

ดอกนำศูนย์

ประเภท และ ตัวเลือก

Tool Types and selections



Center Drills

Type				Material & Coating							Page
				HSS	HSSE	TiN	HSSE8	Red'X	Carbide	Hard'X	
Center Drills	A			✓	✓	✓	✓	✓	✓	✓	18 - 24
	W			✓	-	✓	✓	✓	-	-	25
	R			✓	✓	✓	-	-	✓	✓	26 - 27
	B			✓	✓	✓	-	-	-	-	28 - 30
	BW			✓	-	-	-	-	-	-	30
	82°			✓	-	-	-	-	-	✓	32
	90°			✓	✓	-	-	-	-	✓	31 - 32
	DA			-	✓	-	-	-	-	-	33
	DR			-	✓	-	-	-	-	-	33
	DB			-	✓	-	-	-	-	-	33

วัสดุและการชุบ – Materials and Coating

วัสดุ Material	H	H5	H8	C	TiN	Red'X	Hard'X
	HSS	HSSE (HSSE Cobalt 5%)	HSSE8 (HSSE Cobalt 8%)	Carbide	TiN Coating	Red'X Coating	Hard'X Coating
ความแข็ง Hardness	63HRC	65HRC	67HRC	1800HV	+2300HV	+3500HV	+3500HV (for carbide)

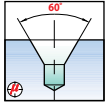


= วัสดุหลัก | Base Material



= วัสดุชุบ | Coating Material

Center Drill (Form A) – ดอกนำศูนย์

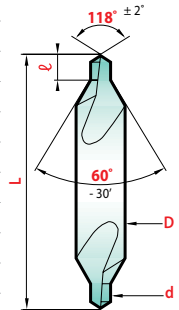


! *ขนาดที่มีด้านเดียว
*Single end



D x d	L	ℓ min - max	Order Code			
			HSS	HSS+TIN	HSSE	HSSE+TIN
			Model 0611	Model 06690	Model 0610	Model 060811
3.0 x 0.5	31	0.6 - 0.9	06110305000			
3.15 x 0.5*	25	0.6 - 0.9	06110315050		06100315050	06081103105
3.15 x 0.63*	25	0.7 - 1.0	06110315063			
3.15 x 0.8*	25	1.0 - 1.3	06110315080		06100315080	06081103108
3.15 x 1.0	31	1.3 - 1.7	06110315100	06690031010	06100315100	06081103151
3.15 x 1.25	31	1.6 - 2.0	06110315125	06690031012	06100315125	06081103125
3.5 x 0.75	35	1.0 - 1.3	06110350750		06100350750	060811035075
4.0 x 1.0	35	1.3 - 1.7	06110410000	06690040010	06100410000	06081104100
4.0 x 1.25	35	1.6 - 2.0	06110412500			
4.0 x 1.6	35	2.0 - 2.6	06110416000	06690040016	06100416000	06081104160
5.0 x 1.5	40	2.0 - 2.6	06110515000	06690050015	06100515000	06081105150
5.0 x 1.6	40	2.0 - 2.6	06110516000			
5.0 x 2.0	40	2.5 - 3.1	06110520000	06690050020	06100520000	06081105200
6.0 x 2.0	45	2.5 - 3.1	06110620000	06690060020	06100620000	06081106200
6.3 x 2.0	45	2.5 - 3.1	06110632000			
6.3 x 2.5	45	3.1 - 3.8	06110632500	06690063025	06100632500	06081106325
8.0 x 2.5	50	3.1 - 3.8	06110825000		06100825000	06081108250
8.0 x 3.0	50	3.9 - 4.6	06110830000	06690080030	06100830000	06081108300
8.0 x 3.15	50	3.9 - 4.6	06110831500	06690080031	06100831500	06081108315
10.0 x 3.0	55	3.9 - 4.6	06111030000	06690100030	06101030000	06081110300
10.0 x 3.15	55	3.9 - 4.6	06111031500			
10.0 x 4.0	55	5.0 - 5.9	06111040000	06690100040	06101040000	06081110400
12.0 x 4.0	63	5.0 - 5.9	06111240000	06690120040	06101240000	06081112400
12.0 x 5.0	63	6.3 - 7.2	06111250000		06101250000	06081112500
12.5 x 4.0	63	5.0 - 5.9	06111254000			
12.5 x 5.0	63	6.3 - 7.2	06111255000	06690125050	06101255000	06081112550
14.0 x 5.0	69	6.3 - 7.2	06111450000		06101450000	06081114500
16.0 x 5.0	71	6.3 - 7.2	06111650000			
16.0 x 6.3	71	8.0 - 8.9	06111663000	06690160063		06081116630
18.0 x 6.0	77	8.0 - 8.9	06111860000			
20.0 x 6.3	80	8.0 - 8.9	06112063000			
20.0 x 8.0	80	10.1 - 11.1	06112080000	06690200080		06081120800
25.0 x 10.0	100	12.8 - 13.8	06112510000			
25.0 x 8.0	100	10.1 - 11.1	06112580000			
31.5 x 10.0	125	12.8 - 13.8	06113151000			
31.5 x 12.5	125	16.5 - 17.5	06113151250			

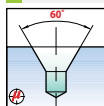
Standards	Form A
	ISO
	NFE 66051-A
	DIN 333-A JIS-1
Tolerance	
D	h7
d	k12
L	±1



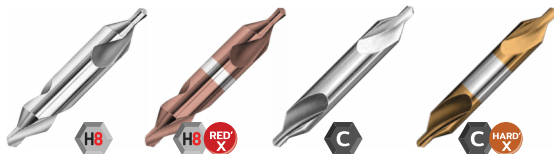
! รุ่น 0611 ขนาด 10.0x4.0 และเล็กกว่า จำหน่ายเป็นกล่อง 10 ชิ้น สามารถแยกขายออกจากกล่องได้
Model 0611 sizes 10.0x4.0 and smaller sold in box of 10pcs. Can sell separately without original box.

ดอกนำศูนย์

Center Drill (Form A) – ดอกนำศูนย์



! *ขนาดที่มีด้านเดียว
*Single end

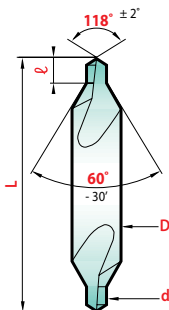


! **Carbide D = h5

D x d	L	ℓ min - max	Order Code			
			HSSE8	HSSE8+Red'X	Carbide	Carbide+Hard'X
			Model 06105	Model 060910	Model 068100	Model 0608100H
3.15 x 0.5*	25	0.6 - 0.9			06810003105	068100H031505
3.15 x 0.8*	25	1.0 - 1.3			06810003108	068100H031508
3.15 x 1.0	31	1.3 - 1.7	06105031510	06091003151	06810003151	068100H03151
3.15 x 1.25	31	1.6 - 2.0	06105031512	06091003125	06810003125	068100H0315125
4.0 x 1.0	35	1.3 - 1.7			06810004100	068100H0410
4.0 x 1.6	35	2.0 - 2.6	06105041600	06091004160	06810004160	068100H0416
5.0 x 1.5	40	2.0 - 2.6			06810005150	068100H0515
5.0 x 2.0	40	2.5 - 3.1	06105052000	06091005200	06810005200	068100H0520
6.0 x 2.0	45	2.5 - 3.1			06810006200	068100H0620
6.3 x 2.5	45	3.1 - 3.8	06105063250	06091006325	06810006325	068100H06325
8.0 x 2.5	50	3.1 - 3.8			06810008250	068100H0825
8.0 x 3.0	50	3.9 - 4.6			06810008300	068100H0830
8.0 x 3.15	50	3.9 - 4.6	06105083150	06091008315	06810008315	068100H08315
10.0 x 3.0	55	3.9 - 4.6			06810010300	068100H1030
10.0 x 4.0	55	5.0 - 5.9	06105104000	06091010400	06810010400	068100H1040
12.0 x 5.0	63	6.3 - 7.2			06810012500	068100H1250
12.5 x 5.0	63	6.3 - 7.2	06101255000	06091012550	06810012550	068100H1255
16.0 x 6.3	71	8.0 - 8.9			06810016630	068100H1663

Standards	
Form A	
ISO	
NFE 66051-A	
DIN 333-A	
JIS-1	

Tolerance	
D	h7 (h5)**
d	k12
L	±1

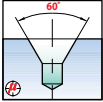


ชุดดอกย่นศูนย์ Center Drill Set



Order Code	Pcs / Set	Set Includes			
		5 pcs	3 pcs	4 pcs	1 pc
H 0611000001	30pcs Set	1.0 x 3.15 1.6 x 4.0 2.0 x 5.0 2.5 x 6.3 3.15 x 8.0	-	4.0 x 10.0	5.0 x 12.5
H 0611000002		0.5 x 3.0 1.0 x 4.0 1.5 x 5.0 2.0 x 6.0 2.5 x 8.0	-	3.0 x 10.0	4.0 x 12.0
H 0611000003	15pcs Set	-	1.0 x 4.0 1.5 x 5.0 2.0 x 6.0 2.5 x 8.0	3.0 x 10.0	4.0 x 12.0
H 0611000004		-	1.6 x 4.0 2.0 x 5.0 2.5 x 6.3 3.15 x 8.0	4.0 x 10.0	5.0 x 12.5

Center Drill (Form A) – ดอกนำศูนย์ ขนาดพิเศษ

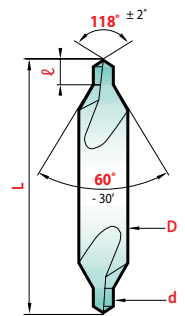


ดอกนำศูนย์ขนาดพิเศษนอกเหนือจากมาตรฐานทั่วไป
Special sizes non-standardized center drills.

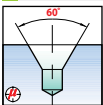


D x d	L	ℓ min - max	Order Code	D x d	L	ℓ min - max	Order Code
			HSS				HSS
			Model 06110				Model 06110
2.0 x 0.5	31	0.6 - 0.9	06110205000	8.0 x 3.5	50	4.4 - 5.1	06110835000
2.0 x 0.75	31	1.0 - 1.3	06110207500	8.0 x 4.0	50	5.0 - 5.9	06110840000
2.5 x 0.75	31	1.0 - 1.3	06110250750	10.0 x 2.0	55	2.5 - 3.1	06111020000
3.0 x 0.3	31	0.3 - 0.4	06110303000	10.0 x 2.5	55	3.1 - 3.8	06111025000
3.0 x 0.4	31	0.5 - 0.7	06110304000	10.0 x 3.5	55	4.4 - 5.1	06111035000
3.0 x 0.75	31	1.0 - 1.3	06110307500	10.0 x 5.0	55	6.3 - 7.2	06111050000
3.0 x 1.0	31	1.3 - 1.7	06110310000	12.0 x 2.5	63	3.1 - 3.8	06111225000
3.5 x 0.5	35	0.6 - 0.9	06110350500	12.0 x 3.0	63	3.9 - 4.6	06111230000
3.5 x 1.0	35	1.3 - 1.7	06110351000	12.0 x 3.5	63	4.4 - 5.1	06111235000
4.0 x 0.75	35	1.0 - 1.3	06110407500	12.0 x 6.0	63	8.0 - 8.9	06111260000
4.0 x 1.5	35	2.0 - 2.6	06110415000	14.0 x 3.0	69	3.9 - 4.6	06111430000
4.0 x 2.0	35	2.5 - 3.1	06110420000	14.0 x 4.0	69	5.0 - 5.9	06111440000
5.0 x 1.0	40	1.3 - 1.7	06110510000	14.0 x 6.0	69	8.0 - 8.9	06111460000
5.0 x 2.5	40	3.1 - 3.8	06110525000	16.0 x 4.0	71	5.0 - 5.9	06111640000
6.0 x 1.0	45	1.3 - 1.7	06110610000	16.0 x 6.0	71	8.0 - 8.9	06111660000
6.0 x 1.5	45	2.0 - 2.6	06110615000	18.0 x 5.0	77	6.3 - 7.2	06111850000
6.0 x 2.5	45	3.1 - 3.8	06110625000	20.0 x 6.0	80	8.0 - 8.9	06112060000
6.0 x 3.0	45	3.9 - 4.6	06110630000	20.0 x 7.0	80	9.0 - 9.9	06112070000
7.0 x 2.5	50	3.1 - 3.8	06110725000	22.0 x 6.0	100	8.0 - 8.9	06112260000
7.5 x 2.5	50	3.1 - 3.8	06110752500				
8.0 x 1.5	50	2.0 - 2.6	06110815000				
8.0 x 2.0	50	2.5 - 3.1	06110820000				

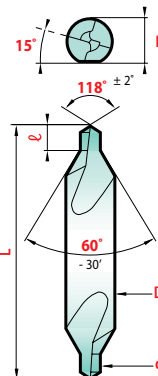
Standards	Form A
	Magafor Standard
Tolerance	
D	h7
d	k12
L	±1



Center Drill with Flat (Form A) – ดอกนำศูนย์ เจียรลำตัว



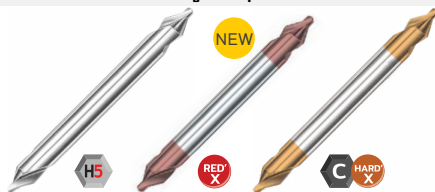
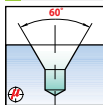
D x d	L	ℓ min - max	P -0.1	Order Code	
				HSSE	HSSE+TiN
				Model 060290	Model 060890
4.0 x 1.6	35	2.0 - 2.6	3.25	06029004160	06089004160
5.0 x 2.0	40	2.5 - 3.1	4.20	06029005200	06089005200
6.3 x 2.5	45	3.1 - 3.8	5.35	06029006325	06089006325
8.0 x 3.15	50	3.9 - 4.6	6.95	06029008315	06089008315
10.0 x 4.0	55	5.0 - 5.9	8.40	06029010400	06089010400
12.5 x 5.0	63	6.3 - 7.2	10.95	06029012550	06089012550
16.0 x 6.3	71	8.0 - 8.9	14.00	06029016630	06089016630
20.0 x 8.0	80	10.1 - 11.1	17.90	06029020800	
25.0 x 10.0	100	12.8 - 13.8	22.50	06029025100	



Standards	Form A
	ISO NFE 66051-A DIN 333-A JIS-1
Tolerance	
D	h7
d	k12
L	±1

ดอกนำศูนย์

Long Center Drill (Form A) – ดอกนำศูนย์ ร่นยาว

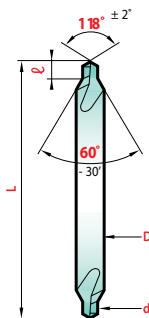


!! Carbide D = h5

D x d	L	ℓ min - max	Order Code		
			HSSE	Red'X	Carbide+Hard'X
			Model 0618	Model 060918	Model 068118H
3.5 x 0.75	60	1.0 - 1.3	06180350760		
	120	1.0 - 1.3	06180350712		
4.0 x 1.0	60	1.3 - 1.7	06180416000		
	100	1.3 - 1.7	06180411000	060918041100	068118H0411
	120	1.3 - 1.7	06180411200		
	150	1.3 - 1.7	06180411500		
5.0 x 1.5	60	2.0 - 2.6	06180515600		
	100	2.0 - 2.6	06180515100		
	120	2.0 - 2.6	06180515120		
	150	2.0 - 2.6	06180515150		
5.0 x 1.6	120	2.0 - 2.6	06180516120		
5.0 x 2.0	200	2.5 - 3.1	06180522000		
6.0 x 2.0	80	2.5 - 3.1	06180628000		
	100	2.5 - 3.1	06180621000	060918062100	068118H0621
	120	2.5 - 3.1	06180621200		
	150	2.5 - 3.1	06180621500		
6.3 x 2.5	200	3.1 - 3.8	06180632520		
8.0 x 2.5	80	3.1 - 3.8	06180825800		
	100	3.1 - 3.8	06180825100		
	120	3.1 - 3.8	06180825120		
	150	3.1 - 3.8	06180825150		
8.0 x 3.0	80	3.9 - 4.6	06180838000		
	100	3.9 - 4.6	06180831000	060918083100	068118H0831
	120	3.9 - 4.6	06180831200		
	150	3.9 - 4.6	06180831500		
8.0 x 3.15	200	3.9 - 4.6	06180831520		
10.0 x 3.0	100	3.9 - 4.6	06181031000		
	120	3.9 - 4.6	06181031200		
	150	3.9 - 4.6	06181031500		
10.0 x 3.15	120	3.9 x 4.6	06181031120		
10.0 x 4.0	100	5.0 - 5.9	06181041000	060918104100	068118H1041
	120	5.0 - 5.9	06181041200		
	150	5.0 - 5.9	06181041500		
	200	5.0 - 5.9	06181042000		
12.0 x 4.0	100	5.0 - 5.9	06181241000		
	120	5.0 - 5.9	06181241200		
	150	5.0 - 5.9	06181241500		
12.0 x 5.0	100	6.3 - 7.2	06181251000		
14.0 x 5.0	120	6.3 - 7.2	06181451200		
16.0 x 6.3	150	8.0 - 8.9	06181663150		

Standards	Form A
	Magafor Standard

Tolerance	
D	h7 (h5)**
d	k12
L	±1

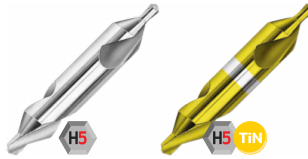
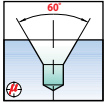


ชุดดอกนำศูนย์ร่นยาว Long Center Drill Set

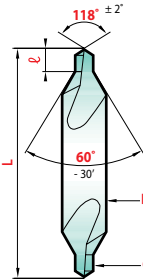


Order Code	Includes
	1 pc each
06180000001	4 x 1 x L60
	5 x 1.5 x L60
	6 x 2 x L80
	8 x 2.5 x L80
	10 x 3 x L100
	12 x 4 x L100

Center Drill (Form A) – ดอกนำศูนย์ มาตรฐานญี่ปุ่นแบบเก่า



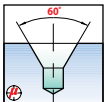
D x d	L	ℓ min - max	Order Code	
			HSSE	HSSE+TIN
			Model 06118	Model 060818
4.0 x 1.0	35	1.2 - 1.5	06118041000	06081804100
5.0 x 1.2	40	1.3 - 1.8	06118051200	06081805120
5.0 x 1.5	40	1.5 - 2.0	06118051500	06081805150
6.0 x 2.0	45	2.0 - 2.5	06118062000	06081806200
7.7 x 2.5	50	2.5 - 3.0	06118077250	0608180772550
7.7 x 2.5	57	2.5 - 3.0	06118077251	0608180772557
7.7 x 3.0	56	3.0 - 3.6	06118077300	06081807730
7.7 x 3.2	57	3.2 - 3.8	06118077320	06081807732
10.0 x 4.0	65	4.5 - 5.1	06118104000	06081810465
10.0 x 4.0	69	4.5 - 5.1	06118104001	06081810469
11.0 x 4.0	69	4.5 - 5.1	06118114000	06081811400
11.0 x 5.0	69	5.5 - 6.1	06118115000	06081811569
11.0 x 5.0	78	5.5 - 6.1	06118115001	06081811578
16.0 x 6.0	90	7.0 - 8.0	06118166000	06081816600
18.0 x 6.0	95	7.0 - 8.0	06118186000	06081818600



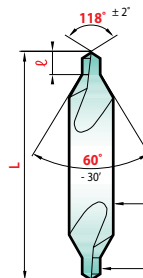
Standards	Form A
	Old JIS
Tolerance	
D	h7
L	±1
d	Tolerance
1.0-1.5	±0.05
2.0-4.0	±0.08
5.0-6.0	±0.12

! รุ่น 06118 ขนาด 10.0x4.0 และเล็กกว่า จำหน่ายเป็นกล่อง 10 ชิ้น สามารถแยกขายออกจากกล่องได้
Model 06118 sizes 10.0x4.0 and smaller sold in box of 10pcs. Can sell separately without original box.

Center Drill (Form A) – ดอกนำศูนย์ มาตรฐานอังกฤษ



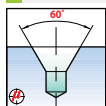
BS No.	D x d		L	ℓ min - max	Order Code
					HSS
	mm	inch			Model 06114
1	3.17 x 1.19	1/8 x 3/64	38	1.5 - 1.8	06114010000
2	4.76 x 1.58	3/16 x 1/16	44	2.0 - 2.4	06114020000
3	6.35 x 2.38	1/4 x 3/32	50	3.3 - 3.9	06114030000
4	7.93 x 3.17	5/16 x 1/8	56	4.1 - 4.7	06114040000
5	11.11 x 4.76	7/16 x 3/16	63	6.5 - 7.1	06114050000
6	15.87 x 6.35	5/8 x 1/4	75	8.5 - 9.1	06114060000
7	19.05 x 7.93	3/4 x 5/16	89	10.8 - 11.6	06114070000



Standards	Form A
	BS
Tolerance	
D	h7
d	k12
L	±1

ดอกนำศูนย์

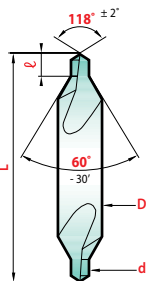
Center Drill (Form A) – ดอกนำศูนย์ มาตรฐานอเมริกา



Standards
Form A
ASA

Tolerance

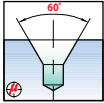
D	h7
d	k12
L	±1



Shape	ASA No.		D x d		L	ℓ min - max	Order Code			
			mm	inch			HSS	HSS+TiN	HSSE8	HSSE8+Red X
							Model 06115	Model 068115	Model 061055	Model 060915
Single End	A	00000	3.17 x 0.25	1/8 x 0.010	31	0.20 - 0.45	0611500A000	06811500A00	06105500A00	06091500A00
	B	0000	3.17 x 0.38	1/8 x 0.015	31	0.35 - 0.65	0611500B000	06811500B00	06105500B00	06091500B00
	C	000	3.17 x 0.51	1/8 x 0.020	31	0.50 - 0.80			06105500C00	06091500C00
	D	00	3.17 x 0.63	1/8 x 0.025	31	0.70 - 1.00			06105500D00	06091500D00
	E	0	3.17 x 0.79	1/8 x 1/32	31	0.90 - 1.20			06105500E00	06091500E00
Double End	C	000	3.17 x 0.51	1/8 x .020	31	0.5 - 0.8	0611500C000	06811500C00		
	D	00	3.17 x 0.63	1/8 x .025	31	0.7 - 1.0	0611500D000	06811500D00		
	E	0	3.17 x 0.79	1/8 x 1/32	31	0.9 - 1.2	0611500E000	06811500E00		
	1		3.17 x 1.19	1/8 x 3/64	31	1.4 - 1.7	06115010000	06811501000	06105501000	06091501000
	2		4.76 x 1.98	3/16 x 5/64	47	2.4 - 2.7	06115020000	06811502000	06105502000	06091502000
	3		6.35 x 2.77	1/4 x 7/64	50	3.3 - 3.9	06115030000	06811503000	06105503000	06091503000
	4		7.93 x 3.17	5/16 x 1/8	54	3.8 - 4.4	06115040000	06811504000	06105504000	06091504000
	4-1/2		9.52 x 3.57	3/8 x 9/64	63	4.3 - 4.9	06115045000	06811504500	06105504500	
	5		11.11 x 4.76	7/16 x 3/16	70	5.9 - 6.5	06115050000	06811505000	06105505000	06091505000
	6		12.70 x 5.55	1/2 x 7/32	76	6.9 - 7.5	06115060000	06811506000	06105506000	06091506000
	7		15.87 x 6.35	5/8 x 1/4	82	8.0 - 8.6	06115070000	06811507000	06105507000	06091507000
	8		19.05 x 7.93	3/4 x 5/16	89	10.0 - 10.6	06115080000	06811508000	06105508000	06091508000
	9		22.22 x 8.73	7/8 x 11/32	92	11.0 - 11.6	06115090000	06811509000	06105509000	
	10		25.40 x 9.52	1 x 3/8	95	12.1 - 12.7	06115100000	06811510000	06105510000	

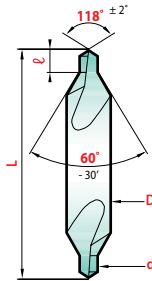
⚠ รุ่น 06115 No. 5 และเล็กกว่า จำหน่ายเป็นกล่อง 10 ชิ้น สามารถแยกขายออกจากกล่องได้
Model 06115 No. 5 and smaller sold in box of 10pcs. Can sell separately without original box.

Long Center Drill (Form A) – ดอกนำศูนย์ ร่นยาว มาตรฐานอเมริกา



ASA No.	D x d		ℓ min - max	Order Code
				HSS
	mm	inch	Model 06185	
1 x 3"	3.17 x 1.19	1/8 x 3/64	76	06185010300
1 x 4"			102	06185010400
1 x 5"			127	06185010500
1 x 6"			152	06185010600
2 x 3"	4.76 x 1.98	3/16 x 5/64	76	06185020300
2 x 4"			102	06185020400
2 x 5"			127	06185020500
2 x 6"			152	06185020600
3 x 3"	6.35 x 2.77	1/4 x 7/64	76	06185030300
3 x 4"			102	06185030400
3 x 5"			127	06185030500
3 x 6"			152	06185030600
4 x 3"	7.93 x 3.17	5/16 x 1/8	76	06185040300
4 x 4"			102	06185040400
4 x 5"			127	06185040500
4 x 6"			152	06185040600
4-1/2 x 4"	9.52 x 3.57	3/8 x 9/64	102	06185045400
4-1/2 x 5"			127	06185045500
4-1/2 x 6"			152	06185045600
5 x 4"	11.11 x 4.76	7/16 x 3/16	102	06185050400
5 x 5"			127	06185050500
5 x 6"			152	06185050600
6 x 4"	12.7 x 5.55	1/2 x 7/32	102	06185060400
6 x 5"			127	06185060500
6 x 6"			152	06185060600
7 x 5"	15.87 x 6.35	5/8 x 1/4	127	06185070500
7 x 6"			152	06185070600
8 x 6"	19.05 x 7.93	3/4 x 5/16	152	06185080600

Standards	Form A
	ASA
Tolerance	
D	h7
d	k12
L	±1



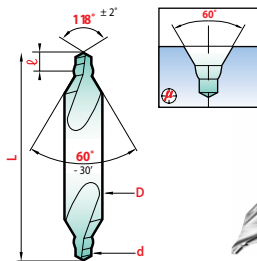
ชุดดอกย่นศูนย์ร่นยาว Long Center Drill Set



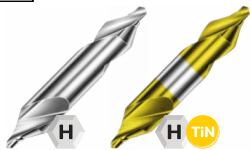
Order Code	Includes
	1 pc each
06185000001	No. 1 No. 2 No. 3 No. 4 No. 5

ดอกนำศูนย์

Center Drill (Form W) – ดอกนำศูนย์



ดอกนำศูนย์ที่มีส่วนปลายที่หนาขึ้น ช่วยลดการหักของส่วนปลาย
Center Drills with reinforced tips reducing tip breakage.



Standards	Form W	Tolerance	
	ISO	D	h7
	NFE 66051-W	d	k12
	DIN 333-W	L	±1
	JIS-1		

D x d	L	ℓ min - max	Order Code	
			HSS	HSS+TIN
			Model 06114	Model 060814
3.0 x 0.5	31	0.6 - 0.9	06140305000	
3.15 x 0.5*	25	0.6 - 0.9	06140315050	
3.15 x 0.8*	25	1.0 - 1.3	06140315080	
3.15 x 1.0	31	1.3 - 1.7	06140315100	
3.15 x 1.25	31	1.6 - 2.0	06140315125	
4.0 x 1.0	35	1.3 - 1.7	06140410000	06081404100
4.0 x 1.25	35	1.6 - 2.0	06140412500	
4.0 x 1.6	35	2.0 - 2.6	06140416000	
5.0 x 1.5	40	2.0 - 2.6	06140515000	06081405150
5.0 x 1.6	40	2.0 - 2.6	06140516000	
5.0 x 2.0	40	2.5 - 3.1	06140520000	
6.0 x 2.0	45	2.5 - 3.1	06140620000	06081406200
6.3 x 2.0	45	2.5 - 3.1	06140632000	
6.3 x 2.5	45	3.1 - 3.8	06140632500	
8.0 x 2.5	50	3.1 - 3.8	06140825000	06081408250
8.0 x 3.0	50	3.9 - 4.6	06140830000	

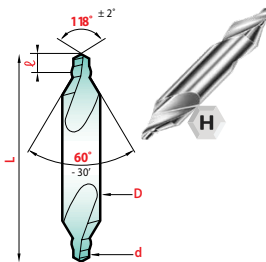
D x d	L	ℓ min - max	Order Code	
			HSS	HSS+TIN
			Model 06114	Model 060814
8.0 x 3.15	50	3.9 - 4.6	06140831500	
10.0 x 3.0	55	3.9 - 4.6	06141030000	06081410300
10.0 x 3.15	55	3.9 - 4.6	06141031500	
10.0 x 4.0	55	5.0 - 5.9	06141040000	
12.0 x 4.0	63	5.0 - 5.9	06141240000	06081412400
12.0 x 5.0	63	6.3 - 7.2	06141250000	
12.5 x 4.0	63	5.0 - 5.9	06141254000	
12.5 x 5.0	63	6.3 - 7.2	06141255000	
14.0 x 5.0	69	6.3 - 7.2	06141450000	
16.0 x 5.0	71	6.3 - 7.2	06141650000	
16.0 x 6.3	71	8.0 - 8.9	06141663000	
18.0 x 6.0	77	8.0 - 8.9	06141860000	
20.0 x 6.3	80	8.0 - 8.9	06142063000	
20.0 x 8.0	80	10.1 - 11.1	06142080000	
25.0 x 10.0	100	12.8 - 13.8	06142510000	

⚠ รุ่น 06114 ขนาด 10.0x4.0 และเล็กกว่า จำหน่ายเป็นกล่อง 10ชิ้น สามารถแยกขายออกจากกล่องได้
Model 06114 sizes 10.0x4.0 and smaller sold in box of 10pcs. Can sell separately without original box.

Center Drill (Form W) – ดอกนำศูนย์ มาตรฐานอเมริกา



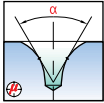
ASA No.	D x d		L	ℓ min - max	Order Code
	mm	inch			HSS
					Model 06145
1-W	3.17 x 1.19	1/8 x 3/64	31	1.4 - 1.7	06145010000
2-W	4.76 x 1.98	3/16 x 5/64	47	2.4 - 2.7	06145020000
3-W	6.35 x 2.77	1/4 x 7/64	50	3.3 - 3.9	06145030000
4-W	7.93 x 3.17	5/16 x 1/8	54	3.8 - 4.4	06145040000
5-W	11.11 x 4.76	7/16 x 3/16	70	5.9 - 6.5	06145050000
6-W	12.7 x 5.55	1/2 x 7/32	76	6.9 - 7.5	06145060000
7-W	15.87 x 6.35	5/8 x 1/4	82	8.0 - 8.6	06145070000
8-W	19.05 x 7.93	3/4 x 5/16	89	10.0 - 10.6	06145080000



Standards	Form W	Tolerance	
	ASA	D	h7
		d	k12
		L	±1

⚠ รุ่น 06145 No. 5-W และเล็กกว่า จำหน่ายเป็นกล่อง 10ชิ้น สามารถแยกขายออกจากกล่องได้
Model 06145 No. 5-W and smaller sold in box of 10pcs. Can sell separately without original box.

Center Drill (Form R) – ดอกนำศูนย์

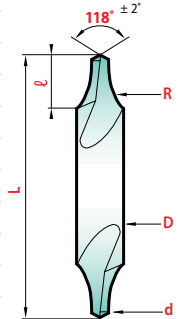


! *ขนาดที่มีด้านเดียว
*Single end



D x d	L	R	ℓ min - max	Order Code			
				HSS	HSS+TiN	Carbide	Carbide+Hard'X
				Model 0612	Model 060812	Model 068112	Model 068112H
3.0 x 0.5	31	2	2.3 - 2.6	06120305000			
3.15 x 0.5*	25	2	2.3 - 2.6	06120315050		06811203105	068112H03105
3.15 x 0.8*	25	2.5	2.6 - 2.9	06120315080			
3.15 x 1.0	31	2.9	3.0 - 3.3	06120315100		06811203151	068112H03151
3.15 x 1.25	31	3.15	3.3 - 3.6	06120315125		06811203125	068112H03125
3.5 x 0.5	35	3	2.7 - 3.0	06120305000			
3.5 x 0.75	35	3.4	2.8 - 3.0	06120305075			
4.0 x 1.0	35	3.9	3.3 - 3.6	06120410000	06081204100		
4.0 x 1.25	35	4	3.7 - 4.1	06120412500			
4.0 x 1.6	35	4	4.2 - 4.7	06120416000	06081204160	06811204160	068112H04160
5.0 x 1.5	40	5	4.5 - 4.9	06120515000	06081205150		
5.0 x 1.6	40	5	4.5 - 4.9	06120516000			
5.0 x 2.0	40	5	5.0 - 5.4	06120520000	06081205200	06811205200	068112H05200
6.0 x 2.0	45	5.8	5.4 - 5.8	06120620000	06081206200		
6.3 x 2.0	45	6.3	5.6 - 6.0	06120632000			
6.3 x 2.5	45	6.3	6.3 - 6.8	06120632500	06081206325	06811206325	068112H06325
8.0 x 2.5	50	8	7.5 - 8.0	06120825000	06081208250		
8.0 x 3.0	50	8	8.0 - 8.5	06120830000	06081208300		
8.0 x 3.15	50	8	8.0 - 8.5	06120831500	06081208315	06811208315	068112H08315
10.0 x 3.0	55	10	8.9 - 9.4	06121030000			
10.0 x 3.15	55	10	8.9 - 9.4	06121031500			
10.0 x 4.0	55	10	10.0 - 10.6	06121040000	06081210400	06811210400	068112H10400
12.0 x 4.0	63	11.5	10.7 - 11.3	06121240000			
12.0 x 5.0	63	11.5	11.4 - 12.0	06121250000			
12.5 x 4.0	63	12.5	11.2 - 11.8	06121254000			
12.5 x 5.0	63	12.5	12.5 - 13.1	06121255000	06081212550		
14.0 x 5.0	69	13.4	12.8 - 13.4	06121450000			
16.0 x 5.0	71	16	14.4 - 15.0	06121650000			
16.0 x 6.3	71	16	16.0 - 16.6	06121663000			
18.0 x 6.0	77	17.8	16.6 - 17.2	06121860000			
20.0 x 6.3	80	20	17.8 - 19.0	06122063000			
20.0 x 8.0	80	20	20.0 - 20.7	06122080000			
25.0 x 10.0	100	25	25.0 - 25.7	06122510000			
31.5 x 12.5	125	31.5	31.5 - 32.3	06123151250			

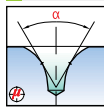
Standards	Form R
	ISO NFE 66051-R DIN 333-R JIS-1
Tolerance	
D	h7
d	k12
L	±1
R	1.25R



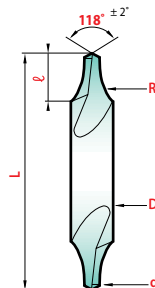
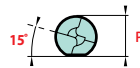
! รุ่น 0612 ขนาด 10.0x4.0 และเล็กกว่า จำหน่ายเป็นกล่อง 10ชิ้น สามารถแยกขายออกจากกล่องได้
Model 0612 sizes 10.0x4.0 and smaller sold in box of 10pcs. Can sell separately without original box.

ดอกนำศูนย์

Center Drill with Flat (Form R) – ดอกนำศูนย์ เจียรลำตัว



D x d	L	R	min - max	P	Order Code	
					HSSE	HSSE+TiN
					Model 060291	Model 060891
4.0 x 1.6	35	4.0	4.2 - 4.7	3.3	06029104160	06089104160
5.0 x 2.0	40	5.0	5.0 - 5.4	4.2	06029105200	06089105200
6.3 x 2.5	45	6.3	6.3 - 6.8	5.4	06029106325	06089106325
8.0 x 3.15	50	8.0	8.0 - 8.5	7.0	06029108315	06089108315
10.0 x 4.0	55	10.0	10.0 - 10.6	8.4	06029110400	06089110400
12.5 x 5.0	63	12.5	12.5 - 13.1	11.0	06029112550	06089112550
16.0 x 6.3	71	16.0	16.0 - 16.6	14.0	06029116630	06089116630
20.0 x 8.0	80	20.0	20.0 - 20.7	17.9	06029120800	

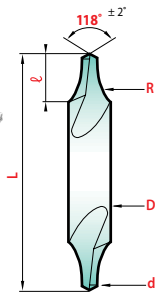
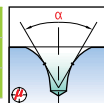


Standards	Form R
	ISO NFE 66051-R DIN 333-R JIS-1

Tolerance	
D	h7
d	k12
L	±1
R	1.25R

Long Center Drill (Form R) – ดอกนำศูนย์ รันยาว

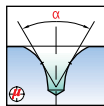
D x d	L	R	min - max	Order Code
				HSSE
				Model 06187
4.0 x 1.0	120	3.9	3.3 - 3.6	06187041120
5.0 x 1.5		5.0	4.5 - 4.9	06187051512
6.0 x 2.0		5.8	5.4 - 5.8	06187062120
8.0 x 2.5		8.0	7.5 - 8.0	06187082512
10.0 x 3.0		10.0	8.9 - 9.4	06187103120
10.0 x 4.0		10.0	10.0 - 10.6	06187104120



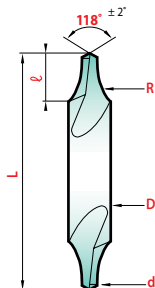
Standards	Form R
	Magafor Standard

Tolerance	
D	h7
d	k12
L	±1
R	1.25R

Center Drill (Form R) – ดอกนำศูนย์ มาตรฐานอเมริกา



ASA No.	D x d		L	R	ℓ min - max	Order Code
						HSS
	mm	inch				Model 06125
1-R	3.17 x 1.19	1/8 x 3/64	31	3.9	3.3 - 3.7	06125010000
2-R	4.76 x 1.98	3/16 x 5/64	47	5.8	5.2 - 5.6	06125020000
3-R	6.35 x 2.77	1/4 x 7/64	50	8.0	7.0 - 7.5	06125030000
4-R	7.93 x 3.17	5/16 x 1/8	54	10.0	8.7 - 9.3	06125040000
5-R	11.11 x 4.76	7/16 x 3/16	70	12.5	12.3 - 12.9	06125050000
6-R	12.70 x 5.55	1/2 x 7/32	76	13.4	13.4 - 14.5	06125060000
7-R	15.87 x 6.35	5/8 x 1/4	82	17.8	17.0 - 17.7	06125070000
8-R	19.05 x 7.93	3/4 x 5/16	89	20.0	20.6 - 21.4	06125080000

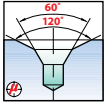


Standards	Form R
	ASA

Tolerance	
D	h7
d	k12
L	±1
R	1.25R

⚠ รุ่น 06125 No. 5-R และเล็กกว่า จำหน่ายเป็นกล่อง 10 ชิ้น สามารถแยกขายออกจากกล่องได้
Model 06125 No. 5-R and smaller sold in box of 10 pcs. Can sell separately without original box.

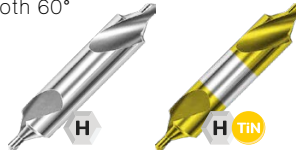
Center Drill (Form B) – ดอกนำศูนย์



ดอกนำศูนย์ที่มีทั้ง 60° และ 120° องศาในดอกเดียว
Form B Center Drills have both 60° and 120° tips.

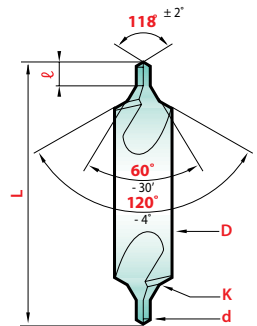


! *ขนาดที่มีด้านเดียว
*Single end



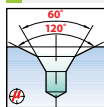
D x d	L	K	ℓ min - max	Order Code	
				HSS	HSS+TiN
				Model 0613	Model 060813
3.0 x 0.5	31	1.2	0.6 - 0.9	06130305000	
4.0 x 0.75	35	2	1.0 - 1.3	06130407500	
4.0 x 1.0	35	2.1	1.3 - 1.7	06130410000	06081304100
5.0 x 1.25	40	2.6	1.6 - 2.0	06130512500	06081305125
5.0 x 1.5*	40	3	2.0 - 2.6	06130515000	
6.0 x 1.0	45	2.5	1.3 - 1.7	06130610000	
6.0 x 2.0*	45	4	2.5 - 3.1	06130620000	
6.3 x 1.6	45	3.3	2.0 - 2.6	06130631600	06081306316
8.0 x 1.5	50	3.8	2.0 - 2.6	06130815000	
8.0 x 2.0	50	4.2	2.5 - 3.1	06130820000	06081308200
8.0 x 2.5*	50	5.5	3.1 - 3.8	06130825000	
8.0 x 3.0*	50	6	3.9 - 4.6	06130830000	
10.0 x 2.0	55	5	2.5 - 3.1	06131020000	
10.0 x 2.5	55	5.3	3.1 - 3.8	06131025000	06081310250
10.0 x 3.0*	55	7	3.9 - 4.6	06131030000	
10.0 x 4.0*	55	8	5.0 - 5.9	06131040000	
11.2 x 3.15	62	6.7	3.9 - 4.6	06131123150	060813112315
12.0 x 2.5	63	6.3	3.1 - 3.8	06131225000	
12.0 x 4.0*	63	9	5.0 - 5.9	06131240000	
12.0 x 5.0*	63	9	6.3 - 7.2	06131250000	
14.0 x 3.0	69	7.5	3.9 - 4.6	06131430000	
14.0 x 4.0	69	8.5	5.0 - 5.9	06131440000	06081314400
14.0 x 5.0*	69	10	6.3 - 7.2	06131450000	
16.0 x 4.0	71	10	5.0 - 5.9	06131640000	
18.0 x 4.0	77	10	5.0 - 5.9	06131840000	
18.0 x 5.0	77	10.6	6.3 - 7.2	06131850000	06081318500
18.0 x 6.0*	77	12	8.0 - 8.9	06131860000	
20.0 x 5.0	80	12.5	6.3 - 7.2	06132050000	
20.0 x 6.3	80	13.2	8.0 - 8.9	06132063000	06081320630
25.0 x 6.0	100	15	8.0 - 8.9	06132560000	
25.0 x 6.3	100	16	8.0 - 8.9	06132563000	
25.0 x 8.0	100	17	10.1 - 11.1	06132580000	
31.5 x 10.0	125	21.2	12.8 - 13.8	06133151000	

Standards	Form B	
	ISO	
	NFE 66051-B	
	DIN 333-B	
Tolerance	JIS-1	
	D	h7
	d	k12
	L	±1
	K	js13

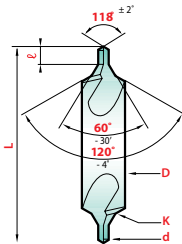


ดอกนำศูนย์

Center Drill with Flat (Form B) – ดอกนำศูนย์ เจียรลำตัว



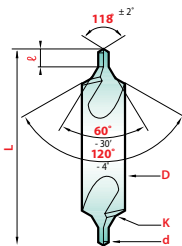
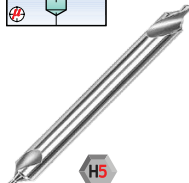
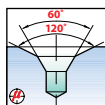
D x d	L	K	ℓ min - max	P	Order Code	
					HSSE	HSSE+TIN
					Model 060292	Model 060892
6.3 x 1.6	45	3.3	2.0 - 2.6	5.4	06029206316	06089206316
8.0 x 2.0	50	4.2	2.5 - 3.1	7.0	06029208200	06089208200
10.0 x 2.5	55	5.3	3.1 - 3.8	8.4	06029210250	06089210250
11.2 x 3.15	63	6.7	3.9 - 4.6	10.0	06029211231	06089211231
14.0 x 4.0	69	8.5	5.0 - 5.9	12.7	06029214400	06089214400
18.0 x 5.0	77	10.6	6.3 - 7.2	16.4	06029218500	06089218500
20.0 x 6.3	80	13.2	8.0 - 8.9	17.9	06029220630	06089220630
25.0 x 8.0	100	17.0	10.1 - 11.1	22.5	06029225800	
31.5 x 10.0	125	21.2	12.8 - 13.8	28.4	06029231510	



Standards	Form B
	ISO
	NFE 66051-B
	DIN 333-B JIS-1
Tolerance	
D	h7
d	k12
L	±1
K	js13

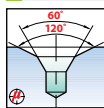
Long Center Drill (Form B) – ดอกนำศูนย์ ร่นยาว

D x d	L	K	ℓ min - max	Order Code
				HSSE Model 06189
4.0 x 1.0	120	2.1	1.3 - 1.7	06189041120
5.0 x 1.5		3.0	2.0 - 2.6	06189051512
6.0 x 2.0		4.0	2.5 - 3.1	06189062120
8.0 x 2.5		5.5	3.1 - 3.8	06189082512
10.0 x 3.0		7.0	3.9 - 4.6	06189103120
10.0 x 4.0		8.0	5.0 - 5.9	06189104120

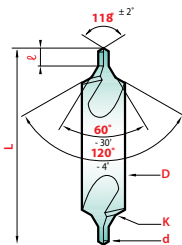


Standards	Form B
	Magafor
	Standard
Tolerance	
D	h7
d	k12
L	±1
K	js13

Center Drill (Form B) – ดอกนำศูนย์ มาตรฐานอังกฤษ



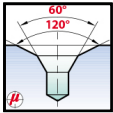
BS No.	D x d		L	K	ℓ min - max	Order Code
	mm	inch				HSS Model 06134
1-B	3.17 x 1.19	1/8 x 3/64	38	1.9	1.6 - 2.0	06134010000
2-B	4.76 x 1.58	3/16 x 1/16	45	2.8	2.0 - 2.4	06134020000
3-B	6.35 x 2.38	1/4 x 3/32	50	3.8	3.3 - 3.9	06134030000
4-B	7.93 x 2.77	5/16 x 7/64	56	4.8	4.1 - 4.7	06134040000
5-B	11.11 x 3.96	7/16 x 5/32	64	6.6	5.7 - 6.3	06134050000
6-B	15.87 x 5.55	5/8 x 7/32	76	9.5	7.7 - 8.3	06134060000
7-B	19.05 x 6.35	3/4 x 1/4	88	11.4	9.2 - 10.0	06134070000



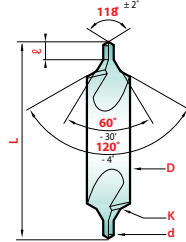
Standards	Form B
	BS
Tolerance	
D	h7
d	k12
L	±1
K	js13

⚠ รุ่น 06134 No.5-B และเล็กกว่า จำหน่ายเป็นกล่อง 10 ชิ้น สามารถแยกขายออกจากกล่องได้
Model 06115 No.5-B and smaller sold in box of 10pcs. Can sell separately without original box.

Center Drill (Form B) – ดอกนำศูนย์ มาตรฐานอเมริกา



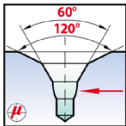
ASA No.	D x d		L	K	ℓ min - max	Order Code
						HSS
	mm	inch				Model 06135
11	3.17 x 1.19	1/8 x 3/64	31	2.5	1.4 - 1.7	06135110000
12	4.76 x 1.58	3/16 x 1/16	47	3.8	1.9 - 2.2	06135120000
13	6.35 x 2.38	1/4 x 3/32	50	5.1	2.8 - 3.4	06135130000
14	7.93 x 2.77	5/16 x 7/64	54	6.3	3.3 - 3.9	06135140000
15	11.11 x 3.96	7/16 x 5/32	70	8.9	4.8 - 5.4	06135150000
16	12.7 x 4.76	1/2 x 3/16	76	10.1	5.9 - 6.5	06135160000
17	15.87 x 5.55	5/8 x 7/32	82	12.7	6.9 - 7.5	06135170000
18	19.05 x 6.35	3/4 x 1/4	89	15.2	8.0 - 8.6	06135180000
19	22.22 x 7.93	7/8 x 5/16	92	17.8	10.0 - 10.6	06135190000
20	25.4 x 9.52	1 x 3/8	95	20.3	12.1 - 12.7	06135200000



Standards	Form B
	ASA
Tolerance	
D	h7
d	k12
L	±1
K	js13

⚠ รุ่น 06135 No. 15 และเล็กกว่า จำหน่ายเป็นกล่อง 10 ชิ้น สามารถแยกขายออกจากกล่องได้
Model 06135 No. 15 and smaller sold in box of 10pcs. Can sell separately without original box.

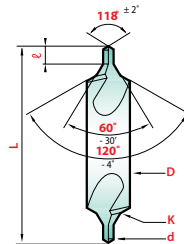
Center Drill (Form BW) – ดอกนำศูนย์



ดอกนำศูนย์ที่มีผลสมทั้งจุดเด่นของรุ่น B และ W เข้าด้วยกัน
Center Drills with B and W characteristics combined.



D x d	L	K	ℓ min - max	Order Code
				HSS
				Model 06023
6.3 x 1.6	45	3.3	2.0 - 2.6	06023063160
8.0 x 2.0	50	4.2	2.5 - 3.1	06023082000
10.0 x 2.5	55	5.3	3.1 - 3.8	06023102500
11.2 x 3.15	62	6.7	3.9 - 4.6	06023112315
14.0 x 4.0	69	8.5	5.0 - 5.9	06023144000
18.0 x 5.0	77	10.6	6.3 - 7.2	06023185000
20.0 x 6.3	80	13.2	8.0 - 8.9	06023206300

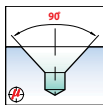


Standards	Form BW
	ISO NFE 66051-BW DIN 333-BW JIS-1
Tolerance	
D	h7
d	k12
L	±1
K	js13

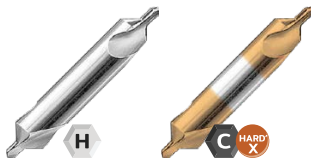
⚠ รุ่น 06023 ขนาด 10.0x4.0 และเล็กกว่า จำหน่ายเป็นกล่อง 10 ชิ้น สามารถแยกขายออกจากกล่องได้
Model 06023 sizes 10.0x4.0 and smaller sold in box of 10pcs. Can sell separately without original box.

ดอกนำศูนย์

Center Drill (90°) – ดอกนำศูนย์



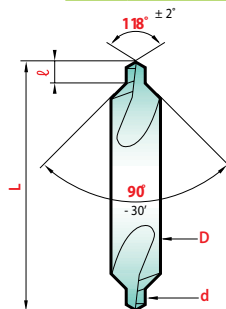
! *ขนาดที่มีด้านเดียว
*Single end



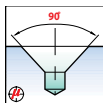
! **Carbide D = h5

D x d	L	ℓ min - max	Order Code	
			HSS	Carbide+Hard'X
			Model 0615	Model 068115H
3.0 x 0.5*	25	0.6-0.9	06150305000	
3.5 x 0.75	35	1.0-1.3	06150350750	
4.0 x 1.0	35	1.3-1.7	06150410000	068115H0410
5.0 x 1.5	40	2.0-2.6	06150515000	
6.0 x 2.0	45	2.5-3.1	06150620000	068115H0620
8.0 x 2.5	50	3.1-3.8	06150825000	
8.0 x 3.0	50	3.9-4.6	06150830000	068115H0830
10.0 x 3.0	55	3.9-4.6	06151030000	
10.0 x 4.0	55	5.0-5.9	06151040000	068115H1040
12.0 x 4.0	63	5.0-5.9	06151240000	
12.0 x 5.0	63	6.3-7.2	06151250000	
14.0 x 5.0	69	6.3-7.2	06151450000	
18.0 x 6.0	77	8.0-8.9	06151860000	
25.0 x 8.0	100	10.1-11.1	06152580000	

Tolerance	
D	h7 (h5)**
d	k12
L	±1

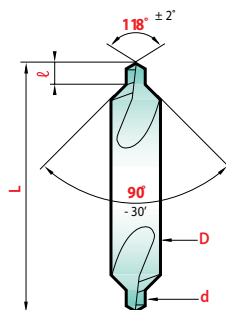


Long Center Drill (90°) – ดอกนำศูนย์ ร่นยาว

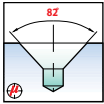


D x d	L	ℓ min - max	Order Code
			HSSE
			Model 06188
4.0 x 1.0	120	1.3 - 1.7	06188041120
5.0 x 1.5	120	2.0 - 2.6	06188051512
6.0 x 1.0	80	0.7 - 1.0	06188061800
6.0 x 2.0	120	2.5 - 3.1	06188062120
8.0 x 2.5	120	3.1 - 3.8	06188082512
10.0 x 2.0	100	1.0 - 1.4	06188102100
10.0 x 3.0	120	3.9 - 4.6	06188103120
10.0 x 4.0	120	5.0 - 5.9	06188104120
16.0 x 3.0	120	1.8 - 2.3	06188163120

Tolerance	
D	h7
d	k12
L	±1

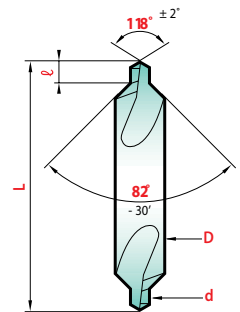


Center Drill (82°) – ดอกนำศูนย์ มาตรฐานอเมริกา

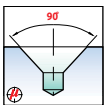


ASA No.	D x d		L	ℓ min - max	Order Code
					HSS
	mm	inch			Model 06154
1	3.17 x 1.19	1/8 x 3/64	31	1.4 - 1.7	06154010000
2	4.76 x 1.98	3/16 x 5/64	47	2.4 - 2.7	06154020000
3	6.35 x 2.77	1/4 x 7/64	50	3.3 - 3.9	06154030000
4	7.93 x 3.17	5/16 x 1/8	54	3.8 - 4.4	06154040000
5	11.11 x 4.76	7/16 x 3/16	70	5.9 - 6.5	06154050000
6	12.7 x 5.55	1/2 x 7/32	76	6.9 - 7.5	06154060000
7	15.87 x 6.35	5/8 x 1/4	82	8.0 - 8.6	06154070000
8	19.05 x 7.93	3/4 x 5/16	89	10.0 - 10.6	06154080000

Tolerance	
D	h7
d	k12
L	±1

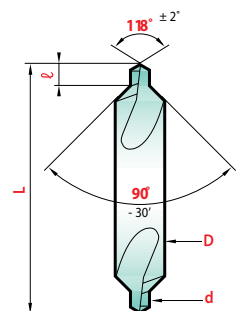


Center Drill (90°) – ดอกนำศูนย์ มาตรฐานอเมริกา



ASA No.	D x d		L	ℓ min - max	Order Code
					HSS
	mm	inch			Model 06155
1	3.17 x 1.19	1/8 x 3/64	31	1.4 - 1.7	06155010000
2	4.76 x 1.98	3/16 x 5/64	47	2.4 - 2.7	06155020000
3	6.35 x 2.77	1/4 x 7/64	50	3.3 - 3.9	06155030000
4	7.93 x 3.17	5/16 x 1/8	54	3.8 - 4.4	06155040000
5	11.11 x 4.76	7/16 x 3/16	70	5.9 - 6.5	06155050000
6	12.7 x 5.55	1/2 x 7/32	76	6.9 - 7.5	06155060000
7	15.87 x 6.35	5/8 x 1/4	82	8.0 - 8.6	06155070000
8	19.05 x 7.93	3/4 x 5/16	89	10.0 - 10.6	06155080000

Tolerance	
D	h7
d	k12
L	±1



ดอกนำศูนย์

Center Drill for Threaded Hole – ดอกนำศูนย์ สำหรับเตรียมรูเกลียว

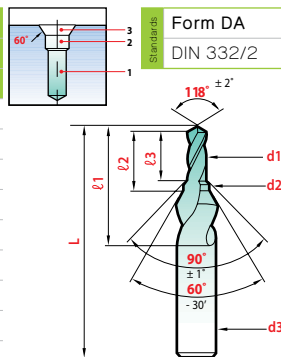
สำหรับลดขั้นตอนการทำงาน ในดอกเดียวเป็น
ทั้งเจาะนำศูนย์ และเจาะรูเพื่อตีเกลียว
Reduce steps in preparing tap
holes by combining centering and
pre-threaded drilling.



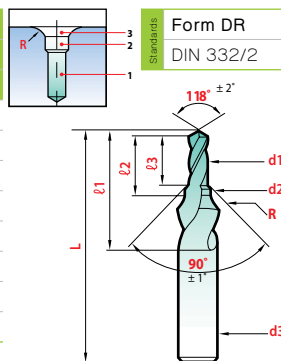
1. เจาะรูตามขนาดที่จะตีเกลียว
 2. ช่องให้ตีเกลียวได้ง่ายขึ้น
 3. ปากรูปแบบที่ต้องการ
1. Pre-Tap hole
 2. Tap entrance
 3. Hole countersink



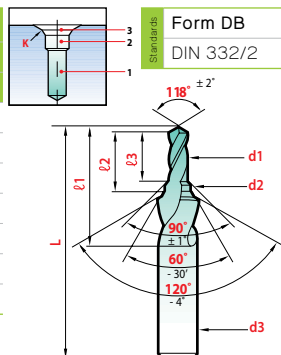
Screw	d1 -0 -0.05	d2 ±0.05	d3 h7	L ±1	t1	t2	t3	Order Code	P -0.1	Order Code
								HSSE		Flat HSSE
								Model 060285		Model 060280
M3	2.5	3.2	6	55	18	9	8	06028503000		-
M4	3.3	4.3	8	63	23	12.6	11	06028504000	6.75	06028004000
M5	4.2	5.3	10	67	27	15.1	13	06028505000	8.45	06028005000
M6	5	6.4	12.5	71	33	18.6	16	06028506000	10.45	06028006000
M8	6.8	8.4	14	88	41	23	19	06028508000	12.5	06028008000
M10	8.5	10.5	16	90	47	27.7	23	06028510000	14.85	06028010000
M12	10.2	13	20	105	59	34.5	28	06028512000	18.45	06028012000
M16	14	17	25	132	67	41.3	33	-	23.40	06028016000
M20	17.5	21	31.5	145	77	48.3	38	-	29.35	06028020000
M24	21	25	40	160	90	57	45	-	36.50	06028024000



Screw	d1 -0 -0.05	d2 ±0.05	d3 h7	L ±1	t1	t2	t3	R	Order Code		P -0.1	Order Code	
									HSSE			Flat HSSE	
									Model 060287		Model 060288		
M4	3.3	4.3	8	63	23	12.6	11	4	06028704000	6.75		06028804000	
M5	4.2	5.3	10	67	27	15.1	13	6	06028705000	8.45		06028805000	
M6	5	6.4	12.5	71	33	18.9	16	8	06028706000	10.45		06028806000	
M8	6.8	8.4	14	88	41	23	19	10	06028708000	12.5		06028808000	
M10	8.5	10.5	16	90	47	27.7	23	14	06028710000	14.85		06028810000	
M12	10.2	13	20	105	59	34.5	28	16	06028712000	18.45		06028812000	
M16	14	17	25	132	70	41.3	33	25	-	23.4		06028816000	
M20	17.5	21	31.5	145	77	48.3	38	31.5	-	29.35		06028820000	



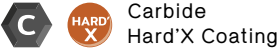
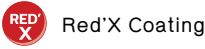
Screw	d1 -0 -0.05	d2 ±0.05	d3 h7	L ±1	t1	t2	t3	K js13	Order Code		P -0.1	Order Code	
									HSSE			Flat HSSE	
									Model 060283			Model 060284	
M4	3.3	4.3	8	63	23	12.6	11	6.4	06028304000		6.75	06028404000	
M5	4.2	5.3	10	67	27	15.1	13	7.8	06028305000		8.45	06028405000	
M6	5	6.4	12.5	71	33	18.9	16	91	06028306000		10.45	06028406000	
M8	6.8	8.4	14	88	41	23	19	11.8	06028308000		12.5	06028408000	
M10	8.5	10.5	16	90	47	27.7	23	14.2	06028310000		14.85	06028410000	
M12	10.2	13	20	105	59	34.5	28	17.4	06028312000		18.45	06028412000	
M16	14	17	25	132	70	41.3	33	21.9	-		23.4	06028416000	



คำแนะนำการใช้งาน ดอกนำศูนย์
Recommendations of use for Center Drills



Materials	Speed m/min.	Feed mm/rev.					Speed m/min.	Feed mm/rev.				
		D						D				
		2	3	6	10	16		2	3	6	10	16
Steel < 500 N/mm²	30 - 44	0.08	0.10	0.20	0.30	0.40	35 - 60	0.08	0.10	0.20	0.30	0.40
Steel 500-800 N/mm²	25 - 30						35 - 50					
Steel 800-1000 N/mm²	15 - 25	0.05	0.07	0.14	0.21	0.28	22 - 40	0.05	0.07	0.14	0.21	0.28
Steel 800-1300 N/mm²	10 - 25	0.04	0.06	0.12	0.18	0.25	15 - 20	0.04	0.06	0.12	0.18	0.25
Stainless Steel / Titanium	6 - 10						10 - 15					
Inconel	5 - 6	0.03	0.05	0.10	0.16	0.22	8 - 12	0.03	0.05	0.10	0.16	0.22
Cast Iron < 180HB	15 - 25	0.08	0.10	0.20	0.30	0.40	20 - 35	0.08	0.10	0.20	0.30	0.40
Cast Iron > 180HB	10 - 15	0.06	0.07	0.15	0.25	0.35	15 - 20	0.06	0.07	0.15	0.25	0.35
Copper / Brass / Bronze	40 - 50	0.10	0.12	0.18	0.30	0.35	50 - 60	0.10	0.12	0.18	0.30	0.35
Aluminum ≤ 6% Si	60 - 90						70 - 90					
Aluminum > 6% Si	35 - 50						40 - 60					
Thermoplast	90 - 100	0.12	0.14	0.20	0.35	0.45	100 - 130	0.12	0.14	0.20	0.35	0.45



Materials	Speed m/min.	Feed mm/rev.					Speed m/min.	Feed mm/rev.				
		D						D				
		2	3	6	10	16		2	3	6	10	16
Steel < 500 N/mm²	60 - 65	0.08	0.10	0.20	0.30	0.40	70 - 80	0.10	0.12	0.2	0.33	0.45
Steel 500-800 N/mm²	50 - 60						60 - 75					
Steel 800-1000 N/mm²	40 - 50	0.05	0.07	0.14	0.21	0.28	50 - 60	0.07	0.08	0.15	0.23	0.31
Steel 800-1300 N/mm²	20 - 30	0.04	0.06	0.12	0.18	0.25	25 - 40	0.06	0.07	0.13	0.20	0.27
Stainless Steel / Titanium	15 - 20						20 - 30	0.06	0.08	0.15	0.20	0.30
Inconel	15 - 20	0.03	0.05	0.10	0.16	0.22	20 - 30	0.05	0.07	0.13	0.18	0.27
Cast Iron < 180HB	40 - 50	0.08	0.10	0.20	0.30	0.40	50 - 60	0.10	0.12	0.22	0.33	0.45
Cast Iron > 180HB	30 - 40	0.06	0.07	0.15	0.25	0.35	35 - 50	0.08	0.10	0.17	0.30	0.40
Copper / Brass / Bronze	60 - 80	0.10	0.12	0.18	0.30	0.35	70 - 100	0.12	0.15	0.20	0.35	0.40
Aluminum ≤ 6% Si	80 - 120						100 - 150					
Aluminum > 6% Si	50 - 75						70 - 90					
Thermoplast	110 - 140	0.12	0.14	0.20	0.35	0.45	150 - 200	0.13	0.15	0.25	0.40	0.50