	0.09	1,600	0.10	2,800	0.15	3,200	0.15
5.0	950	0.12	1,300	0.13	2,200	0.18	2,600	0.18
6.0	800	0.14	1,100	0.15	1,800	0.20	2,100	0.19
8.0	600	0.18	800	0.18	1,400	0.22	1,600	0.24
10.0	480	0.22	640	0.21	1,100	0.25	1,300	0.28
12.0	400	0.24	530	0.25	930	0.30	1,100	0.34
13.0	370	0.26	490	0.28	860	0.32	1,000	0.36

- 1) Please reduce the revolution and feed rate depending on the drilling situation when the installation of workpiece or machine lacks rigidity.
- 2) Please use a collet type drill chuck.
- 3) Use sufficient cutting fluid.
- 4) MZE/MZS type drill is recommended for precipitation hardened stainless steels (ASTM 630 and ASTM 631).
- 5) Do not peck drill when drilling depths exceed 3XD(D:drill diameter).

The above-mentioned cutting conditions are standard when using water-soluble cutting fluid.  
Please reduce the revolution when using non-water-soluble cutting fluid.

#### For Your Safety

●Don't handle inserts and chips without gloves. ●Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

## MITSUBISHI MATERIALS CORPORATION



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