

# DRILLS

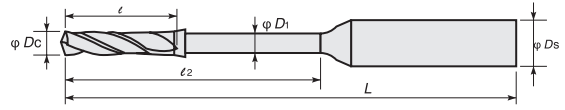
ดอกสว่าน

Straight Shank

ดอกสว่านมาตรฐาน



## ดอกสว่าน Epoch Micro Step Borer H EMSBH0000-00-00



**Carbide Drills**  
ดอกสว่านคาร์ไบด์

**HSS Drills**  
ดอกสว่านไฮสปีด

Stub / Standard  
ตัวสั้น / มาตรฐาน

Long  
ตัวยาว

Micro Drill  
ดอกสว่านไมโคร

Z Plunging

Step Borer



**h7** +0.006 ~ +0.001

**h4** Ds=3 : 0 ~ -0.003  
3<Ds≤4 : 0 ~ -0.004

(mm)

Order Code	Stock	Size (mm)					
		Dc Tool Dia.	l Flute Length	l2 Under neck length	D1 Neck dia.	L Overall length	Ds Shank Dia.
EMSBH0010-1-ATH	●			1.0			
EMSBH0010-2-ATH	●	0.1	0.50	2.0	0.09	45	3.0
EMSBH0010-3-ATH	●			3.0			
EMSBH0011-1-ATH	□			1.0			
EMSBH0011-2-ATH	□	0.11	0.55	2.0	0.1	45	3.0
EMSBH0011-3-ATH	□			3.0			
EMSBH0012-1-ATH	□			1.0			
EMSBH0012-2-ATH	□	0.12	0.60	2.0	0.11	45	3.0
EMSBH0012-3-ATH	□			3.0			
EMSBH0015-1.5-ATH	□			1.5			
EMSBH0015-3-ATH	□	0.15	0.75	3.0	0.14	45	3.0
EMSBH0015-4.5-ATH	□			4.5			
EMSBH0020-2-ATH	●			2.0			
EMSBH0020-4-ATH	●	0.2	1.00	4.0	0.19	45	3.0
EMSBH0020-6-ATH	●			6.0			
EMSBH0021-2-ATH	□			2.0			
EMSBH0021-4-ATH	□	0.21	1.05	4.0	0.19	45	3.0
EMSBH0021-6-ATH	□			6.0			
EMSBH0022-2-ATH	□			2.0			
EMSBH0022-4-ATH	□	0.22	1.10	4.0	0.2	45	3.0
EMSBH0022-6-ATH	□			6.0			
EMSBH0030-3-ATH	●			3.0			
EMSBH0030-6-ATH	●	0.3	1.5	6.0	0.28	45	3.0
EMSBH0030-9-ATH	●			9.0			
EMSBH0031-3-ATH	□			3.0			
EMSBH0031-6-ATH	□	0.31	1.5	6.0	0.29	45	3.0
EMSBH0031-9-ATH	□			9.0			
EMSBH0032-3-ATH	□			3.0			
EMSBH0032-6-ATH	□	0.32	1.5	6.0	0.3	45	3.0
EMSBH0032-9-ATH	□			9.0			
EMSBH0040-4-ATH	●			4.0			
EMSBH0040-8-ATH	●	0.4	2.0	8.0	0.38	50	3.0
EMSBH0040-12-ATH	●			12.0			
EMSBH0041-4-ATH	□			4.0			
EMSBH0041-8-ATH	□	0.41	2.0	8.0	0.39	50	3.0
EMSBH0041-12-ATH	□			12.0			
EMSBH0042-4-ATH	□			4.0			
EMSBH0042-8-ATH	□	0.42	2.0	8.0	0.4	50	3.0
EMSBH0042-12-ATH	□			12.0			
EMSBH0050-5-ATH	●			5.0			
EMSBH0050-10-ATH	●	0.5	2.5	10.0	0.48	50	3.0
EMSBH0050-15-ATH	●			15.0			
EMSBH0051-5-ATH	□			5.0			
EMSBH0051-10-ATH	□	0.51	2.5	10.0	0.48	50	3.0
EMSBH0051-15-ATH	□			15.0			
EMSBH0052-5-ATH	□			5.0			
EMSBH0052-10-ATH	□	0.52	2.5	10.0	0.49	50	3.0
EMSBH0052-15-ATH	□			15.0			
EMSBH0060-6-ATH	●			6.0			
EMSBH0060-12-ATH	●	0.6	3.0	12.0	0.57	55	3.0

Order Code	Stock	Size (mm)					
		Dc Tool Dia.	l Flute Length	l2 Under neck length	D1 Neck dia.	L Overall length	Ds Shank Dia.
EMSBH0060-18-ATH	●	0.6	3.0	18.0	0.57	55	3.0
EMSBH0061-6-ATH	□			6.0			
EMSBH0061-12-ATH	□	0.61	3.0	12.0	0.58	55	3.0
EMSBH0061-18-ATH	□			18.0			
EMSBH0062-6-ATH	□			6.0			
EMSBH0062-12-ATH	□	0.62	3.0	12.0	0.59	55	3.0
EMSBH0062-18-ATH	□			18.0			
EMSBH0070-7-ATH	●			7.0			
EMSBH0070-14-ATH	●	0.7	3.5	14.0	0.67	60	4.0
EMSBH0070-21-ATH	●			21.0			
EMSBH0071-7-ATH	□			7.0			
EMSBH0071-14-ATH	□	0.71	3.5	14.0	0.67	60	4.0
EMSBH0071-21-ATH	□			21.0			
EMSBH0072-7-ATH	□			7.0			
EMSBH0072-14-ATH	□	0.72	3.5	14.0	0.68	60	4.0
EMSBH0072-21-ATH	□			21.0			
EMSBH0080-8-ATH	●			8.0			
EMSBH0080-16-ATH	●	0.8	4.0	16.0	0.76	60	4.0
EMSBH0080-24-ATH	●			24.0			
EMSBH0081-8-ATH	□			8.0			
EMSBH0081-16-ATH	□	0.81	4.0	16.0	0.76	60	4.0
EMSBH0081-24-ATH	□			24.0			
EMSBH0082-8-ATH	□			8.0			
EMSBH0082-16-ATH	□	0.82	4.0	16.0	0.77	60	4.0
EMSBH0082-24-ATH	□			24.0			
EMSBH0090-9-ATH	●			9.0			
EMSBH0090-18-ATH	●	0.9	4.5	18.0	0.85	65	4.0
EMSBH0090-27-ATH	●			27.0			
EMSBH0091-9-ATH	□			9.0			
EMSBH0091-18-ATH	□	0.91	4.5	18.0	0.86	65	4.0
EMSBH0091-27-ATH	□			27.0			
EMSBH0092-9-ATH	□			9.0			
EMSBH0092-18-ATH	□	0.92	4.5	18.0	0.87	65	4.0
EMSBH0092-27-ATH	□			27.0			
EMSBH0100-10-ATH	●			10.0			
EMSBH0100-20-ATH	●	1.0	5.0	20.0	0.95	70	4.0
EMSBH0100-30-ATH	●			30.0			
EMSBH0101-10-ATH	□			10.0			
EMSBH0101-20-ATH	□	1.01	5.0	20.0	0.97	70	4.0
EMSBH0101-30-ATH	□			30.0			
EMSBH0102-10-ATH	□			10.0			
EMSBH0102-20-ATH	□	10.2	5.0	20.0	0.98	70	4.0
EMSBH0102-30-ATH	□			30.0			
EMSBH0150-15-ATH	●			15.0	-	70	
EMSBH0150-30-ATH	●	1.5	15.0	30.0	1.44	70	4.0
EMSBH0150-45-ATH	●			45.0	-	100	
EMSBH0151-15-ATH	□			15.0	-	70	
EMSBH0151-30-ATH	□	1.51	15.0	30.0	1.45	70	4.0
EMSBH0151-45-ATH	□			45.0	-	100	
EMSBH0152-15-ATH	□	1.52	15.0	15.0	-	70	4.0

● : Stocked Items of new products. □ : Stocked by specified distributor. Contact with our sales department.

(NOTE) For products with tool dimensions other than those listed above, separate consultation is needed. Please contact to sales office.



Order Code	Stock	Size (mm)					
		Dc Tool Dia.	ℓ Flute Length	ℓ <sub>2</sub> Under neck length	D1 Neck dia.	L Overall length	Ds Shank Dia.
EMSBH0152-30-ATH	<input type="checkbox"/>	1.52	15.0	30.0	1.46	70	4.0
EMSBH0152-45-ATH	<input type="checkbox"/>			45.0			
EMSBH0200-20-ATH	<input checked="" type="checkbox"/>	2.0	20.0	20.0	1.92	100	4.0
EMSBH0200-40-ATH	<input checked="" type="checkbox"/>			40.0			
EMSBH0200-60-ATH	<input checked="" type="checkbox"/>			60.0			

Order Code	Stock	Size (mm)					
		Dc Tool Dia.	ℓ Flute Length	ℓ <sub>2</sub> Under neck length	D1 Neck dia.	L Overall length	Ds Shank Dia.
EMSBH0201-20-ATH	<input type="checkbox"/>	2.01	20.0	20.0	1.93	100	4.0
EMSBH0201-40-ATH	<input type="checkbox"/>			40.0			
EMSBH0201-60-ATH	<input type="checkbox"/>			60.0			
EMSBH0202-20-ATH	<input type="checkbox"/>	2.02	20.0	20.0	1.94	100	4.0
EMSBH0202-40-ATH	<input type="checkbox"/>			40.0			
EMSBH0202-60-ATH	<input type="checkbox"/>			60.0			

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**Carbide Drills**

ดอกสว่านคาร์ไบด์

**HSS Drills**

ดอกสว่านไฮสปีด

Stub / Standard  
ตัวสั้น / มาตรฐาน

Long  
ตัวยาว

Micro Drill  
ดอกสว่านไมโคร

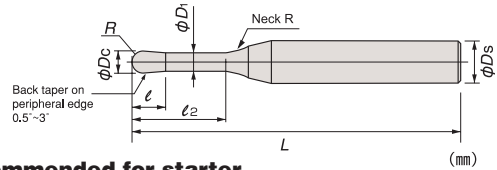
Z Plunging

Step Borer

### ดอกสว่าน

### Special Starter

### EPDBEH2-ATH



**Use of Epoch Deep Ball Evolution Hard (EPDBEH-ATH) is recommended for starter.**



R ≤ 0.25 : ±0.003  
0.25 < R : ±0.005



0 ~ -0.005

(mm)

Order Code	Stock	Size (mm)								
		R Ball radius	Dc Tool Dia.	ℓ <sub>2</sub> Under neck length	ℓ Flute length	D1 Neck dia.	L Overall length	Ds Shank Dia.	Neck R	
EPDBEH2001-0.2-ATH	●	0.05	0.1	0.2	0.08	0.08	45	4	1	
EPDBEH20011-0.2-ATH	□	0.055	0.11	0.2	0.09	0.09	45	4	1	
EPDBEH20012-0.2-ATH	□	0.06	0.12	0.2	0.1	0.1	45	4	1	
EPDBEH20015-0.2-ATH	□	0.075	0.15	0.2	0.13	0.13	45	4	1	
EPDBEH2002-0.5-ATH	●	0.1	0.2	0.5	0.15	0.17	50	4	1	
EPDBEH20021-0.5-ATH	□	0.105	0.21	0.5	0.16	0.18	50	4	1	
EPDBEH20022-0.5-ATH	□	0.11	0.22	0.5	0.17	0.19	50	4	1	
EPDBEH2003-0.5-ATH	●	0.15	0.3	0.5	0.25	0.27	50	4	2	
EPDBEH20031-0.5-ATH	□	0.155	0.31	0.5	0.26	0.28	50	4	2	
EPDBEH20032-0.5-ATH	□	0.16	0.32	0.5	0.27	0.29	50	4	2	
EPDBEH2004-0.75-ATH	●	0.2	0.4	0.75	0.3	0.37	50	4	2	
EPDBEH20041-0.75-ATH	□	0.205	0.41	0.75	0.31	0.38	50	4	2	
EPDBEH20042-0.75-ATH	□	0.21	0.42	0.75	0.32	0.39	50	4	2	
EPDBEH2005-1-ATH	●	0.25	0.5	1	0.35	0.47	50	4	2	
EPDBEH20051-1-ATH	□	0.255	0.51	1	0.36	0.48	50	4	2	
EPDBEH20052-1-ATH	□	0.26	0.52	1	0.37	0.49	50	4	2	
EPDBEH2006-1-ATH	●	0.3	0.6	1	0.4	0.57	50	4	4	
EPDBEH20061-1-ATH	□	0.305	0.61	1	0.41	0.58	50	4	4	
EPDBEH20062-1-ATH	□	0.31	0.62	1	0.42	0.59	50	4	4	
EPDBEH2007-2-ATH	●	0.35	0.7	2	0.45	0.67	50	4	4	
EPDBEH20071-2-ATH	□	0.355	0.71	2	0.46	0.68	50	4	4	
EPDBEH20072-2-ATH	□	0.36	0.72	2	0.47	0.69	50	4	4	
EPDBEH2008-2-ATH	●	0.4	0.8	2	0.5	0.77	50	4	4	
EPDBEH20081-2-ATH	□	0.405	0.81	2	0.51	0.78	50	4	4	
EPDBEH20082-2-ATH	□	0.41	0.82	2	0.52	0.79	50	4	4	
EPDBEH2009-2-ATH	●	0.45	0.9	2	0.6	0.87	50	4	4	
EPDBEH20091-2-ATH	□	0.455	0.91	2	0.61	0.88	50	4	4	
EPDBEH20092-2-ATH	□	0.46	0.82	2	0.62	0.89	50	4	4	
EPDBEH2010-2-ATH	●	0.5	1	2	0.8	0.96	50	4	4	
EPDBEH20101-2-ATH	□	0.505	1.01	2	0.81	0.97	50	4	4	
EPDBEH20102-2-ATH	□	0.51	1.02	2	0.82	0.98	50	4	4	
EPDBEH2015-2-ATH	●	0.75	1.5	2	1.35	1.44	50	4	4	
EPDBEH20151-2-ATH	□	0.755	1.51	2	1.36	1.45	50	4	4	
EPDBEH20152-2-ATH	□	0.76	1.52	2	1.37	1.46	50	4	4	
EPDBEH2020-3-ATH	●	1	2	3	1.7	1.92	50	4	4	
EPDBEH20201-3-ATH	□	1.005	2.01	3	1.71	1.93	50	4	4	
EPDBEH20202-3-ATH	□	1.01	2.02	3	1.72	1.94	50	4	4	

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