Center Drills/Centering Tools

CESA

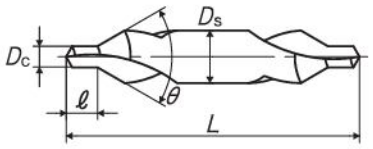
High Helix Center Drills-JIS Type A 60°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
0.5 × 60° × 3.15	CEA0.5	3.15	31.5	0.8	1	◎
0.63 × 60° × 3.15	CEA0.63	3.15	31.5	1	1	◎
0.8 × 60° × 3.15	CEA0.8	3.15	31.5	1.2	1	◎
1 × 60° × 3.15	CEA1.0	3.15	31.5	1.5	1	◎
1.25 × 60° × 3.15	CEA1.25	3.15	31.5	1.9	1	◎
1.6 × 60° × 4	CEA1.6	4	35.5	2.4	1	◎
2 × 60° × 5	CEA2.0	5	40	3	1	◎
2.5 × 60° × 6.3	CEA2.5	6.3	45	3.8	1	◎
3.15 × 60° × 8	CEA3.15	8	50	4.8	1	◎
4 × 60° × 10	CEA4.0	10	56	6	1	◎
5 × 60° × 12.5	CEA5.0	12.5	63	7.5	1	◎
6.3 × 60° × 16	CEA6.3	16	71	9.2	1	◎
8 × 60° × 20	CEA8.0	20	80	11.5	1	◎
10 × 60° × 25	CEA010	25	100	14.2	1	◎

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CE-S

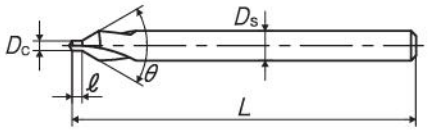
High Helix Center Drills-Type A 60°

Specification

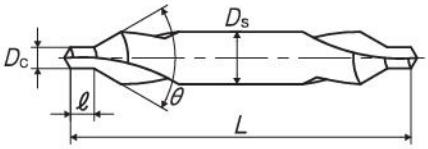
HSS

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
0.3 × 60° × 3	CE0.3	3	35	0.3	1	△
0.4 × 60° × 3	CE0.4	3	35	0.4	1	△
0.5 × 60° × 3.5	CE0.5	3.5	35	0.5	2	○
0.6 × 60° × 3.5	CE0.6	3.5	35	0.6	2	○
0.7 × 60° × 3.5	CE0.7	3.5	35	0.7	2	○
0.8 × 60° × 3.5	CE0.8	3.5	35	0.8	2	○
0.9 × 60° × 4	CE0.9	4	35	0.9	2	○
1 × 60° × 4	CE1.0	4	35	1	2	○
1.2 × 60° × 5	CE1.2	5	40	1.2	2	○
1.5 × 60° × 5	CE1.5	5	40	1.5	2	○
2 × 60° × 6	CE2.0	6	45	2	2	○
2.5 × 60° × 7.7	CE2.5	7.7	50	2.5	2	○
3 × 60° × 7.7	CE3.0	7.7	55	3	2	○
3 × 60° × 8	CE3.0-8	8	55	3	2	○
4 × 60° × 10	CE4.0	10	65	4.5	2	○
5 × 60° × 11	CE5.0	11	78	5.5	2	○
5 × 60° × 12	CE5.0-12	12	78	5.5	2	○
6 × 60° × 16	CE6.0-16	16	90	6.5	2	○
6 × 60° × 18	CE6.0	18	90	6.5	2	○
8 × 60° × 18	CE8.0	18	100	8.5	2	○
10 × 60° × 18	CE010	18	100	11	2	○
12 × 60° × 25	CE012	25	120	13	2	○

CE-S(I)

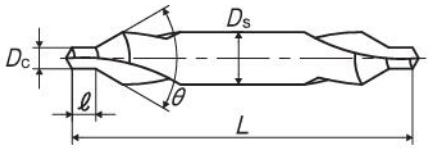
High Helix Center Drills-Type A 60°, (Old JIS Type 1)

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
2.5 × 60° × 8	CE12.5	8	50	3.5	1	○
3 × 60° × 10	CE13.0	10	55	4	1	○
4 × 60° × 12	CE14.0	12	66	5	1	○
5 × 60° × 14	CE15.0	14	78	6.5	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CD-S

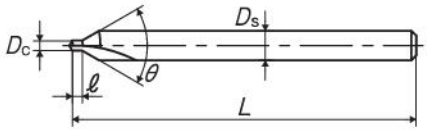
Low Helix Center Drills-Type A 60°

Specification

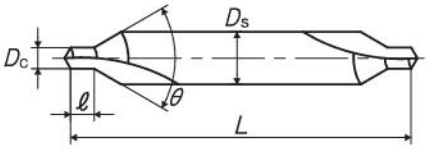
HSS

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
0.3 × 60° × 3	CY0.3	3	35	0.3	1	△
0.4 × 60° × 3	CY0.4	3	35	0.4	1	△
0.5 × 60° × 3.5	CY0.5	3.5	35	0.5	2	○
0.6 × 60° × 3.5	CY0.6	3.5	35	0.6	2	○
0.7 × 60° × 3.5	CY0.7	3.5	35	0.7	2	△
0.8 × 60° × 3.5	CY0.8	3.5	35	0.8	2	○
0.9 × 60° × 4	CY0.9	4	35	0.9	2	△
1 × 60° × 4	CY1.0	4	35	1	2	○
1.2 × 60° × 5	CY1.2	5	40	1.2	2	○
1.5 × 60° × 5	CY1.5	5	40	1.5	2	○
2 × 60° × 6	CY2.0	6	45	2	2	○
2.5 × 60° × 7.7	CY2.5	7.7	50	2.5	2	○
3 × 60° × 7.7	CY3.0	7.7	55	3	2	○
3 × 60° × 8	CY3.0-8	8	55	3	2	○
4 × 60° × 10	CY4.0	10	65	4.5	2	○
5 × 60° × 11	CY5.0	11	78	5.5	2	○
6 × 60° × 16	CY6.0-16	16	90	6.5	2	○
6 × 60° × 18	CY6.0	18	90	6.5	2	○

CD-S(I)

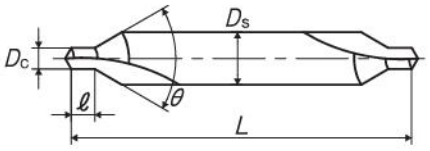
Low Helix Center Drills-Type A 60°, (Old JIS Type 1)

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
2.5 × 60° × 8	C12.5	8	50	3.5	1	○
3 × 60° × 10	C13.0	10	55	4	1	○
4 × 60° × 12	C14.0	12	66	5	1	○
5 × 60° × 14	C15.0	14	78	6.5	1	○

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CD-S LH

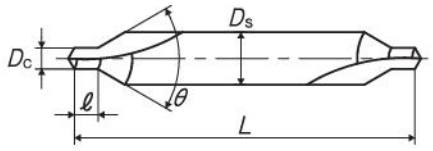
Low Helix Center Drills-Type A 60°, Left Hand Cut

Specification

HSS LH

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
0.5 × 60° × 3.5	CY0.5-L	3.5	35	0.5	1	△
0.7 × 60° × 3.5	CY0.7-L	3.5	35	0.7	1	△
0.8 × 60° × 3.5	CY0.8-L	3.5	35	0.8	1	△
0.9 × 60° × 4	CY0.9-L	4	35	0.9	1	△
1 × 60° × 4	CY1.0-L	4	35	1	1	△
1.2 × 60° × 5	CY1.2-L	5	40	1.2	1	△
1.5 × 60° × 5	CY1.5-L	5	40	1.5	1	△
2 × 60° × 6	CY2.0-L	6	45	2	1	△
2.5 × 60° × 7.7	CY2.5-L	7.7	50	2.5	1	△
3 × 60° × 7.7	CY3.0-L	7.7	55	3	1	△
4 × 60° × 10	CY4.0-L	10	65	4.5	1	△
5 × 60° × 11	CY5.0-L	11	78	5.5	1	△
6 × 60° × 16	CY6.0-L16	16	90	6.5	1	△
6 × 60° × 18	CY6.0-L	18	90	6.5	1	△

CE-S V

High Helix Center Drills-Type A 60°, Coated

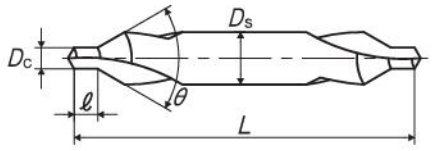
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	VCE1.0	4	35	1	1	○
1.5 × 60° × 5	VCE1.5	5	40	1.5	1	○
2 × 60° × 6	VCE2.0	6	45	2	1	○
2.5 × 60° × 7.7	VCE2.5	7.7	50	2.5	1	○
3 × 60° × 7.7	VCE3.0	7.7	55	3	1	○
4 × 60° × 10	VCE4.0	10	65	4.5	1	○
5 × 60° × 11	VCE5.0	11	78	5.5	1	○
6 × 60° × 18	VCE6.0	18	90	6.5	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CE-S V(I)

High Helix Center Drills-Type A 60°, Coated, (Old JIS Type 1)

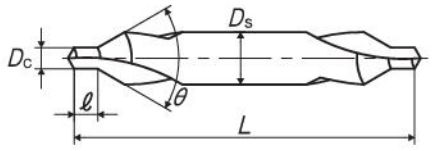
Specification

HSS Coating

■Optimum coating suitable for the cutting condition.

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
2.5 × 60° × 8	VCE12.5	8	50	3.5	1	△
3 × 60° × 10	VCE13.0	10	55	4	1	△
4 × 60° × 12	VCE14.0	12	66	5	1	△
5 × 60° × 14	VCE15.0	14	78	6.5	1	△

C-CD-S

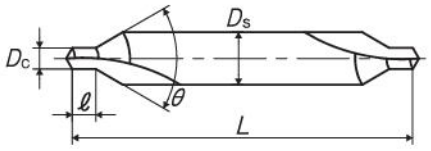
Carbide Center Drills-Type A 60°

Specification

HF

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	CCD1.0	4	35	1	1	◎
1.2 × 60° × 5	CCD1.2	5	40	1.2	1	△
1.5 × 60° × 5	CCD1.5	5	40	1.5	1	◎
2 × 60° × 6	CCD2.0	6	45	2	1	◎
2.5 × 60° × 7.7	CCD2.5	7.7	50	2.5	1	◎
2.5 × 60° × 8	CCD2.5-8	8	50	2.5	1	△
3 × 60° × 7.7	CCD3.0	7.7	55	3	1	◎
3 × 60° × 8	CCD3.0-8	8	55	3	1	△
4 × 60° × 10	CCD4.0	10	65	4.5	1	◎
5 × 60° × 11	CCD5.0	11	78	5.5	1	○
5 × 60° × 12	CCD5.0-12	12	78	5.5	1	△
6 × 60° × 18	CCD6.0	18	90	6.5	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CE-SL

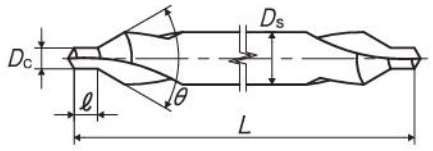
Long Shank High Helix Center Drills-Type A 60°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	CEL1.0	4	100	1	1	◎
	CEM1.0		150			○
1.5 × 60° × 5	CEL1.5	5	100	1.5	1	◎
	CEM1.5		150			○
2 × 60° × 6	CEL2.0	6	100	2	1	◎
	CEM2.0		150			
2.5 × 60° × 8	CEL2.5	8	100	2.5	1	◎
	CEM2.5		150			
3 × 60° × 8	CEL3.0	8	100	3	1	◎
	CEM3.0		150			
	CEN3.0		200			△
4 × 60° × 10	CEL4.0	10	100	4.5	1	◎
	CEM4.0		150			
	CEN4.0		200			△
5 × 60° × 12	CEL5.0	12	100	5.5	1	◎
	CEM5.0		150			
	CEN5.0		200			△

CD-SL

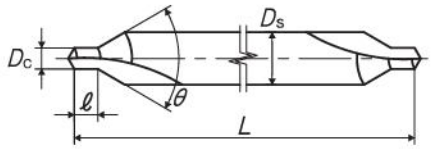
Long Shank Low Helix Center Drills-Type A 60°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	CDL1.0	4	100	1	1	○
	CDM1.0		150			
1.5 × 60° × 5	CDL1.5	5	100	1.5	1	○
	CDM1.5		150			
2 × 60° × 6	CDL2.0	6	100	2	1	◎
	CDM2.0		150			○
2.5 × 60° × 8	CDL2.5	8	100	2.5	1	◎
	CDM2.5		150			○
3 × 60° × 8	CDL3.0	8	100	3	1	◎
	CDM3.0		150			○
	CDN3.0		200			△
4 × 60° × 10	CDL4.0	10	100	4.5	1	◎
	CDM4.0		150			○
	CDN4.0		200			△
5 × 60° × 12	CDL5.0	12	100	5.5	1	○
	CDM5.0		150			
	CDN5.0		200			△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CE-SL V

Long Shank High Helix Center Drills-Type A 60°, Coated

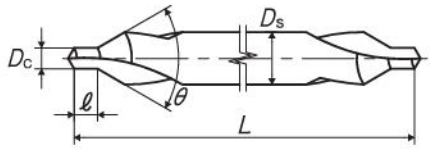
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	VCEL1.0	4	100	1	1	○
	VCEM1.0		150			
1.5 × 60° × 5	VCEL1.5	5	100	1.5	1	○
	VCEM1.5		150			
2 × 60° × 6	VCEL2.0	6	100	2	1	◎
	VCEM2.0		150			○
2.5 × 60° × 8	VCEL2.5	8	100	2.5	1	○
	VCEM2.5		150			
3 × 60° × 8	VCEL3.0	8	100	3	1	◎
	VCEM3.0		150			○
4 × 60° × 10	VCEL4.0	10	100	4.5	1	○
	VCEM4.0		150			
5 × 60° × 12	VCEL5.0	12	100	5.5	1	○
	VCEM5.0		150			

CD-SL V

Long Shank Low Helix Center Drills-Type A 60°, Coated

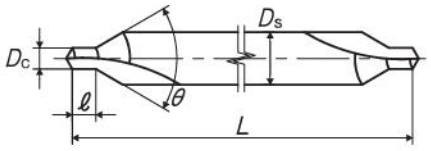
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	VCDL1.0	4	100	1	1	△
	VCDM1.0		150			
1.5 × 60° × 5	VCDL1.5	5	100	1.5	1	△
	VCDM1.5		150			
2 × 60° × 6	VCDL2.0	6	100	2	1	△
	VCDM2.0		150			
2.5 × 60° × 8	VCDL2.5	8	100	2.5	1	△
	VCDM2.5		150			
3 × 60° × 8	VCDL3.0	8	100	3	1	△
	VCDM3.0		150			
4 × 60° × 10	VCDL4.0	10	100	4.5	1	△
	VCDM4.0		150			
5 × 60° × 12	VCDL5.0	12	100	5.5	1	△
	VCDM5.0		150			

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

C-CD-SL

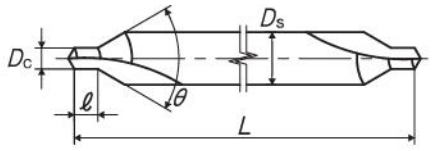
Long Shank Low Helix Carbide Center Drills-Type A 60°

Specification

HF

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 4	CCDL1.0	4	100	1	1	△
1.5 × 60° × 5	CCDL1.5	5	100	1.5	1	△
2 × 60° × 6	CCDL2.0	6	100	2	1	△
	CCDM2.0		150			
2.5 × 60° × 8	CCDL2.5	8	100	2.5	1	△
	CCDM2.5		150			
3 × 60° × 8	CCDL3.0	8	100	3	1	△
	CCDM3.0		150			
4 × 60° × 10	CCDL4.0	10	100	4.5	1	△
	CCDM4.0		150			
5 × 60° × 12	CCDL5.0	12	100	5.5	1	△
	CCDM5.0		150			

CEQA

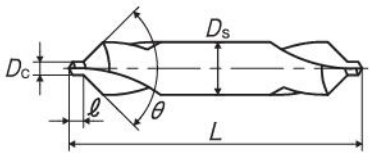
High Helix Center Drills-JIS Type A 90°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	CEA1.0Q	4	35.5	1.1	1	◎
1.25 × 90° × 5	CEA1.25Q	5	40	1.4	1	◎
1.6 × 90° × 6.3	CEA1.6Q	6.3	45	1.8	1	◎
2 × 90° × 8	CEA2.0Q	8	50	2.2	1	◎
2.5 × 90° × 10	CEA2.5Q	10	56	2.8	1	◎
3.15 × 90° × 11.2	CEA3.15Q	11.2	60	3.6	1	◎
4 × 90° × 12.5	CEA4.0Q	12.5	63	4.5	1	◎
5 × 90° × 16	CEA5.0Q	16	71	5.6	1	◎
6.3 × 90° × 20	CEA6.3Q	20	80	7.1	1	◎
8 × 90° × 25	CEA8.0Q	25	100	9	1	◎
10 × 90° × 31.5	CEA010Q	31.5	125	11.2	1	◎
12.5 × 90° × 35.5	CEA12.5Q	35.5	140	14	1	◎

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CE-Q

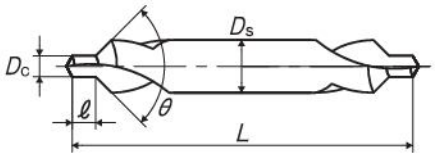
High Helix Center Drills-Type A 90°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
0.5 × 90° × 3.5	CY0.5Z	3.5	35	0.5	1	△
0.6 × 90° × 3.5	CY0.6Z	3.5	35	0.6	1	△
0.7 × 90° × 3.5	CY0.7Z	3.5	35	0.7	1	○
0.8 × 90° × 3.5	CY0.8Z	3.5	35	0.8	1	○
0.9 × 90° × 4	CY0.9Z	4	35	0.9	1	△
1 × 90° × 4	CY1.0Z	4	35	1	1	○
1.2 × 90° × 5	CY1.2Z	5	40	1.2	1	△
1.5 × 90° × 5	CY1.5Z	5	40	1.5	1	○
2 × 90° × 6	CY2.0Z	6	45	2	1	○
2.5 × 90° × 7.7	CY2.5Z	7.7	50	2.5	1	○
3 × 90° × 7.7	CY3.0Z	7.7	55	3	1	○
4 × 90° × 10	CY4.0Z	10	65	4.5	1	○
5 × 90° × 11	CY5.0Z	11	78	5.5	1	○
6 × 90° × 16	CY6.0Z-16	16	90	6.5	1	○
6 × 90° × 18	CY6.0Z	18	90	6.5	1	○

CD-Q

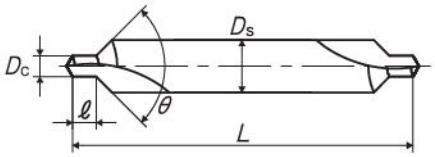
Low Helix Center Drills-Type A 90°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	CY1.0Q	4	35	1	1	○
1.5 × 90° × 5	CY1.5Q	5	40	1.5	1	○
2 × 90° × 6	CY2.0Q	6	45	2	1	○
2.5 × 90° × 7.7	CY2.5Q	7.7	50	2.5	1	○
3 × 90° × 7.7	CY3.0Q	7.7	55	3	1	○
4 × 90° × 10	CY4.0Q	10	65	4.5	1	○
5 × 90° × 11	CY5.0Q	11	78	5.5	1	○
6 × 90° × 16	CY6.0Q-16	16	90	6.5	1	△
6 × 90° × 18	CY6.0Q	18	90	6.5	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CD-Q LH

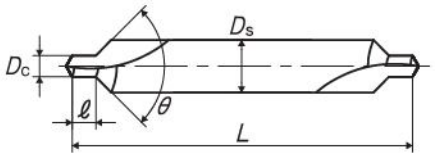
Low Helix Center Drills - Type A 90°, Left Hand Cut

Specification

HSS LH

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	CY1.0Q-L	4	35	1	1	△
1.2 × 90° × 5	CY1.2Q-L	5	40	1.2	1	△
1.5 × 90° × 5	CY1.5Q-L	5	40	1.5	1	△
2 × 90° × 6	CY2.0Q-L	6	45	2	1	△
2.5 × 90° × 7.7	CY2.5Q-L	7.7	50	2.5	1	△
2.5 × 90° × 8	CY2.5Q8L	8	50	2.5	1	△
3 × 90° × 7.7	CY3.0Q-L	7.7	55	3	1	△
3 × 90° × 8	CY3.0Q8L	8	55	3	1	△
4 × 90° × 10	CY4.0Q-L	10	65	4.5	1	△
5 × 90° × 12	CY5.0Q12L	12	78	5.5	1	△
6 × 90° × 18	CY6.0Q-L	18	90	6.5	1	△

CE-Q V

High Helix Center Drills-Type A 90°, Coated

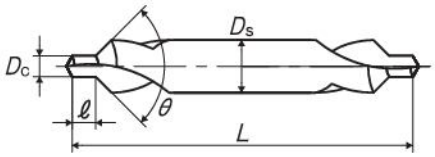
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	VCY1.0Z	4	35	1	1	○
1.5 × 90° × 5	VCY1.5Z	5	40	1.5	1	○
2 × 90° × 6	VCY2.0Z	6	45	2	1	○
2.5 × 90° × 7.7	VCY2.5Z	7.7	50	2.5	1	○
3 × 90° × 7.7	VCY3.0Z	7.7	55	3	1	○
4 × 90° × 10	VCY4.0Z	10	65	4.5	1	○
5 × 90° × 11	VCY5.0Z	11	78	5.5	1	○
6 × 90° × 18	VCY6.0Z	18	90	6.5	1	○

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CD-Q V

Low Helix Center Drills-Type A 90°, Coated

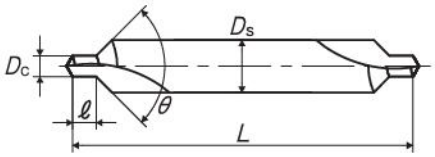
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	VCY1.0Q	4	35	1	1	△
1.5 × 90° × 5	VCY1.5Q	5	40	1.5	1	△
2 × 90° × 6	VCY2.0Q	6	45	2	1	△
2.5 × 90° × 7.7	VCY2.5Q	7.7	50	2.5	1	△
3 × 90° × 7.7	VCY3.0Q	7.7	55	3	1	△
4 × 90° × 10	VCY4.0Q	10	65	4.5	1	△
5 × 90° × 11	VCY5.0Q	11	78	5.5	1	△
6 × 90° × 18	VCY6.0Q	18	90	6.5	1	△

C-CD-Q

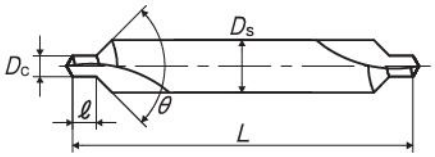
Low Helix Carbide Center Drills-Type A 90°

Specification

HF

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	CC1.0Q	4	35	1	1	△
1.5 × 90° × 5	CC1.5Q	5	40	1.5	1	△
2 × 90° × 6	CC2.0Q	6	45	2	1	△
2.5 × 90° × 7.7	CC2.5Q	7.7	50	2.5	1	△
2.5 × 90° × 8	CC2.5Q-8	8	50	2.5	1	△
3 × 90° × 7.7	CC3.0Q	7.7	55	3	1	△
3 × 90° × 8	CC3.0Q-8	8	55	3	1	△
4 × 90° × 10	CC4.0Q	10	65	4.5	1	△
5 × 90° × 11	CC5.0Q	11	78	5.5	1	△
5 × 90° × 12	CC5.0Q-12	12	78	5.5	1	△
6 × 90° × 18	CC6.0Q	18	90	6.5	1	△

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

CE-QL

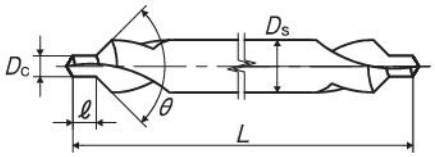
Long Shank High Helix Center Drills-Type A 90°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	CL1.0Z	4	100	1	1	◎
	CM1.0Z		150			△
1.5 × 90° × 5	CL1.5Z	5	100	1.5	1	◎
	CM1.5Z		150			○
2 × 90° × 6	CL2.0Z	6	100	2	1	◎
	CM2.0Z		150			○
2.5 × 90° × 8	CL2.5Z	8	100	2.5	1	◎
	CM2.5Z		150			○
3 × 90° × 8	CL3.0Z	8	100	3	1	◎
	CM3.0Z		150			○
4 × 90° × 10	CL4.0Z	10	100	4.5	1	◎
	CM4.0Z		150			○
5 × 90° × 12	CL5.0Z	12	100	5.5	1	◎
	CM5.0Z		150			○

CE-QL V

Long Shank High Helix Center Drills-Type A 90°, Coated

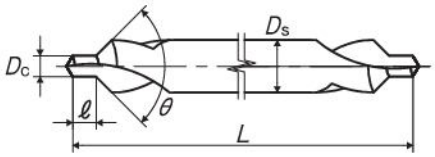
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	VCL1.0Z	4	100	1	1	○
	VCM1.0Z		150			△
1.5 × 90° × 5	VCL1.5Z	5	100	1.5	1	○
	VCM1.5Z		150			△
2 × 90° × 6	VCL2.0Z	6	100	2	1	○
	VCM2.0Z		150			
2.5 × 90° × 8	VCL2.5Z	8	100	2.5	1	○
	VCM2.5Z		150			
3 × 90° × 8	VCL3.0Z	8	100	3	1	○
	VCM3.0Z		150			
4 × 90° × 10	VCL4.0Z	10	100	4.5	1	○
	VCM4.0Z		150			
5 × 90° × 12	VCL5.0Z	12	100	5.5	1	○
	VCM5.0Z		150			

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length
Dc	Ds	L	ℓ

C-CD-QL

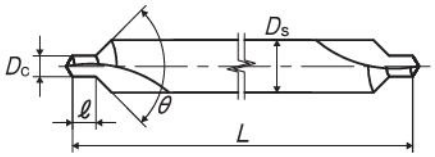
Long Shank Low Helix Carbide Center Drills-Type A 90°

Specification

HF

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 90° × 4	CCL1.0Q	4	100	1	1	△
1.5 × 90° × 5	CCL1.5Q	5	100	1.5	1	△
2 × 90° × 6	CCL2.0Q	6	100	2	1	△
	CCM2.0Q		150			
2.5 × 90° × 8	CCL2.5Q	8	100	2.5	1	△
	CCM2.5Q		150			
3 × 90° × 8	CCL3.0Q	8	100	3	1	△
	CCM3.0Q		150			
4 × 90° × 10	CCL4.0Q	10	100	4.5	1	△
	CCM4.0Q		150			
5 × 90° × 12	CCL5.0Q	12	100	5.5	1	△
	CCM5.0Q		150			

CEIR

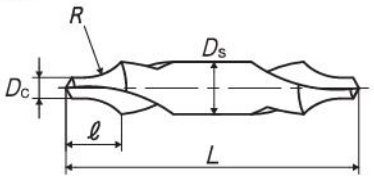
High Helix Center Drills-JIS Type R

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Rmax (mm)	Rmin (mm)	Type	Stock
1 × R × 3.15	CE1.0RI	3.15	31.5	3	3.15	2.5	1	◎
1.25 × R × 3.15	CE1.25RI	3.15	31.5	3.35	4	3.15	1	◎
1.6 × R × 4	CE1.6RI	4	35.5	4.25	5	4	1	◎
2 × R × 5	CE2.0RI	5	40	5.3	6.3	5	1	◎
2.5 × R × 6.3	CE2.5RI	6.3	45	6.7	8	6.3	1	◎
3.15 × R × 8	CE3.15RI	8	50	8.5	10	8	1	◎
4 × R × 10	CE4.0RI	10	56	10.6	12.5	10	1	◎
5 × R × 12.5	CE5.0RI	12.5	63	13.2	16	12.5	1	◎
6.3 × R × 16	CE6.3RI	16	71	17	20	16	1	◎
8 × R × 20	CE8.0RI	20	80	21.2	25	20	1	◎
10 × R × 25	CE010RI	25	100	26.5	31.5	25	1	◎

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Cut length	Rmax (mm)	Rmin (mm)
Dc	Ds	L	ℓ	–	–

CD-R

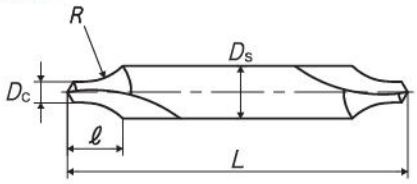
Low Helix Center Drills-Type R

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	L (mm)	ℓ (mm)	Rmax (mm)	Type	Stock
0.7 × R × 3.5	CY0.7R	3.5	35	2.5	2.4	1	△
0.8 × R × 3.5	CY0.8R	3.5	35	2.6	2.4	1	△
1 × R × 4	CY1.0R	4	35	3.25	2.9	1	△
1.5 × R × 5	CY1.5R	5	40	4.6	4.6	1	○
2 × R × 6	CY2.0R	6	45	5.75	5.8	1	○
2.5 × R × 7.7	CY2.5R	7.7	50	7.3	7.4	1	○
3 × R × 7.7	CY3.0R	7.7	55	8.3	9.3	1	○
4 × R × 10	CY4.0R	10	65	10.6	11.5	1	○
5 × R × 11	CY5.0R	11	78	12.4	14.7	1	△
6 × R × 16	CY6.0R-16	16	90	16.9	18.5	1	△
6 × R × 18	CY6.0R	18	90	17.8	18.5	1	△

CESB

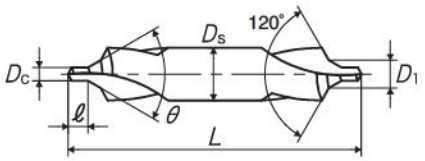
High Helix Center Drills-JIS Type B 60°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	D_1 (mm)	L (mm)	ℓ (mm)	Type	Stock
0.5 × 60° × 3.15	CEB0.5	3.15	1.06	31.5	0.8	1	◎
0.63 × 60° × 3.15	CEB0.63	3.15	1.32	31.5	1	1	◎
0.8 × 60° × 3.15	CEB0.8	3.15	1.7	31.5	1.2	1	◎
1 × 60° × 4	CEB1.0	4	2.12	35.5	1.5	1	◎
1.25 × 60° × 5	CEB1.25	5	2.65	40	1.9	1	◎
1.6 × 60° × 6.3	CEB1.6	6.3	3.35	45	2.4	1	◎
2 × 60° × 8	CEB2.0	8	4.25	50	3	1	◎
2.5 × 60° × 10	CEB2.5	10	5.3	56	3.8	1	◎
3.15 × 60° × 11.2	CEB3.15	11.2	6.7	60	4.8	1	◎
4 × 60° × 14	CEB4.0	14	8.5	67	6	1	◎
5 × 60° × 18	CEB5.0	18	10.6	75	7.5	1	◎
6.3 × 60° × 20	CEB6.3	20	13.2	80	9.2	1	◎
8 × 60° × 25	CEB8.0	25	17	100	11.5	1	◎
10 × 60° × 31.5	CEB010	31.5	21.2	125	14.2	1	◎

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Maximum dia.	Overall length	Drill length
Dc	Ds	D_1	L	ℓ

CE-S(II)

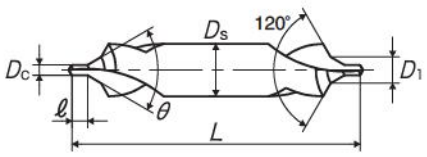
High Helix Center Drills-Type B 60°, (Old JIS Type 2)

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	D_1 (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 6	CE21.0	6	2.5	45	1.5	1	○
1.5 × 60° × 8	CE21.5	8	4	50	2	1	○
2 × 60° × 10	CE22.0	10	5	55	3	1	○
2.5 × 60° × 12	CE22.5	12	6.5	60	3.5	1	○
3 × 60° × 14	CE23.0	14	8	65	4	1	○
4 × 60° × 18	CE24.0	18	10	76	5	1	○
5 × 60° × 22	CE25.0	22	12	88	6.5	1	○
6 × 60° × 25	CE26.0	25	15	100	8	1	○

Drill dia.	Shank dia.	Maximum dia.	Overall length	Drill length
Dc	Ds	D_1	L	ℓ

CD-S(II)

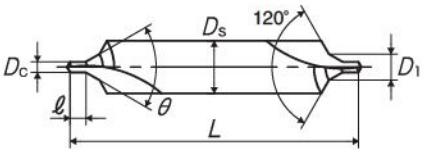
Low Helix Center Drills-Type B 60°, (Old JIS Type 2)

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	D_1 (mm)	L (mm)	ℓ (mm)	Type	Stock
1 × 60° × 6	C21.0	6	2.5	45	1.5	1	○
1.5 × 60° × 8	C21.5	8	4	50	2	1	○
2 × 60° × 10	C22.0	10	5	55	3	1	○
2.5 × 60° × 12	C22.5	12	6.5	60	3.5	1	○
3 × 60° × 14	C23.0	14	8	65	4	1	○
4 × 60° × 18	C24.0	18	10	76	5	1	○
5 × 60° × 22	C25.0	22	12	88	6.5	1	○
6 × 60° × 25	C26.0	25	15	100	8	1	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	–	Maximum dia.	Overall length	Drill length	Larger cut length
Dc	Ds	D_1	D_2	L	ℓ	ℓ_2

CESC

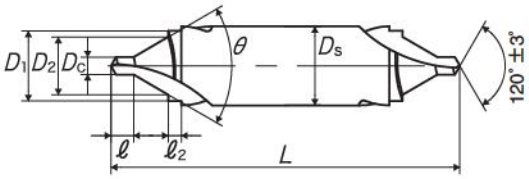
High Helix Center Drills-JIS Type C 60°

Specification

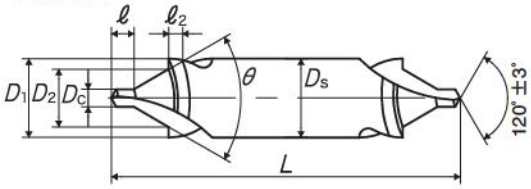
HSS

For icon explanation, refer to P.24

TYPE: 1



TYPE: 2



Segment : 51

Size Dc × θ × Ds	Code	Ds (mm)	D_1 (mm)	D_2 (mm)	L (mm)	ℓ (mm)	ℓ_2 (mm)	Type	Stock
0.5 × 60° × 3.15	CEC0.5	3.15	1.6	1.06	31.5	0.8	0.6	1	○
0.63 × 60° × 3.15	CEC0.63	3.15	2	1.32	31.5	1	0.8	1	○
0.8 × 60° × 3.15	CEC0.8	3.15	2.5	1.7	31.5	1.2	1	1	○
1 × 60° × 3.15	CEC1.0	3.15	3.15	2.12	31.5	1.5	1.2	2	○
1.25 × 60° × 4	CEC1.25	4	4	2.65	35.5	1.9	1.5	2	○
1.6 × 60° × 5	CEC1.6	5	5	3.35	40	2.4	1.8	2	○
2 × 60° × 6.3	CEC2.0	6.3	6.3	4.25	45	3	2.2	2	○
2.5 × 60° × 8	CEC2.5	8	8	5.3	50	3.8	3	2	○
3.15 × 60° × 10	CEC3.15	10	10	6.7	56	4.8	3.5	2	○
4 × 60° × 12.5	CEC4.0	12.5	12.5	8.5	63	6	4.2	2	○
5 × 60° × 16	CEC5.0	16	16	10.6	71	7.5	5.5	2	○
6.3 × 60° × 18	CEC6.3	18	18	13.2	75	9.2	5.5	2	○
8 × 60° × 22.4	CEC8.0	22.4	22.4	17	90	11.5	5.5	2	○
10 × 60° × 28	CEC010	28	28	21.2	112	14.2	7	2	○

JOINT TOOLS

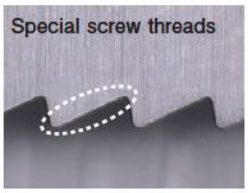
Product features

1 Economy

To one holder, it is possible to attach various kinds of cutters selected to meet the application.
If the cutter has become damaged, all you have to do is only to change the cutter.

2 Increased fastening power.

Special screw threads widen the contact face and strengthen the fastening power.



3 Severe run-out tolerance.

Severe run-out tolerance is secured by having cone shape face at jointing portion.

Jointing portion (mating with cone face)

4 High rigidity.

Powerful tightening assures the high rigidity, and enables cutting operation even under heavy load.

Joint tool

Remarks

Please use spanners (JIS B4630) when exchanging cutters.
For spanner's width size, refer to H sizes shown in specification table.
Take special care while tightening, otherwise excessive tightening may cause breakage on cutting edge.

【Reference】 Tightening torque (N-m)

Adaptable holder Shank dia	Tightening torque
14	5
16	10
20	30

Obtainable from
Video site shown in right

Drill dia.	Shank dia.	Overall length	Drill length	Body length	–
Dc	Ds	L	ℓ	ℓ2	H

JO-CES

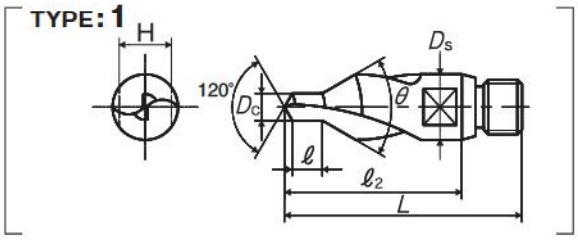
Joint- High Helix Center Drills-Type A 60°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 5C

Size Dc × θ	Code	Ds (mm)	L (mm)	ℓ (mm)	ℓ2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
4 × 60°	JCE4.0	10	37.5	4.5	27.5	8	14	1	○
5 × 60°	JCE5.0	12	43.5	5.5	32.5	10	16	1	○
6 × 60°	JCE6.0	16	48.5	6.5	34.5	13	20	1	○

JO-CES V

Joint- High Helix Center Drills-Type A 60°, Coated

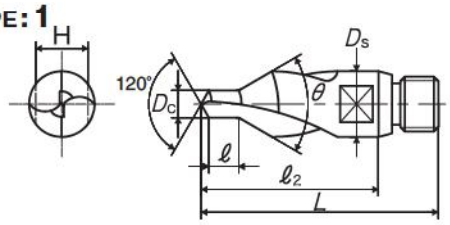
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ	Code	Ds (mm)	L (mm)	ℓ (mm)	ℓ2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
4 × 60°	JVCE4.0	10	37.5	4.5	27.5	8	14	1	○
5 × 60°	JVCE5.0	12	43.5	5.5	32.5	10	16	1	○
6 × 60°	JVCE6.0	16	48.5	6.5	34.5	13	20	1	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Overall length	Drill length	Body length	–
Dc	Ds	L	ℓ	ℓ2	H

JO-CDS

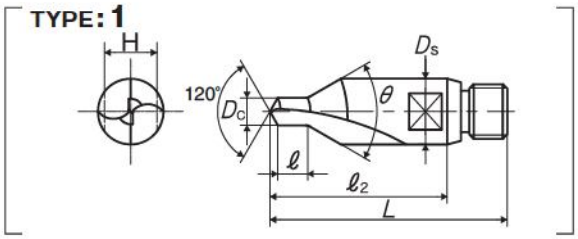
Joint- Low Helix Center Drills-Type A 60°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Dc × θ	Code	Ds (mm)	L (mm)	ℓ (mm)	ℓ2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
4 × 60°	JCY4.0	10	37.5	4.5	27.5	8	14	1	○
5 × 60°	JCY5.0	12	43.5	5.5	32.5	10	16	1	○
6 × 60°	JCY6.0	16	48.5	6.5	34.5	13	20	1	○

Drill dia.	Shank dia.	Overall length	Drill length	Body length	–
Dc	Ds	L	ℓ	ℓ2	H

JO-CDS V

Joint- Low Helix Center Drills-Type A 60°, Coated

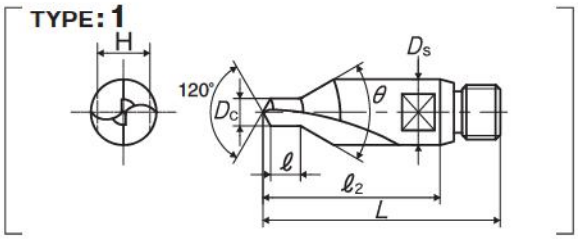
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ	Code	Ds (mm)	L (mm)	ℓ (mm)	ℓ2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
4 × 60°	JVCY4.0	10	37.5	4.5	27.5	8	14	1	○
5 × 60°	JVCY5.0	12	43.5	5.5	32.5	10	16	1	○
6 × 60°	JVCY6.0	16	48.5	6.5	34.5	13	20	1	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Maximum dia.	Overall length	Drill length	Body length	–
Dc	Ds	D_1	L	ℓ	ℓ_2	H

JO-CDS(II)

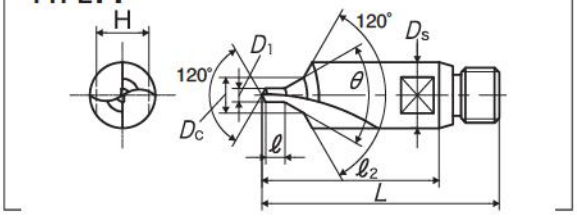
Joint- Low Helix Center Drills-Type B 60°, (Old JIS Type 2)

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Dc × θ	Code	Ds (mm)	D_1 (mm)	L (mm)	ℓ (mm)	ℓ_2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
2 × 60°	JC22.0	10	5	37.5	3	27.5	8	14	1	○
2.5 × 60°	JC22.5	12	6.5	43.5	3.5	32.5	10	16	1	○
3 × 60°	JC23.0	16	8	48.5	4	34.5	13	20	1	○

Drill dia.	Shank dia.	Overall length	Drill length	Body length	–
Dc	Ds	L	ℓ	ℓ2	H

JO-C-CDS

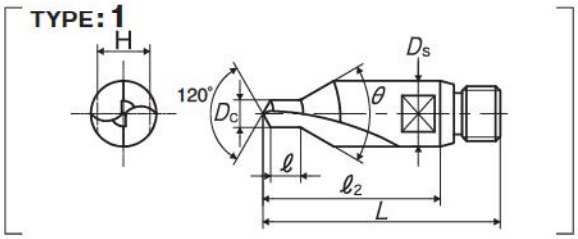
Joint- Low Helix Carbide Center Drills-Type A 60°

Specification

HF

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ	Code	Ds (mm)	L (mm)	ℓ (mm)	ℓ2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
4 × 60°	JCCY4.0	10	37.5	4.5	27.5	8	14	1	○
5 × 60°	JCCY5.0	12	43.5	5.5	32.5	10	16	1	○
6 × 60°	JCCY6.0	16	48.5	6.5	34.5	13	20	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Shank dia.	Point dia.	Overall length	Body length	–
Ds	Dc	L	ℓ2	H

JO-PEQ

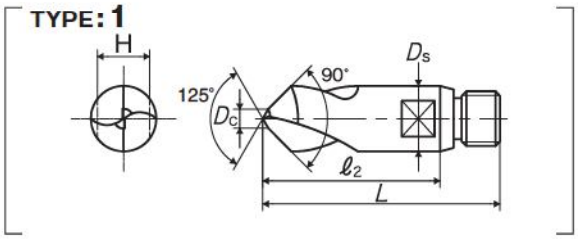
Joint- Point Drills 90°

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 52

Size Ds × Dc	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
10 × 3	JPE010Q	10	3	37.5	27.5	8	14	1	○
12 × 3.5	JPE012Q	12	3.5	43.5	32.5	10	16	1	○
16 × 4	JPE016Q	16	4	48.5	34.5	13	20	1	○

JO-PEQ V

Joint- Point Drills 90°, Coated

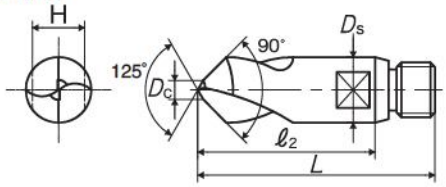
Specification

HSS Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Ds × Dc	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
10 × 3	JVPE010Q	10	3	37.5	27.5	8	14	1	○
12 × 3.5	JVPE012Q	12	3.5	43.5	32.5	10	16	1	○
16 × 4	JVPE016Q	16	4	48.5	34.5	13	20	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Shank dia.	Point dia.	Overall length	Body length	–
Ds	Dc	L	ℓ_2	H

JO-C-PEQ V

Joint- Carbide Point Drills 90°, Coated

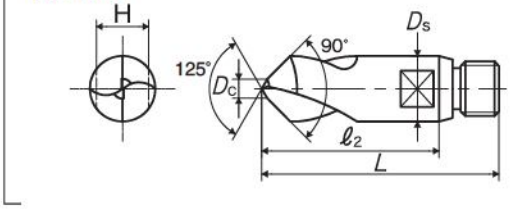
Specification

HF **Coating**

For icon explanation, refer to P.24

■Optimum coating suitable for the cutting condition

TYPE: 1



Segment : 51

Size Ds × Dc	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
10 × 3	JVCPE010Q	10	3	37.5	27.5	8	14	1	○
12× 3.5	JVCPE012Q	12	3.5	43.5	32.5	10	16	1	○
16× 4	JVCPE016Q	16	4	48.5	34.5	13	20	1	○

Drill dia.	Shank dia.	Overall length	Body length	–
Dc	Ds	L	ℓ_2	H

JO-NCSD V

Joint- NC Starting Drills for Beveling, Coated

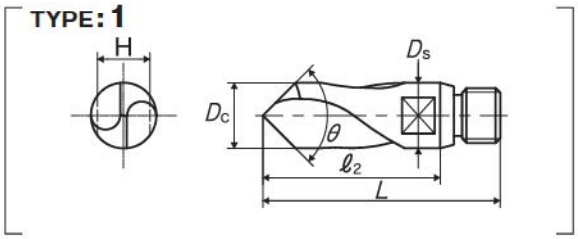
Specification

HSS-Co Coating

■Optimum coating suitable for the cutting condition

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size Dc × θ	Code	Ds (mm)	L (mm)	ℓ_2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
10 × 90°	JVCS-D010Q	10	37.5	27.5	8	14	1	○
12 × 90°	JVCS-D012Q	12	43.5	32.5	10	16	1	○
16 × 90°	JVCS-D016Q	16	48.5	34.5	13	20	1	○

Think threads with YAMAWA

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Drill dia.	Shank dia.	Tool end dia.	Overall length	Cutting edge length	Body length	–
D_2	Ds	Dc	L	ℓ	ℓ_2	H

JO-CSQM

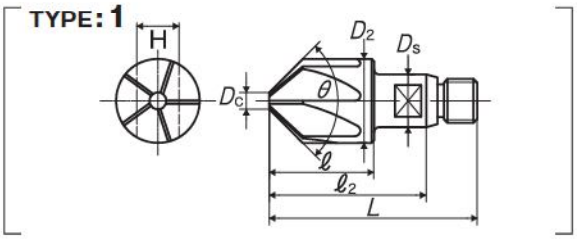
Joint- Countersinks 90°, Drilling Machine Use

Specification

HSS

For icon explanation, refer to P.24

TYPE: 1



Segment : 51

Size $D^2 \times \theta$	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ (mm)	ℓ_2 (mm)	H (mm)	Adaptable holder Shank dia	Type	Stock
16 × 90°	JCS016QM9	10	3.2	37.5	20	27.5	8	14	1	○
20 × 90°	JCS020QM9	12	4	43.5	24	32.5	10	16	1	○

Shank dia.	Overall length	Body length	–
Ds	L	ℓ	H

JO-HOLDER

Holders for Joint Tools, for 150mm and for 200mm

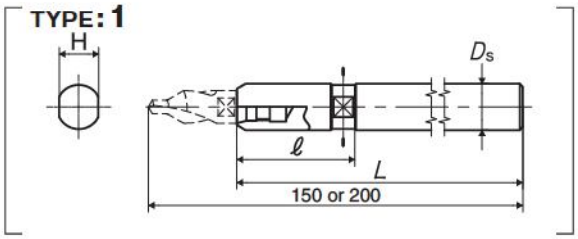
Specification

Alloy steel

For icon explanation, refer to P.24

■Each holder can attach itself to several types of cutters depending on their usage.

TYPE: 1



Segment : 5A

Size	Code	Ds (mm)	L (mm)	ℓ (mm)	H (mm)	Applicable cutting edge shank dia.	Type	Stock
150mm	JH1014M	14	122.5	36	12	10	1	○
150mm	JH1216M	16	117.5	37	14	12	1	○
150mm	JH1620M	20	115.5	41	17	16	1	○
200mm	JH1014N	14	172.5	36	12	10	1	○
200mm	JH1216N	16	167.5	37	14	12	1	○
200mm	JH1620N	20	165.5	41	17	16	1	○

Think threads with YAMAWA

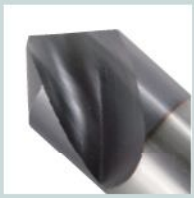
◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

MEMO

POINT DRILLS

Product features

- ●High rigidity design of the drills enables high speed cutting.
- ●High helix design enables high accuracy of surface finishing due to excellent cutting performance.



Point angle:125°,
Chamfering angle:90° (60°)
By using two types of angles, centering process and chamfering process are obtained at the same time.

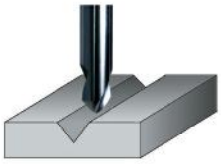
- ●Different from normal center drills, because of no drill portion, there is no breakage trouble of drill portion.
- ●Two processes, centering and chamfering, are obtained at the same time. Point drills are also used for other processes such as fluting.
- ●The figures of drill end are two stepped flat type. This type enables excellent chamfering, and high precision cutting becomes possible.

Examples of usage

Centering Chamfering

Beveling

Fluting



Cutting processes

Point drills

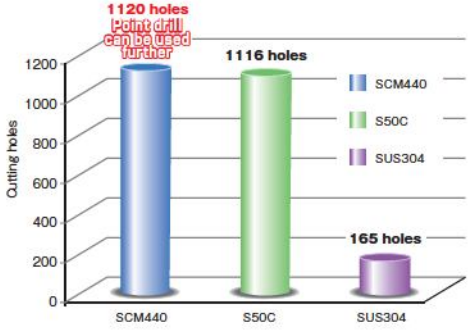
Centering process and chamfering process are obtained at the same time.

Drilling

Tapping

Test of continuous centering

Tool	Work material	Cutting speed	Feed	Dia. of chamfer hole	Cutting depth	Machine	Lubricant
PE-Q 12× (3.5) ×90°	SCM440 (Alloy steel)	25m/min	0.15mm/rev	8.0mm	3.0mm	Machining center of vertical direction	Water soluble oil ×20
	S50C (Carbon steel)	25m/min	0.2mm/rev				
	SUS304 (Stainless steel)	15m/min	0.1mm/rev				



Shank dia.	Point dia.	Overall length	Point length
Ds	Dc	L	ℓ_1

PE-Q

Point Drills 90°

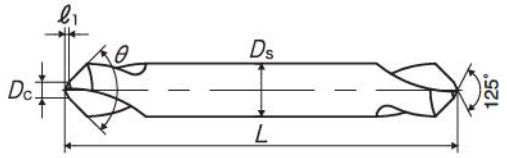
Specification

HSS

For icon explanation, refer to P.24

■PE-Q is the point drill enabling positioning (125° edge angle) and beveling (90°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design.

TYPE: 1



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_1 (mm)	Type	Stock
3 × 0.5 × 90°	PE3.0Q	3	0.5	40	0.13	1	○
4 × 1 × 90°	PE4.0Q	4	1	45	0.26	1	○
6 × 2 × 90°	PE6.0Q	6	2	55	0.52	1	○
8 × 2.5 × 90°	PE8.0Q	8	2.5	65	0.65	1	○
10 × 3 × 90°	PE010Q	10	3	75	0.78	1	○
12 × 3.5 × 90°	PE012Q	12	3.5	85	0.91	1	○
16 × 4 × 90°	PE016Q	16	4	90	1.04	1	○
20 × 5 × 90°	PE020Q	20	5	100	1.30	1	○

PE-Q V

Point Drills 90°, Coated

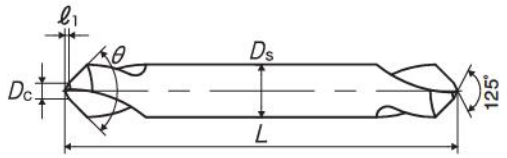
Specification

HSS Coating

For icon explanation, refer to P.24

■PE-Q V is the coated point drill enabling positioning (125° edge angle) and beveling (90°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design. Optimum coating suitable for the cutting condition.

TYPE: 1



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ1 (mm)	Type	Stock
3 × 0.5 × 90°	VPE3.0Q	3	0.5	40	0.13	1	○
4 × 1 × 90°	VPE4.0Q	4	1	45	0.26	1	○
6 × 2 × 90°	VPE6.0Q	6	2	55	0.52	1	○
8 × 2.5 × 90°	VPE8.0Q	8	2.5	65	0.65	1	○
10 × 3 × 90°	VPE010Q	10	3	75	0.78	1	○
12 × 3.5 × 90°	VPE012Q	12	3.5	85	0.91	1	○
16 × 4 × 90°	VPE016Q	16	4	90	1.04	1	○
20 × 5 × 90°	VPE020Q	20	5	100	1.30	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Shank dia.	Point dia.	Overall length	Point length
Ds	Dc	L	ℓ_1

C-PE-Q V

Carbide Point Drills 90°, Coated

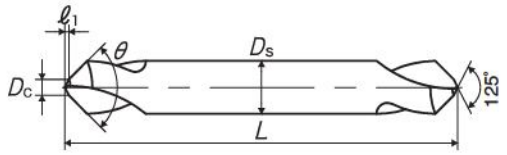
Specification

HF Coating

For icon explanation, refer to P.24

■C-PE-Q V is the carbide point drill enabling positioning (125° edge angle) and beveling (90°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design. Optimum coating suitable for the cutting condition

TYPE: 1



Segment : 52

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_1 (mm)	Type	Stock
3 × 0.5 × 90°	VCPE3.0Q	3	0.5	40	0.13	1	○
4 × 1 × 90°	VCPE4.0Q	4	1	45	0.26	1	○
6 × 2 × 90°	VCPE6.0Q	6	2	55	0.52	1	○
8 × 2.5 × 90°	VCPE8.0Q	8	2.5	65	0.65	1	○
10 × 3 × 90°	VCPE010Q	10	3	75	0.78	1	○
12 × 3.5 × 90°	VCPE012Q	12	3.5	85	0.91	1	○
16 × 4 × 90°	VCPE016Q	16	4	90	1.04	1	○

PE-QL V

Long Shank Point Drills 90°, Coated

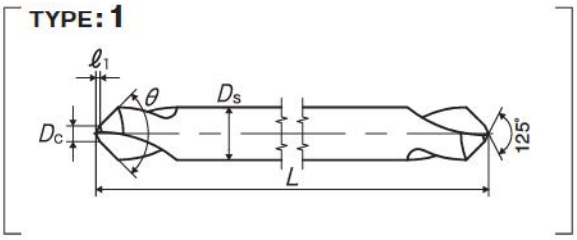
Specification

HSS Coating

For icon explanation, refer to P.24

■PE-QL V is the long shank coated point drill enabling positioning (125° edge angle) and beveling (90°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design. Optimum coating suitable for the cutting condition.

TYPE: 1



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ1 (mm)	Type	Stock
4 × 1 × 90°	VPEL4.0Q	4	1	100	0.26	1	○
6 × 2 × 90°	VPEL6.0Q	6	2	100	0.52	1	○
8 × 2.5 × 90°	VPEL8.0Q	8	2.5	100	0.65	1	○
	VPEM8.0Q			150			
10 × 3 × 90°	VPEL010Q	10	3	100	0.78	1	○
	VPEM010Q			150			
12 × 3.5 × 90°	VPEL012Q	12	3.5	100	0.91	1	○
	VPEM012Q			150			
16 × 4 × 90°	VPEM016Q	16	4	150	1.04	1	○
20 × 5 × 90°	VPEM020Q	20	5	150	1.30	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Shank dia.	Point dia.	Overall length	Point length
Ds	Dc	L	ℓ_1

PE-S

Point Drills 60°

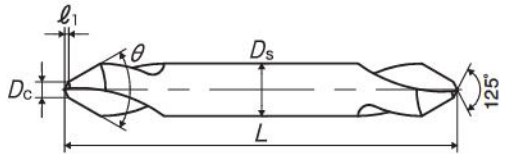
Specification

HSS

For icon explanation, refer to P.24

■PE-S is the point drill enabling positioning (125° edge angle) and beveling (60°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design.

TYPE: 1



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_1 (mm)	Type	Stock
3 × 0.5 × 60°	PE3.0S	3	0.5	40	0.13	1	○
4 × 1 × 60°	PE4.0S	4	1	45	0.26	1	○
6 × 2 × 60°	PE6.0S	6	2	55	0.52	1	○
8 × 2.5 × 60°	PE8.0S	8	2.5	65	0.65	1	○
10 × 3 × 60°	PE010S	10	3	75	0.78	1	○
12 × 3.5 × 60°	PE012S	12	3.5	85	0.91	1	○
16 × 4 × 60°	PE016S	16	4	90	1.04	1	○
20 × 5 × 60°	PE020S	20	5	100	1.30	1	○

PE-S V

Point Drills 60°, Coated

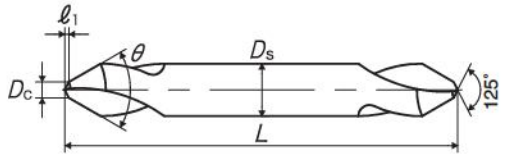
Specification

HSS Coating

For icon explanation, refer to P.24

■PE-S V is the coated point drill enabling positioning (125° edge angle) and beveling (60°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design. Optimum coating suitable for the cutting condition.

TYPE: 1



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ1 (mm)	Type	Stock
3 × 0.5 × 60°	VPE3.0S	3	0.5	40	0.13	1	○
4 × 1 × 60°	VPE4.0S	4	1	45	0.26	1	○
6 × 2 × 60°	VPE6.0S	6	2	55	0.52	1	○
8 × 2.5 × 60°	VPE8.0S	8	2.5	65	0.65	1	○
10 × 3 × 60°	VPE010S	10	3	75	0.78	1	○
12 × 3.5 × 60°	VPE012S	12	3.5	85	0.91	1	○
16 × 4 × 60°	VPE016S	16	4	90	1.04	1	○
20 × 5 × 60°	VPE020S	20	5	100	1.30	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Shank dia.	Point dia.	Overall length	Point length
Ds	Dc	L	ℓ_1

C-PE-S V

Carbide Point Drills 60°,Coated

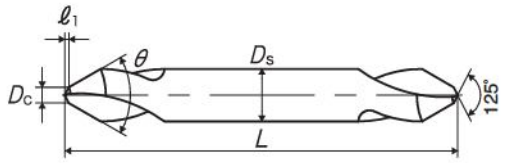
Specification

HF **Coating**

For icon explanation, refer to P.24

■C-PE-S V is the carbide point drill enabling positioning (125° edge angle) and beveling (60°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design. Optimum coating suitable for the cutting condition.

TYPE: 1



Segment : 52

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_1 (mm)	Type	Stock
6 × 2 × 60°	VCPE6.0S	6	2	55	0.52	1	○
8 × 2.5 × 60°	VCPE8.0S	8	2.5	65	0.65	1	○
10 × 3 × 60°	VCPE010S	10	3	75	0.78	1	○

Shank dia.	Point dia.	Overall length	Point length
Ds	Dc	L	ℓ_1

PE-SL V

Long Shank Point Drills 60°, Coated

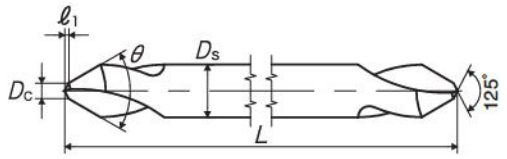
Specification

HSS Coating

For icon explanation, refer to P.24

■PE-SL V is the point drill enabling positioning (125 ° edge angle) and beveling (60°) simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design. Optimum coating suitable for the cutting condition.

TYPE: 1



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ_1 (mm)	Type	Stock
4 × 1 × 60°	VPEL4.0S	4	1	100	0.26	1	○
6 × 2 × 60°	VPEL6.0S	6	2	100	0.52	1	○
8 × 2.5 × 60°	VPEL8.0S	8	2.5	100	0.65	1	○
	VPEM8.0S			150			
10 × 3 × 60°	VPEL010S	10	3	100	0.78	1	○
	VPEM010S			150			
12 × 3.5 × 60°	VPEL012S	12	3.5	100	0.91	1	○
	VPEM012S			150			
16 × 4 × 60°	VPEM016S	16	4	150	1.04	1	○

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.