

# General Hole Processing Series

# DRILLING TOOLS **SERIES**

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## Carbide drill bit for steel processing

- characteristic of carbide drill bit for steel processing .....C002
- carbide drill bit for steel processing 5XD (outside cooling) .....C003
- carbide drill bit for steel processing 5XD (inner-cooling) .....C007

## HSD indexable drills

- Feature of HSD indexable drills .....C011
- HSD indexable insert drill .....C012
- HWD indexable insert drill .....C020
- Insert of HSD indexable drills .....C026
- Recommended cutting conditions .....C028

## Double-side chamfering short-hole drill

- Double-side chamfering short-hole drill .....C030

## Interchangeable crown drill tip

- .....C032



A

# Carbide drill bit for steel processing

B

## Product Feature

C

### ■ Functional feature

It is suitable for processing low carbon steel, medium carbon steel and alloy steel below HRC28°. Strong centering ability, stable dimensional accuracy and good surface quality.

D

E

### ■ Manufacturing characteristics

Cutting edge tolerance: m7

Flute type: Special design, easy to remove chips

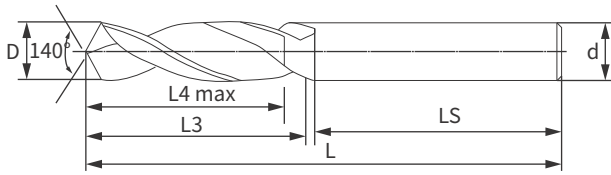
Horizontal cutting edge: horizontal modification, Halnn standard

Handle form: DIN6535HA h6

Coating: He/NaNo



## Carbide drill bit for steel processing 5XD (external coolant)



Part number	D	d	L	L3	L4	LS	Inventory
CWE05-0300-P	3	4	62	28	23	36	●
CWE05-0310-P	3.1	4	62	28	23	36	●
CWE05-0320-P	3.2	4	62	28	23	36	●
CWE05-0330-P	3.3	4	62	28	23	36	●
CWE05-0340-P	3.4	4	62	28	23	36	●
CWE05-0350-P	3.5	4	62	28	23	36	●
CWE05-0360-P	3.6	4	62	28	23	36	●
CWE05-0370-P	3.7	4	62	28	23	36	●
CWE05-0380-P	3.8	4	62	28	29	36	●
CWE05-0390-P	3.9	4	62	28	29	36	●
CWE05-0400-P	4	4	62	28	29	36	●
CWE05-0410-P	4.1	6	74	36	29	36	●
CWE05-0420-P	4.2	6	74	36	29	36	●
CWE05-0430-P	4.3	6	74	36	29	36	●
CWE05-0440-P	4.4	6	74	36	29	36	●
CWE05-0450-P	4.5	6	74	36	29	36	●
CWE05-0460-P	4.6	6	74	36	29	36	●
CWE05-0470-P	4.7	6	74	36	29	36	●
CWE05-0480-P	4.8	6	82	44	35	36	●
CWE05-0490-P	4.9	6	82	44	35	36	●
CWE05-0500-P	5	6	82	44	35	36	●
CWE05-0510-P	5.1	6	82	44	35	36	●
CWE05-0520-P	5.2	6	82	44	35	36	●
CWE05-0530-P	5.3	6	82	44	35	36	●
CWE05-0540-P	5.4	6	82	44	35	36	●
CWE05-0550-P	5.5	6	82	44	35	36	●
CWE05-0560-P	5.6	6	82	44	35	36	●
CWE05-0570-P	5.7	6	82	44	35	36	●
CWE05-0580-P	5.8	6	82	44	35	36	●
CWE05-0590-P	5.9	6	82	44	35	36	●
CWE05-0600-P	6	6	82	44	35	36	●
CWE05-0610-P	6.1	8	91	53	43	36	●
CWE05-0620-P	6.2	8	91	53	43	36	●
CWE05-0630-P	6.3	8	91	53	43	36	●
CWE05-0640-P	6.4	8	91	53	43	36	●
CWE05-0650-P	6.5	8	91	53	43	36	●
CWE05-0660-P	6.6	8	91	53	43	36	●
CWE05-0670-P	6.7	8	91	53	43	36	●

Note: ● have stock ○ for reservation

A

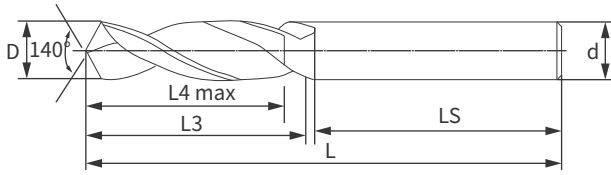
## Carbide drill bit for steel processing 5XD (external coolant)

B

C

D

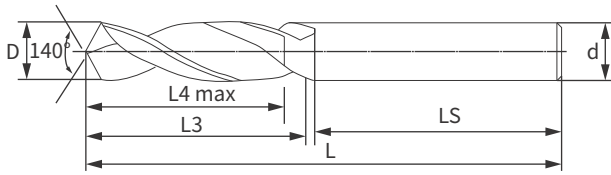
E



Part number	D	d	L	L3	L4	LS	Inventory
CWE05-0680-P	6.8	8	91	53	43	36	●
CWE05-0690-P	6.9	8	91	53	43	36	●
CWE05-0700-P	7	8	91	53	43	36	●
CWE05-0710-P	7.1	8	91	53	43	40	●
CWE05-0720-P	7.2	8	91	53	43	40	●
CWE05-0730-P	7.3	8	91	53	43	40	●
CWE05-0740-P	7.4	8	91	53	43	40	●
CWE05-0750-P	7.5	8	91	53	43	40	●
CWE05-0760-P	7.6	8	91	53	43	40	●
CWE05-0770-P	7.7	8	91	53	43	40	●
CWE05-0780-P	7.8	8	91	53	43	40	●
CWE05-0790-P	7.9	8	91	53	43	40	●
CWE05-0800-P	8	8	91	53	43	40	●
CWE05-0810-P	8.1	10	103	61	49	40	●
CWE05-0820-P	8.2	10	103	61	49	40	●
CWE05-0830-P	8.3	10	103	61	49	40	●
CWE05-0840-P	8.4	10	103	61	49	40	●
CWE05-0850-P	8.5	10	103	61	49	40	●
CWE05-0860-P	8.6	10	103	61	49	40	●
CWE05-0870-P	8.7	10	103	61	49	40	●
CWE05-0880-P	8.8	10	103	61	49	40	●
CWE05-0890-P	8.9	10	103	61	49	40	●
CWE05-0900-P	9	10	103	61	49	40	●
CWE05-0910-P	9.1	10	103	61	49	40	●
CWE05-0920-P	9.2	10	103	61	49	40	●
CWE05-0930-P	9.3	10	103	61	49	40	●
CWE05-0940-P	9.4	10	103	61	49	40	●
CWE05-0950-P	9.5	10	103	61	49	40	●
CWE05-0960-P	9.6	10	103	61	49	40	●
CWE05-0970-P	9.7	10	103	61	49	40	●
CWE05-0980-P	9.8	10	103	61	49	40	●
CWE05-0990-P	9.9	10	103	61	49	40	●
CWE05-1000-P	10	10	103	61	49	40	●
CWE05-1010-P	10.1	12	118	71	56	45	●
CWE05-1020-P	10.2	12	118	71	56	45	●
CWE05-1030-P	10.3	12	118	71	56	45	●
CWE05-1040-P	10.4	12	118	71	56	45	●
CWE05-1050-P	10.5	12	118	71	56	45	●

Note: ● have stock ○ for reservation

## Carbide drill bit for steel processing 5XD (external coolant)

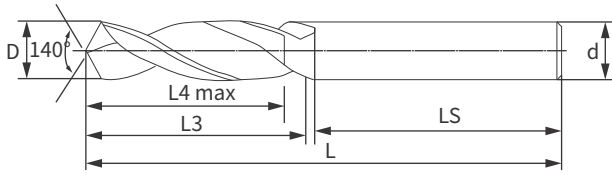


Part number	D	d	L	L3	L4	LS	Inventory
CWE05-1060-P	10.6	12	118	71	56	45	●
CWE05-1070-P	10.7	12	118	71	56	45	●
CWE05-1080-P	10.8	12	118	71	56	45	●
CWE05-1090-P	10.9	12	118	71	56	45	●
CWE05-1100-P	11	12	118	71	56	45	●
CWE05-1110-P	11.1	12	118	71	56	45	●
CWE05-1120-P	11.2	12	118	71	56	45	●
CWE05-1130-P	11.3	12	118	71	56	45	●
CWE05-1140-P	11.4	12	118	71	56	45	●
CWE05-1150-P	11.5	12	118	71	56	45	●
CWE05-1160-P	11.6	12	118	71	56	45	●
CWE05-1170-P	11.7	12	118	71	56	45	●
CWE05-1180-P	11.8	12	118	71	56	45	●
CWE05-1190-P	11.9	12	118	71	56	45	●
CWE05-1200-P	12	12	118	71	56	45	●
CWE05-1210-P	12.1	14	124	77	60	45	●
CWE05-1220-P	12.2	14	124	77	60	45	●
CWE05-1230-P	12.3	14	124	77	60	45	●
CWE05-1240-P	12.4	14	124	77	60	45	●
CWE05-1250-P	12.5	14	124	77	60	45	●
CWE05-1260-P	12.6	14	124	77	60	45	●
CWE05-1280-P	12.8	14	124	77	60	45	●
CWE05-1290-P	12.9	14	124	77	60	45	●
CWE05-1300-P	13	14	124	77	60	45	●
CWE05-1310-P	13.1	14	124	77	60	45	●
CWE05-1320-P	13.2	14	124	77	60	45	●
CWE05-1330-P	13.3	14	124	77	60	45	●
CWE05-1340-P	13.4	14	124	77	60	45	●
CWE05-1350-P	13.5	14	124	77	60	45	●
CWE05-1360-P	13.6	14	124	77	60	45	●
CWE05-1370-P	13.7	14	124	77	60	45	●
CWE05-1380-P	13.8	14	124	77	60	45	●
CWE05-1390-P	13.9	14	124	77	60	45	●
CWE05-1400-P	14	14	124	77	60	45	●
CWE05-1410-P	14.1	16	133	83	63	45	●
CWE05-1420-P	14.2	16	133	83	63	45	●
CWE05-1430-P	14.3	16	133	83	63	45	●
CWE05-1440-P	14.4	16	133	83	63	45	●

Note: ● have stock ○ for reservation

A  
B  
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D  
E

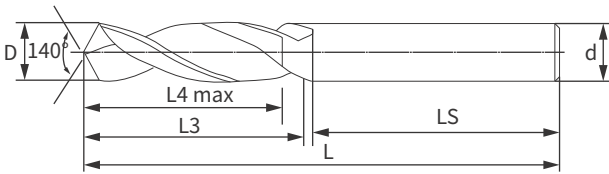
## Carbide drill bit for steel processing 5XD (external coolant)



Part number	D	d	L	L3	L4	LS	Inventory
CWE05-1450-P	14.5	16	133	83	63	45	●
CWE05-1460-P	14.6	16	133	83	63	45	●
CWE05-1470-P	14.7	16	133	83	63	45	●
CWE05-1480-P	14.8	16	133	83	63	45	●
CWE05-1490-P	14.9	16	133	83	63	45	●
CWE05-1500-P	15	16	133	83	63	45	●
CWE05-1510-P	15.1	16	133	83	63	45	●
CWE05-1520-P	15.2	16	133	83	63	45	●
CWE05-1530-P	15.3	16	133	83	63	45	●
CWE05-1540-P	15.4	16	133	83	63	45	●
CWE05-1550-P	15.5	16	133	83	63	45	●
CWE05-1560-P	15.6	16	133	83	63	45	●
CWE05-1570-P	15.7	16	133	83	63	45	●
CWE05-1580-P	15.8	16	133	83	63	45	●
CWE05-1590-P	15.9	16	133	83	63	45	●
CWE05-1600-P	16	16	133	83	63	45	●

Note: ● have stock ○ for reservation

## Carbide drill bit for steel processing 5XD (inner-cooling)

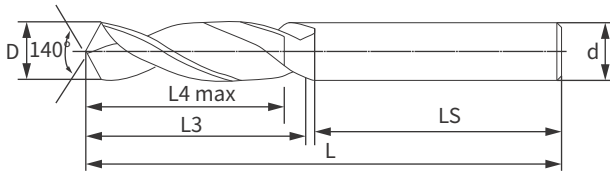


Part number	D	d	L	L3	L4	LS	Inventory
CWS05-0300-P	3	4	62	28	23	36	●
CWS05-0310-P	3.1	4	62	28	23	36	●
CWS05-0320-P	3.2	4	62	28	23	36	●
CWS05-0330-P	3.3	4	62	28	23	36	●
CWS05-0340-P	3.4	4	62	28	23	36	●
CWS05-0350-P	3.5	4	62	28	23	36	●
CWS05-0360-P	3.6	4	62	28	23	36	●
CWS05-0370-P	3.7	4	62	28	23	36	●
CWS05-0380-P	3.8	4	62	28	29	36	●
CWS05-0390-P	3.9	4	62	28	29	36	●
CWS05-0400-P	4	4	62	28	29	36	●
CWS05-0410-P	4.1	6	74	36	29	36	●
CWS05-0420-P	4.2	6	74	36	29	36	●
CWS05-0430-P	4.3	6	74	36	29	36	●
CWS05-0440-P	4.4	6	74	36	29	36	●
CWS05-0450-P	4.5	6	74	36	29	36	●
CWS05-0460-P	4.6	6	74	36	29	36	●
CWS05-0470-P	4.7	6	74	36	29	36	●
CWS05-0480-P	4.8	6	82	44	35	36	●
CWS05-0480-P	4.9	6	82	44	35	36	●
CWS05-0500-P	5	6	82	44	35	36	●
CWS05-0510-P	5.1	6	82	44	35	36	●
CWS05-0520-P	5.2	6	82	44	35	36	●
CWS05-0530-P	5.3	6	82	44	35	36	●
CWS05-0540-P	5.4	6	82	44	35	36	●
CWS05-0550-P	5.5	6	82	44	35	36	●
CWS05-0560-P	5.6	6	82	44	35	36	●
CWS05-0570-P	5.7	6	82	44	35	36	●
CWS05-0580-P	5.8	6	82	44	35	36	●
CWS05-0590-P	5.9	6	82	44	35	36	●
CWS05-0600-P	6	6	82	44	35	36	●
CWS05-0610-P	6.1	8	91	53	43	36	●
CWS05-0620-P	6.2	8	91	53	43	36	●
CWS05-0630-P	6.3	8	91	53	43	36	●
CWS05-0640-P	6.4	8	91	53	43	36	●
CWS05-0650-P	6.5	8	91	53	43	36	●
CWS05-0660-P	6.6	8	91	53	43	36	●
CWS05-0670-P	6.7	8	91	53	43	36	●

Note: ● have stock ○ for reservation



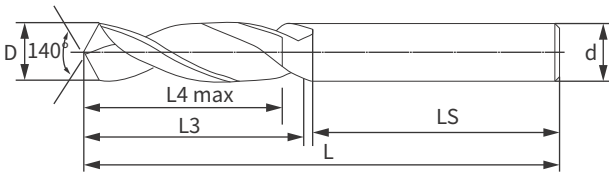
## Carbide drill bit for steel processing 5XD (inner-cooling)



Part number	D	d	L	L3	L4	LS	Inventory
CWS05-0680-P	6.8	8	91	53	43	36	●
CWS05-0690-P	6.9	8	91	53	43	36	●
CWS05-0700-P	7	8	91	53	43	36	●
CWS05-0710-P	7.1	8	91	53	43	40	●
CWS05-0720-P	7.2	8	91	53	43	40	●
CWS05-0730-P	7.3	8	91	53	43	40	●
CWS05-0740-P	7.4	8	91	53	43	40	●
CWS05-0750-P	7.5	8	91	53	43	40	●
CWS05-0760-P	7.6	8	91	53	43	40	●
CWS05-0770-P	7.7	8	91	53	43	40	●
CWS05-0780-P	7.8	8	91	53	43	40	●
CWS05-0790-P	7.9	8	91	53	43	40	●
CWS05-0800-P	8	8	91	53	43	40	●
CWS05-0810-P	8.1	10	103	61	49	40	●
CWS05-0820-P	8.2	10	103	61	49	40	●
CWS05-0830-P	8.3	10	103	61	49	40	●
CWS05-0840-P	8.4	10	103	61	49	40	●
CWS05-0850-P	8.5	10	103	61	49	40	●
CWS05-0860-P	8.6	10	103	61	49	40	●
CWS05-0870-P	8.7	10	103	61	49	40	●
CWS05-0880-P	8.8	10	103	61	49	40	●
CWS05-0890-P	8.9	10	103	61	49	40	●
CWS05-0900-P	9	10	103	61	49	40	●
CWS05-0910-P	9.1	10	103	61	49	40	●
CWS05-0920-P	9.2	10	103	61	49	40	●
CWS05-0930-P	9.3	10	103	61	49	40	●
CWS05-0940-P	9.4	10	103	61	49	40	●
CWS05-0950-P	9.5	10	103	61	49	40	●
CWS05-0960-P	9.6	10	103	61	49	40	●
CWS05-0970-P	9.7	10	103	61	49	40	●
CWS05-0980-P	9.8	10	103	61	49	40	●
CWS05-0990-P	9.9	10	103	61	49	40	●
CWS05-1000-P	10	10	103	61	49	40	●
CWS05-1010-P	10.1	12	118	71	56	45	●
CWS05-1020-P	10.2	12	118	71	56	45	●
CWS05-1030-P	10.3	12	118	71	56	45	●
CWS05-1040-P	10.4	12	118	71	56	45	●
CWS05-1050-P	10.5	12	118	71	56	45	●

Note: ● have stock ○ for reservation

## Carbide drill bit for steel processing 5XD (inner-cooling)



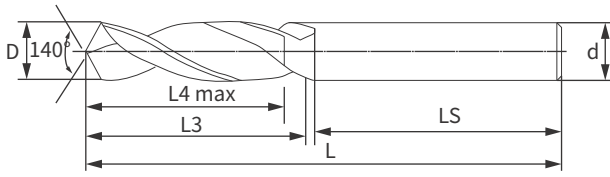
Part number	D	d	L	L3	L4	LS	Inventory
CWS05-1060-P	10.6	12	118	71	56	45	●
CWS05-1070-P	10.7	12	118	71	56	45	●
CWS05-1080-P	10.8	12	118	71	56	45	●
CWS05-1090-P	10.9	12	118	71	56	45	●
CWS05-1100-P	11	12	118	71	56	45	●
CWS05-1110-P	11.1	12	118	71	56	45	●
CWS05-1120-P	11.2	12	118	71	56	45	●
CWS05-1130-P	11.3	12	118	71	56	45	●
CWS05-1140-P	11.4	12	118	71	56	45	●
CWS05-1150-P	11.5	12	118	71	56	45	●
CWS05-1160-P	11.6	12	118	71	56	45	●
CWS05-1170-P	11.7	12	118	71	56	45	●
CWS05-1180-P	11.8	12	118	71	56	45	●
CWS05-1190-P	11.9	12	118	71	56	45	●
CWS05-1200-P	12	12	118	71	56	45	●
CWS05-1210-P	12.1	14	124	77	60	45	●
CWS05-1220-P	12.2	14	124	77	60	45	●
CWS05-1230-P	12.3	14	124	77	60	45	●
CWS05-1240-P	12.4	14	124	77	60	45	●
CWS05-1250-P	12.5	14	124	77	60	45	●
CWS05-1260-P	12.6	14	124	77	60	45	●
CWS05-1280-P	12.8	14	124	77	60	45	●
CWS05-1290-P	12.9	14	124	77	60	45	●
CWS05-1300-P	13	14	124	77	60	45	●
CWS05-1310-P	13.1	14	124	77	60	45	●
CWS05-1320-P	13.2	14	124	77	60	45	●
CWS05-1330-P	13.3	14	124	77	60	45	●
CWS05-1340-P	13.4	14	124	77	60	45	●
CWS05-1350-P	13.5	14	124	77	60	45	●
CWS05-1360-P	13.6	14	124	77	60	45	●
CWS05-1370-P	13.7	14	124	77	60	45	●
CWS05-1380-P	13.8	14	124	77	60	45	●
CWS05-1390-P	13.9	14	124	77	60	45	●
CWS05-1400-P	14	14	124	77	60	45	●
CWS05-1410-P	14.1	16	133	83	63	45	●
CWS05-1420-P	14.2	16	133	83	63	45	●
CWS05-1430-P	14.3	16	133	83	63	45	●
CWS05-1440-P	14.4	16	133	83	63	45	●

Note: ● have stock ○ for reservation



A  
B  
C  
D  
E

## Carbide drill bit for steel processing 5XD (inner-cooling)



Part number	D	d	L	L3	L4	LS	Inventory
CWS05-1450-P	14.5	16	133	83	63	45	●
CWS05-1460-P	14.6	16	133	83	63	45	●
CWS05-1470-P	14.7	16	133	83	63	45	●
CWS05-1480-P	14.8	16	133	83	63	45	●
CWS05-1490-P	14.9	16	133	83	63	45	●
CWS05-1500-P	15	16	133	83	63	45	●
CWS05-1510-P	15.1	16	133	83	63	45	●
CWS05-1520-P	15.2	16	133	83	63	45	●
CWS05-1530-P	15.3	16	133	83	63	45	●
CWS05-1540-P	15.4	16	133	83	63	45	●
CWS05-1550-P	15.5	16	133	83	63	45	●
CWS05-1560-P	15.6	16	133	83	63	45	●
CWS05-1570-P	15.7	16	133	83	63	45	●
CWS05-1580-P	15.8	16	133	83	63	45	●
CWS05-1590-P	15.9	16	133	83	63	45	●
CWS05-1600-P	16	16	133	83	63	45	●

Note: ● have stock ○ for reservation

# HSD indexable insert drill

## Product Feature

Force balanced design.

The inner and outer cutting edges are made of double materials, HPA025B is black, HPA225B is yellow, And it is easier to identify by using of inner and outer cutting edges.

(Inner edge is made of HPA025B, outer edge is made of HPA225B)

Excellent the chips removal.

Good processing surface.

4 corner cutting edge, reduce the tool cost.

Realize the diversity of processing.

Length of drill hole L/D: 2-5 times of diameter

Cooling system: inner cooling structure

Range of diameter:  $\Phi 12.5$ - $\Phi 50$ mm



A

B

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A

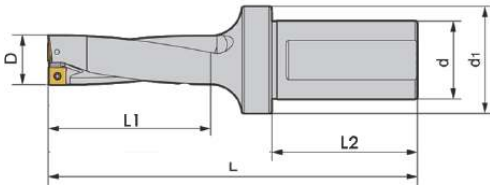
## HSD20 indexable insert drill

B

C

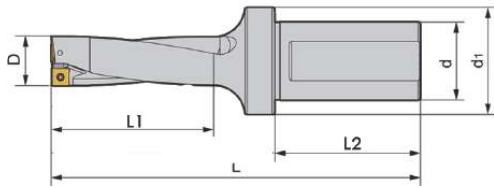
D

E



Part number	Size						Insert	Screw	Wrench
	D	d	d1	L	L1	L2			
HSD20-C20-125-SP05	12.5	20	25	94	26	50	SP**050204	T2040	TIP6
HSD20-C20-130-SP05	13	20	25	94	26	50			
HSD20-C20-135-SP05	13.5	20	25	96	28	50			
HSD20-C20-140-SP05	14	20	25	96	28	50			
HSD20-C20-145-SP05	14.5	20	25	99	30	50			
HSD20-C20-150-SP05	15	20	25	99	30	50	SP**060204	T2250	TIP6
HSD20-C25-160-SP06	16	25	32	108	32	56			
HSD20-C25-165-SP06	16.5	25	32	110	34	56			
HSD20-C25-170-SP06	17	25	32	110	34	56			
HSD20-C25-175-SP06	17.5	25	32	113	36	56			
HSD20-C25-180-SP06	18	25	32	115	38	56			
HSD20-C25-185-SP06	18.5	25	32	115	38	56			
HSD20-C25-190-SP06	19	25	32	116	38	56			
HSD20-C25-195-SP06	19.5	25	32	119	40	56			
HSD20-C25-200-SP06	20	25	32	119	40	56			
HSD20-C25-210-SP06	21	25	32	121	42	56	SP**07T308	T2560	TIP8
HSD20-C25-215-SP06	21.5	25	32	123	44	56			
HSD20-C25-220-SP07	22	25	32	123	44	56			
HSD20-C25-225-SP07	22.5	25	32	127	46	56			
HSD20-C25-230-SP07	23	25	45	127	46	56			
HSD20-C25-235-SP07	23.5	25	45	130	48	56			
HSD20-C25-240-SP07	24	25	45	130	48	56			
HSD20-C25-245-SP07	24.5	25	45	133	50	56	SP**090408	T3590	TIP15
HSD20-C25-250-SP07	25	25	45	133	50	56			
HSD20-C25-255-SP07	25.5	25	45	135	52	56			
HSD20-C25-260-SP07	26	25	45	135	52	56			
HSD20-C25-265-SP07	26.5	25	45	137	54	56			
HSD20-C32-280-SP09	28	32	45	144	56	60	SP**090408	T3590	TIP15
HSD20-C32-285-SP09	28.5	32	45	146	58	60			
HSD20-C32-290-SP09	29	32	45	146	58	60			
HSD20-C32-295-SP09	29.5	32	55	151	60	60			
HSD20-C32-300-SP09	30	32	55	151	60	60			
HSD20-C32-310-SP09	31	32	55	154	62	60			
HSD20-C32-320-SP09	32	32	55	156	64	60			
HSD20-C32-330-SP09	33	32	55	158	66	60			

## HSD20 indexable inserts drill



Part number	Size						Insert	Screw	Wrench
	D	d	d1	L	L1	L2			
HSD20-C40-340-SP11	34	40	55	173	68	70	SP**110408	T4090	TIP15
HSD20-C40-350-SP11	35	40	55	175	70	70			
HSD20-C40-360-SP11	36	40	55	177	72	70			
HSD20-C40-370-SP11	37	40	55	179	74	70			
HSD20-C40-380-SP11	38	40	55	183	76	70			
HSD20-C40-385-SP11	38.5	40	55	185	78	70			
HSD20-C40-390-SP11	39	40	55	185	78	70			
HSD20-C40-400-SP11	40	40	60	189	80	70			
HSD20-C40-410-SP11	41	40	60	191	82	70			
HSD20-C40-420-SP14	42	40	60	193	84	70			
HSD20-C40-430-SP14	43	40	60	196	86	70			
HSD20-C40-440-SP14	44	40	60	198	88	70			
HSD20-C40-450-SP14	45	40	60	202	90	70			
HSD20-C40-460-SP14	46	40	60	204	92	70			
HSD20-C40-470-SP14	47	40	60	206	94	70			
HSD20-C40-480-SP14	48	40	60	209	96	70			
HSD20-C40-490-SP14	49	40	60	212	98	70			
HSD20-C40-500-SP14	50	40	60	215	100	70			



A

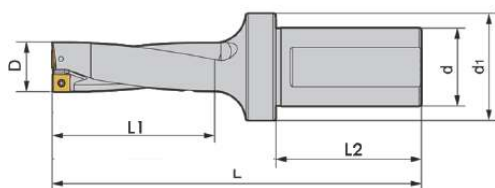
## HSD30 indexable insert drill

B

C

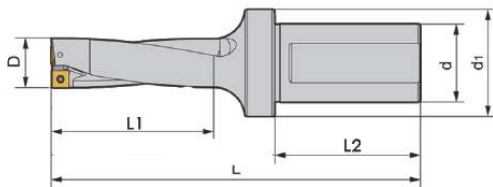
D

E



Part number	Size						Insert	Screw	Wrench
	D	d	d1	L	L1	L2			
HSD30-C20-125-SP05	12.5	20	25	107	39	50	SP**050204	T2040	TIP6
HSD30-C20-130-SP05	13	20	25	107	39	50			
HSD30-C20-135-SP05	13.5	20	25	110	42	50			
HSD30-C20-140-SP05	14	20	25	110	42	50			
HSD30-C20-145-SP05	14.5	20	25	114	45	50			
HSD30-C20-150-SP05	15	20	25	114	45	50			
HSD30-C25-155-SP06	15.5	25	32	124	48	56	SP**060204	T2250	TIP6
HSD30-C25-160-SP06	16	25	32	124	48	56			
HSD30-C25-165-SP06	16.5	25	32	127	51	56			
HSD30-C25-175-SP06	17.5	25	32	130	54	56			
HSD30-C25-185-SP06	18.5	25	32	134	57	56			
HSD30-C25-190-SP06	19	25	32	134	57	56			
HSD30-C25-195-SP06	19.5	25	32	138	60	56			
HSD30-C25-200-SP06	20	25	32	138	60	56			
HSD30-C25-205-SP06	20.5	25	32	142	63	56			
HSD30-C25-210-SP06	21	25	32	142	63	56			
HSD30-C25-215-SP06	21.5	25	32	145	66	56	SP**07T308	T2560	TIP8
HSD30-C25-220-SP07	22	25	32	145	66	56			
HSD30-C25-225-SP07	22.5	25	45	154	69	60			
HSD30-C25-230-SP07	23	25	45	150	69	56			
HSD30-C25-235-SP07	23.5	25	45	154	72	56			
HSD30-C25-240-SP07	24	25	45	154	72	56			
HSD30-C25-245-SP07	24.5	25	45	158	75	56	SP**07T308	T2560	TIP8
HSD30-C32-230-SP07	23	32	45	154	69	60			
HSD30-C32-240-SP07	24	32	45	158	72	60			
HSD30-C32-250-SP07	25	32	45	161	75	60			
HSD30-C32-255-SP07	25.5	32	45	165	78	60			
HSD30-C32-260-SP07	26	32	45	165	78	60			
HSD30-C32-265-SP07	26.5	32	45	168	81	60	SP**090408	T3590	TIP15
HSD30-C32-280-SP09	28	32	45	172	84	60			
HSD30-C32-285-SP09	28.5	32	45	175	87	60			
HSD30-C32-290-SP09	29	32	45	175	87	60			
HSD30-C32-295-SP09	29.5	32	55	181	90	60			
HSD30-C32-300-SP09	30	32	55	181	90	60			
HSD30-C32-305-SP09	30.5	32	55	185	93	60			

## HSD30 indexable insert drill



Part number	Size						Insert	Screw	Wrench
	D	d	d1	L	L1	L2			
HSD30-C32-310-SP09	31	32	55	185	93	60	SP**090408	T3590	TIP15
HSD30-C32-320-SP09	32	32	55	188	96	60			
HSD30-C32-325-SP09	32.5	32	55	192	99	60			
HSD30-C32-330-SP09	33	32	55	192	99	60	SP**110408	T4090	TIP15
HSD30-C32-350-SP11	35	32	55	199	105	60			
HSD30-C32-360-SP11	36	32	55	203	108	60			
HSD30-C40-340-SP11	34	40	55	205	102	70	SP**110408	T4090	TIP15
HSD30-C40-350-SP11	35	40	55	209	105	70			
HSD30-C40-360-SP11	36	40	55	213	108	70			
HSD30-C40-380-SP11	38	40	55	220	114	70			
HSD30-C40-390-SP11	39	40	55	224	117	70			
HSD30-C40-400-SP11	40	40	60	228	120	70			
HSD30-C40-405-SP11	40.5	40	60	231	123	70			
HSD30-C40-410-SP11	41	40	60	232	123	70	SP**140512	T5013	TIP20
HSD30-C40-420-SP14	42	40	60	235	126	70			
HSD30-C40-430-SP14	43	40	60	239	129	70			
HSD30-C40-440-SP14	44	40	60	242	132	70			
HSD30-C40-450-SP14	45	40	60	247	135	70			
HSD30-C40-460-SP14	46	40	60	251	138	70			
HSD30-C40-470-SP14	47	40	60	254	141	70			
HSD30-C40-480-SP14	48	40	60	258	144	70	SP**140512	T5013	TIP20
HSD30-C40-490-SP14	49	40	60	261	147	70			
HSD30-C40-500-SP14	50	40	60	265	150	70			





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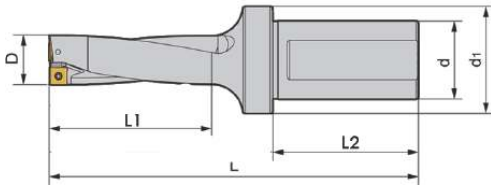
## HSD40 indexable insert drill

B

C

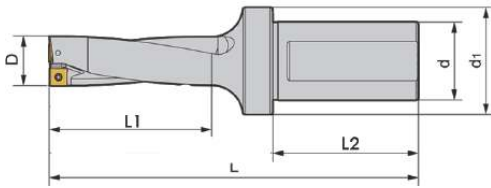
D

E



Part number	Size						Insert	Screw	Wrench
	D	d	d1	L	L1	L2			
HSD40-C20-125-SP05	12.5	20	25	120	52	50	SP**050204	T2040	TIP6
HSD40-C20-130-SP05	13	20	25	120	52	50			
HSD40-C20-135-SP05	13.5	20	25	124	56	50			
HSD40-C20-140-SP05	14	20	25	124	56	50			
HSD40-C20-145-SP05	14.5	20	25	129	60	50			
HSD40-C20-150-SP05	15	20	25	129	60	50			
HSD40-C25-155-SP06	15.5	25	32	140	64	56	SP**060204	T2250	TIP6
HSD40-C25-160-SP06	16	25	32	140	64	56			
HSD40-C25-165-SP06	16.5	25	32	144	68	56			
HSD40-C25-170-SP06	17	25	32	144	68	56			
HSD40-C25-175-SP06	17.5	25	32	149	72	56			
HSD40-C25-180-SP06	18	25	32	149	72	56			
HSD40-C25-185-SP06	18.5	25	32	153	76	56			
HSD40-C25-190-SP06	19	25	32	153	76	56			
HSD40-C25-195-SP06	19.5	25	32	159	80	56			
HSD40-C25-200-SP06	20	25	32	159	80	56			
HSD40-C25-205-SP06	20.5	25	32	163	84	56			
HSD40-C25-210-SP06	21	25	32	163	84	56			
HSD40-C25-215-SP06	21.5	25	32	167	88	56	SP**07T308	T2560	TIP8
HSD40-C25-220-SP07	22	25	32	167	88	56			
HSD40-C25-225-SP07	22.5	25	32	173	92	56			
HSD40-C25-230-SP07	23	25	45	173	92	56			
HSD40-C25-235-SP07	23.5	25	45	177	96	56			
HSD40-C25-240-SP07	24	25	45	177	96	56			
HSD40-C25-245-SP07	24.5	25	45	183	100	56			
HSD40-C25-250-SP07	25	25	45	183	100	56			
HSD40-C25-255-SP07	25.5	25	45	187	104	56	SP**07T308	T2560	TIP8
HSD40-C25-265-SP07	26.5	25	45	191	108	56			
HSD40-C25-275-SP07	27.5	25	45	195	112	56			
HSD40-C32-260-SP07	26	32	45	191	104	60	SP**07T308	T2560	TIP8
HSD40-C32-270-SP07	27	32	45	195	108	60			
HSD40-C32-280-SP09	28	32	45	200	112	60	SP**090408	T3590	TIP15
HSD40-C32-285-SP09	28.5	32	45	204	116	60			
HSD40-C32-290-SP09	29	32	45	204	116	60			
HSD40-C32-295-SP09	29.5	32	55	212	120	60			

## HSD40 indexable insert drill



Part number	Size						Insert	Screw	Wrench
	D	d	d1	L	L1	L2			
HSD40-C32-300-SP09	30	32	55	212	120	60	SP**090408	T3590	TIP15
HSD40-C32-305-SP09	30.5	32	55	216	124	60			
HSD40-C32-310-SP09	31	32	55	216	124	60			
HSD40-C32-315-SP09	31.5	32	55	220	128	60			
HSD40-C32-320-SP09	32	32	55	220	128	60			
HSD40-C32-325-SP09	32.5	32	55	224	132	60			
HSD40-C32-330-SP09	33	32	55	224	132	60			
HSD40-C40-340-SP11	34	40	55	239	136	70	SP**110408	T4090	TIP15
HSD40-C40-350-SP11	35	40	55	244	140	70			
HSD40-C40-360-SP11	36	40	55	249	144	70			
HSD40-C40-370-SP11	37	40	55	254	148	70			
HSD40-C40-380-SP11	38	40	55	259	152	70			
HSD40-C40-390-SP11	39	40	55	263	156	70			
HSD40-C40-400-SP11	40	40	60	269	160	70			
HSD40-C40-410-SP11	41	40	60	273	164	70	SP**140512	T5013	TIP20
HSD40-C40-420-SP14	42	40	60	277	168	70			
HSD40-C40-430-SP14	43	40	60	281	172	70			
HSD40-C40-440-SP14	44	40	60	285	176	70			
HSD40-C40-450-SP14	45	40	60	289	180	70			
HSD40-C40-460-SP14	46	40	60	293	184	70			
HSD40-C40-470-SP14	47	40	60	297	188	70			
HSD40-C40-480-SP14	48	40	60	301	192	70			
HSD40-C40-490-SP14	49	40	60	305	196	70			
HSD40-C40-500-SP14	50	40	60	309	200	70			

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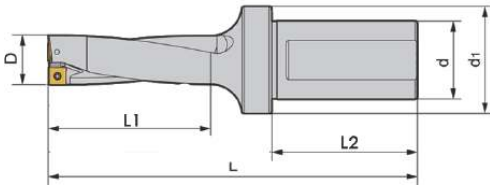
## HSD50 indexable insert drill

B

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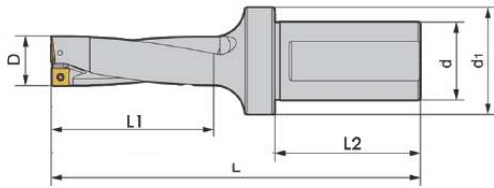
D

E



Part number	Size						Insert	Screw	Wrench
	D	d	d1	L	L1	L2			
HSD50-C20-125-SP05	12.5	20	25	133	65	50	SP**050204	T2040	TIP6
HSD50-C20-130-SP05	13	20	25	133	65	50			
HSD50-C20-135-SP05	13.5	20	25	138	70	50			
HSD50-C20-140-SP05	14	20	25	138	70	50			
HSD50-C20-145-SP05	14.5	20	25	144	75	50			
HSD50-C20-150-SP05	15	20	25	144	75	50			
HSD50-C25-155-SP06	15.5	25	32	156	80	56	SP**060204	T2250	TIP6
HSD50-C25-160-SP06	16	25	32	156	80	56			
HSD50-C25-170-SP06	17	25	32	161	85	56			
HSD50-C25-175-SP06	17.5	25	32	167	90	56			
HSD50-C25-180-SP06	18	25	32	167	90	56			
HSD50-C25-185-SP06	18.5	25	32	172	95	56			
HSD50-C25-190-SP06	19	25	32	172	95	56			
HSD50-C25-195-SP06	19.5	25	32	179	100	56			
HSD50-C25-200-SP06	20	25	32	179	100	56			
HSD50-C25-205-SP06	20.5	25	32	184	105	56			
HSD50-C25-210-SP06	21	25	32	184	105	56	SP**07T308	T2560	TIP8
HSD50-C25-215-SP06	21.5	25	32	189	110	56			
HSD50-C25-220-SP07	22	25	32	189	110	56	SP**090408	T3590	TIP15
HSD50-C32-280-SP09	28	32	45	228	140	60			
HSD50-C32-290-SP09	29	32	45	233	145	60			
HSD50-C32-300-SP09	30	32	45	241	150	60			
HSD50-C32-310-SP09	31	32	45	246	155	60			
HSD50-C32-330-SP09	33	32	55	258	165	60			
HSD50-C40-340-SP11	34	40	55	275	170	70	SP**110408	T4090	TIP15
HSD50-C40-350-SP11	35	40	55	280	175	70			
HSD50-C40-360-SP11	36	40	55	285	180	70			
HSD50-C40-380-SP11	38	40	55	296	190	70			
HSD50-C40-390-SP11	39	40	55	302	195	70			
HSD50-C40-400-SP11	40	40	60	308	200	70			
HSD50-C40-410-SP11	41	40	60	314	205	70	SP**140512	T5013	TIP20
HSD50-C40-420-SP14	42	40	60	320	210	70			
HSD50-C40-440-SP14	44	40	60	331	220	70			
HSD50-C40-450-SP14	45	40	60	337	225	70			
HSD50-C40-460-SP14	46	40	60	343	230	70			
HSD50-C40-480-SP14	48	40	60	354	240	70			
HSD50-C40-500-SP14	50	40	60	365	250	70			

## HSD60 indexable insert drill



Part number	Size						Insert	Screw	Wrench
	D	d	d1	L	L1	L2			
HSD60-C25-230-SP07	23	25	45	219	138	56	SP**07T308	T2560	TIP8
HSD60-C25-240-SP07	24	25	45	226	144	56			
HSD60-C32-260-SP07	26	32	45	243	156	60	SP**07T308	T2560	TIP8
HSD60-C32-270-SP07	27	32	45	249	162	60			
HSD60-C32-280-SP09	28	32	45	256	168	60	SP**090408	T3590	TIP15
HSD60-C32-290-SP09	29	32	45	262	174	60			
HSD60-C32-300-SP09	30	32	55	271	180	60			

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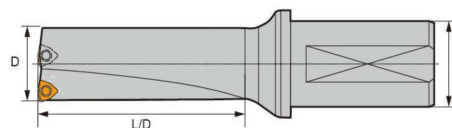
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# HWD indexable insert drill

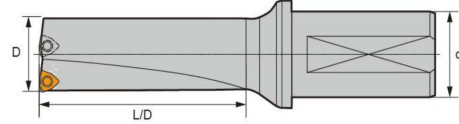
## HWD02



Part number	size			Inserts	stock
	D	d	L/D		
HWD02-C20-180-WC03	18	20	2	WCMX030208	●
HWD02-C20-190-WC03	19	20	2	WCMX030208	●
HWD02-C25-195-WC03	19.5	25	2	WCMX030208	●
HWD02-C25-210-WC04	21	25	2	WCMX040208	●
HWD02-C25-215-WC04	21.5	25	2	WCMX040208	●
HWD02-C25-220-WC04	22	25	2	WCMX040208	●
HWD02-C25-230-WC04	23	25	2	WCMX040208	●
HWD02-C25-235-WC04	23.5	25	2	WCMX040208	●
HWD02-C25-245-WC04	24.5	25	2	WCMX040208	●
HWD02-C25-250-WC04	25	25	2	WCMX040208	●
HWD02-C32-255-WC05	25.5	32	2	WCMX050308	●
HWD02-C32-260-WC05	26	32	2	WCMX050308	●
HWD02-C32-265-WC05	26.5	32	2	WCMX050308	●
HWD02-C32-270-WC05	27	32	2	WCMX050308	●
HWD02-C32-275-WC05	27.5	32	2	WCMX050308	●
HWD02-C32-280-WC05	28	32	2	WCMX050308	●
HWD02-C32-290-WC05	29	32	2	WCMX050308	●
HWD02-C32-295-WC05	29.5	32	2	WCMX050308	●
HWD02-C32-300-WC05	30	32	2	WCMX050308	●
HWD02-C32-310-WC05	31	32	2	WCMX050308	●
HWD02-C32-320-WC06	32	32	2	WCMX06T308	●
HWD02-C32-330-WC06	33	32	2	WCMX06T308	●
HWD02-C32-340-WC06	34	32	2	WCMX06T308	●
HWD02-C32-350-WC06	35	32	2	WCMX06T308	●
HWD02-C32-360-WC06	36	32	2	WCMX06T308	●
HWD02-C32-370-WC06	37	32	2	WCMX06T308	●
HWD02-C32-380-WC06	38	32	2	WCMX06T308	●
HWD02-C32-390-WC06	39	32	2	WCMX06T308	●
HWD02-C32-400-WC06	40	32	2	WCMX06T308	●
HWD02-C32-410-WC06	41	32	2	WCMX06T308	●

# HWD indexable insert drill

## HWD02



Part number	size			Inserts	stock
	D	d	L/D		
HWD02-C40-420-WC08	42	40	2	WCMX080412	●
HWD02-C40-430-WC08	43	40	2	WCMX080412	●
HWD02-C40-440-WC08	44	40	2	WCMX080412	●
HWD02-C40-450-WC08	45	40	2	WCMX080412	●
HWD02-C40-460-WC08	46	40	2	WCMX080412	●
HWD02-C40-470-WC08	47	40	2	WCMX080412	●
HWD02-C40-480-WC08	48	40	2	WCMX080412	●
HWD02-C40-490-WC08	49	40	2	WCMX080412	●
HWD02-C40-500-WC08	50	40	2	WCMX080412	●
HWD02-C40-510-WC08	51	40	2	WCMX080412	●
HWD02-C40-530-WC08	53	40	2	WCMX080412	●
HWD02-C40-550-WC08	55	40	2	WCMX080412	●
HWD02-C40-560-WC08	56	40	2	WCMX080412	●

Note: ● have stock ○ for reservation



A

B

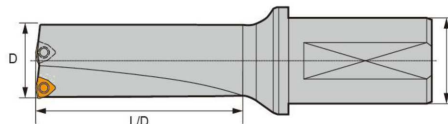
C

D

E

# HWD indexable insert drill

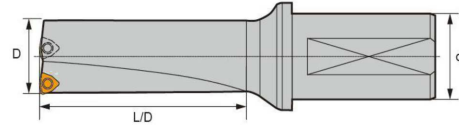
HDW03



Part number	size			Inserts	stock
	D	d	L/D		
HWD03-C20-180-WC03	18	20	3	WCMX030208	●
HWD03-C25-155-WC03	15.5	25	3	WCMX030208	●
HWD03-C25-165-WC03	16.5	25	3	WCMX030208	●
HWD03-C25-175-WC03	17.5	25	3	WCMX030208	●
HWD03-C25-180-WC03	18	25	3	WCMX030208	●
HWD03-C25-185-WC03	18.5	25	3	WCMX030208	●
HWD03-C25-195-WC03	19.5	25	3	WCMX030208	●
HWD03-C25-200-WC04	20	25	3	WCMX040208	●
HWD03-C25-205-WC04	20.5	25	3	WCMX040208	●
HWD03-C25-210-WC04	21	25	3	WCMX040208	●
HWD03-C25-220-WC04	22	25	3	WCMX040208	●
HWD03-C25-230-WC04	23	25	3	WCMX040208	●
HWD03-C25-235-WC04	23.5	25	3	WCMX040208	●
HWD03-C25-240-WC04	24	25	3	WCMX040208	●
HWD03-C25-245-WC04	24.5	25	3	WCMX040208	●
HWD03-C32-255-WC05	25.5	32	3	WCMX050308	●
HWD03-C32-260-WC05	26	32	3	WCMX050308	●
HWD03-C32-265-WC05	26.5	32	3	WCMX050308	●
HWD03-C32-270-WC05	27	32	3	WCMX050308	●
HWD03-C32-275-WC05	27.5	32	3	WCMX050308	●
HWD03-C32-280-WC05	28	32	3	WCMX050308	●
HWD03-C32-290-WC05	29	32	3	WCMX050308	●
HWD03-C32-300-WC05	30	32	3	WCMX050308	●
HWD03-C32-310-WC05	31	32	3	WCMX050308	●
HWD03-C32-330-WC06	33	32	3	WCMX06T308	●
HWD03-C32-340-WC06	34	32	3	WCMX06T308	●
HWD03-C32-350-WC06	35	32	3	WCMX06T308	●
HWD03-C32-360-WC06	36	32	3	WCMX06T308	●
HWD03-C32-370-WC06	37	32	3	WCMX06T308	●
HWD03-C32-380-WC06	38	32	3	WCMX06T308	●

# HWD indexable insert drill

## HWD03



Part number	size			Inserts	stock
	D	d	L/D		
HWD03-C32-390-WC06	39	32	3	WCMX06T308	●
HWD03-C32-410-WC06	41	32	3	WCMX06T308	●
HWD03-C40-420-WC08	42	40	3	WCMX080412	●
HWD03-C40-430-WC08	43	40	3	WCMX080412	●
HWD03-C40-440-WC08	44	40	3	WCMX080412	●
HWD03-C40-450-WC08	45	40	3	WCMX080412	●
HWD03-C40-460-WC08	46	40	3	WCMX080412	●
HWD03-C40-470-WC08	47	40	3	WCMX080412	●
HWD03-C40-480-WC08	48	40	3	WCMX080412	●
HWD03-C40-490-WC08	49	40	3	WCMX080412	●
HWD03-C40-500-WC08	50	40	3	WCMX080412	●
HWD03-C40-510-WC08	51	40	3	WCMX080412	●
HWD03-C40-530-WC08	53	40	3	WCMX080412	●
HWD03-C40-550-WC08	55	40	3	WCMX080412	●
HWD03-C40-560-WC08	56	40	3	WCMX080412	●

Note: ● have stock ○ for reservation





A

B

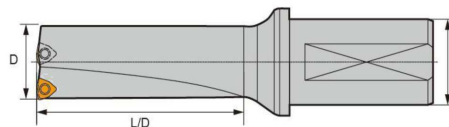
C

D

E

# HWD indexable insert drill

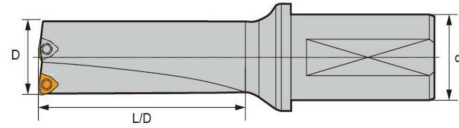
## HWD04



Part number	size			Inserts	stock
	D	d	L/D		
HWD04-C20-150-WC03	15	20	4	WCMX030208	●
HWD04-C20-160-WC03	16	20	4	WCMX030208	●
HWD04-C25-140-WC03	14	25	4	WCMX030208	●
HWD04-C25-145-WC03	14.5	25	4	WCMX030208	●
HWD04-C25-155-WC03	15.5	25	4	WCMX030208	●
HWD04-C25-165-WC03	16.5	25	4	WCMX030208	●
HWD04-C25-170-WC03	17	25	4	WCMX030208	●
HWD04-C25-180-WC03	18	25	4	WCMX030208	●
HWD04-C25-190-WC03	19	25	4	WCMX030208	●
HWD04-C25-195-WC03	19.5	25	4	WCMX030208	●
HWD04-C25-200-WC04	20	25	4	WCMX040208	●
HWD04-C25-205-WC04	20.5	25	4	WCMX040208	●
HWD04-C25-210-WC04	21	25	4	WCMX040208	●
HWD04-C25-215-WC04	21.5	25	4	WCMX040208	●
HWD04-C25-220-WC04	22	25	4	WCMX040208	●
HWD04-C25-225-WC04	22.5	25	4	WCMX040208	●
HWD04-C25-230-WC04	23	25	4	WCMX040208	●
HWD04-C25-235-WC04	23.5	25	4	WCMX040208	●
HWD04-C25-240-WC04	24	25	4	WCMX040208	●
HWD04-C25-245-WC04	24.5	25	4	WCMX040208	●
HWD04-C25-250-WC04	25	25	4	WCMX040208	●
HWD04-C32-250-WC05	25	32	4	WCMX050308	●
HWD04-C32-255-WC05	25.5	32	4	WCMX050308	●
HWD04-C32-265-WC05	26.5	32	4	WCMX050308	●
HWD04-C32-270-WC05	27	32	4	WCMX050308	●
HWD04-C32-275-WC05	27.5	32	4	WCMX050308	●
HWD04-C32-280-WC05	28	32	4	WCMX050308	●
HWD04-C32-290-WC05	29	32	4	WCMX050308	●
HWD04-C32-340-WC06	34	32	4	WCMX06T308	●
HWD04-C32-360-WC06	36	32	4	WCMX06T308	●

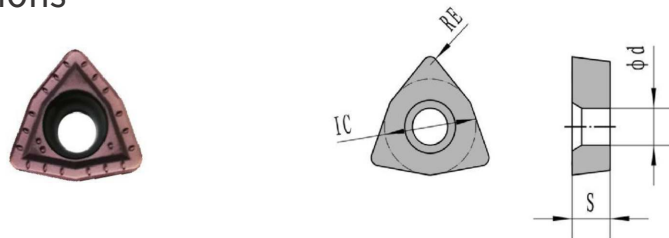
# HWD indexable insert drill

## HWD04



Part number	size			Inserts	stock
	D	d	L/D		
HWD04-C32-370-WC06	37	32	4	WCMX06T308	●
HWD04-C32-380-WC06	38	32	4	WCMX06T308	●
HWD04-C32-410-WC06	41	32	4	WCMX06T308	●
HWD04-C40-420-WC08	42	40	4	WCMX080412	●
HWD04-C40-430-WC08	43	40	4	WCMX080412	●
HWD04-C40-440-WC08	44	40	4	WCMX080412	●
HWD04-C40-450-WC08	45	40	4	WCMX080412	●
HWD04-C40-460-WC08	46	40	4	WCMX080412	●
HWD04-C40-470-WC08	47	40	4	WCMX080412	●
HWD04-C40-480-WC08	48	40	4	WCMX080412	●
HWD04-C40-490-WC08	49	40	4	WCMX080412	●
HWD04-C40-500-WC08	50	40	4	WCMX080412	●
HWD04-C40-510-WC08	51	40	4	WCMX080412	●
HWD04-C40-550-WC08	55	40	4	WCMX080412	●
HWD04-C40-560-WC08	56	40	4	WCMX080412	●

## Inserts specifications



Part number	Applicable to processed materials			Size			
	M	K	P	IC	S	Re	d
	material (PCD)						
	HA1500B						
WCMX030208-U		●		5.56	2.38	0.8	2.8
WCMX040208-U		●		6.35	2.38	0.8	3.1
WCMX050308-U		●		7.94	3.18	0.8	3.2
WCMX06T308-U		●		9.525	3.97	0.8	3.7
WCMX080412-U		●		12.7	4.76	1.2	4.3

Note: ● have stock ○ for reservation



A

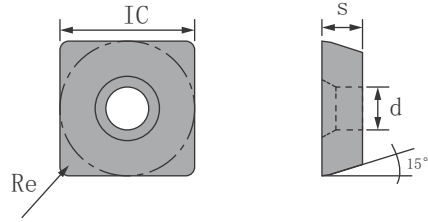
## Insert of HSD indexable drills

B

C

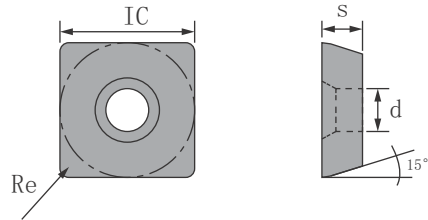
D

E



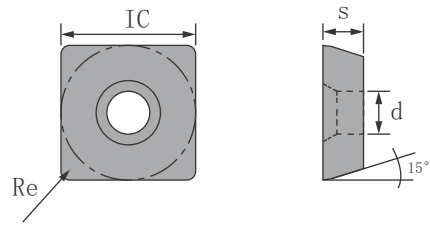
Part number	Material			Size			
	HPA025B	HPA225B	HPA325B	IC	s	Re	d
SPMG050204-UM	●	●	●	5.00	2.38	0.4	2.25
SPMG060204-UM	●	●	●	6.00	2.38	0.4	2.61
SPMG07T308-UM	●	●	●	7.94	3.97	0.8	2.85
SPMG090408-UM	●	●	●	9.80	4.30	0.8	4.05
SPMG110408-UM	●	●	●	11.50	4.80	0.8	4.45
SPMG140512-UM	●	●	●	14.30	5.20	1.2	5.75

Note: ● have stock ○ for reservation



Part number	Material	Size			
	HPA325B	IC	s	Re	d
SPGG050204-M	●	5.00	2.38	0.4	2.25
SPGG060204-M	●	6.00	2.38	0.4	2.61
SPGG07T308-M	●	7.94	3.97	0.8	2.85
SPGG090408-M	●	9.80	4.30	0.8	4.05
SPGG110408-M	●	11.50	4.80	0.8	4.45
SPGG140512-M	●	14.30	5.20	1.2	5.75

Note: ● have stock ○ for reservation



**N** 铝用加工

Part number	Material	Size			
	HWK001B	IC	s	Re	D
SPGT050204-DA	●	5.00	2.38	0.4	2.25
SPGT060204-DA	●	6.00	2.38	0.4	2.61
SPGT07T308-DA	●	7.94	3.97	0.8	2.85
SPGT090408-DA	●	9.8	4.3	0.8	4.05
SPGT110408-DA	●	11.5	4.8	0.8	4.45
SPGT140512-DA	●	14.3	5.2	1.2	5.75

Note: ● have stock ○ for reservation

### Material Recommendation List

Working material	Insert material			
	HPA025B	HPA225B	HPA325B	HWK001B
Mild steel			▲	
Alloy steel	▲		▲	
Grey cast iron		▲		
Nodular cast iron	▲			
Stainless steel		▲	▲	
Aluminum				▲

Note: ▲ recommended △ optional

- A
- B
- C
- D
- E

## Recommended cutting conditions

Workpiece material	Hardness	Insert material	Φ17-Φ19.5				Φ20-Φ23.5			
			Cutting speed (m/min)	Feed(mm/rev)			Cutting speed (m/min)	Feed(mm/rev)		
				1/d=2-6	1/d=2,3	1/d=4,5		1/d=6	1/d=2-6	1/d=2,3
P Mild steel (SS400·S10C, etc.) Carbon steel Alloy steel (S45C, SCM440, etc.) Carbon steel Alloy steel (SNCM439, etc.) Alloy tool steel (SKD, SKT, etc.)	≤HB200	HPA025B	180 (160-200)	0.05 (0.04-0.06)	0.05 (0.04-0.06)	0.04 (0.04-0.05)	200 (180-235)	0.06 (0.04-0.08)	0.06 (0.04-0.07)	0.04 (0.04-0.05)
	HB180-280	HPA025B	140 (115-180)	0.08 (0.06-0.14)	0.08 (0.06-0.09)	0.05 (0.04-0.06)	140 (115-180)	0.10 (0.06-0.18)	0.09 (0.06-0.12)	0.07 (0.06-0.08)
	HB280-350	HPA025B	100 (75-140)	0.08 (0.06-0.14)	0.08 (0.06-0.09)	0.05 (0.04-0.06)	100 (75-140)	0.10 (0.06-0.18)	0.09 (0.06-0.12)	0.07 (0.06-0.08)
	≤HB350	HPA025B	135 (100-170)	0.08 (0.06-0.14)	0.08 (0.06-0.09)	0.05 (0.04-0.06)	135 (100-170)	0.10 (0.06-0.18)	0.09 (0.06-0.12)	0.07 (0.06-0.08)
M Austenitic stainless steel (SUS304, SUS316, etc.) Austenitic stainless steel (SUS304LN, SUS316LN, etc.) Ferritic, precipitation hardening stainless steel (SUS410, SUS430, etc.) Ferritic, precipitation hardening stainless steel (SUS431, SUS20J2, etc.)	≤HB200	HPA225B	140 (115-180)	0.06 (0.04-0.08)	0.05 (0.04-0.06)	0.04 (0.04-0.05)	140 (115-180)	0.08 (0.06-0.12)	0.07 (0.06-0.08)	0.06 (0.06-0.07)
	>HB200	HPA225B	140 (115-180)	0.06 (0.04-0.08)	0.05 (0.04-0.06)	0.04 (0.04-0.05)	140 (115-180)	0.08 (0.06-0.12)	0.07 (0.06-0.08)	0.06 (0.06-0.07)
	≤HB200	HPA225B	140 (115-180)	0.06 (0.04-0.08)	0.05 (0.04-0.06)	0.04 (0.04-0.05)	140 (115-165)	0.09 (0.06-0.14)	0.07 (0.06-0.09)	0.06 (0.06-0.07)
	>HB200	HPA225B	140 (115-165)	0.06 (0.04-0.08)	0.05 (0.04-0.06)	0.04 (0.04-0.05)	140 (115-165)	0.09 (0.06-0.14)	0.07 (0.06-0.09)	0.06 (0.06-0.07)
K Grey cast iron (FC300 and so on) Nodular cast iron (FCD450 and so on) Nodular cast iron (FCD700 and so on)	Tensile strength ≤350Mpa	HPA225B	140 (130-195)	0.11 (0.08-0.14)	0.09 (0.08-0.10)	0.05 (0.04-0.06)	160 (130-195)	0.13 (0.10-0.16)	0.10 (0.10-0.12)	0.07 (0.06-0.08)
	Tensile strength ≤450MPa	HPA225B	100 (80-135)	0.11 (0.08-0.14)	0.09 (0.08-0.10)	0.05 (0.04-0.06)	100 (80-135)	0.13 (0.10-0.16)	0.10 (0.10-0.11)	0.07 (0.06-0.08)
	Tensile strength ≤800MPa	HPA225B	100 (70-125)	0.11 (0.08-0.14)	0.09 (0.08-0.10)	0.05 (0.04-0.06)	100 (70-125)	0.13 (0.10-0.16)	0.10 (0.10-0.11)	0.07 (0.06-0.08)
N Titanium alloy cooper alloy non-metal	-	HWK001B	30-80	0.06-0.12	0.06-0.12	0.06-0.12	30-80	0.12-0.2	0.12-0.2	0.12-0.2
	-	HWK001B	150-230	0.06-0.14	0.06-0.14	0.06-0.14	150-230	0.12-0.18	0.12-0.18	0.12-0.18
	-	HWK001B	150-230	0.06-0.13	0.06-0.13	0.06-0.13	150-230	0.08-0.13	0.08-0.13	0.08-0.13

## Recommended cutting conditions

Workpiece material	Hardness	Insert material	Φ24-Φ33				Φ34-Φ50			
			Cutting speed (m/min)	Feed(mm/rev)			Cutting speed (m/min)	Feed(mm/rev)		
				1/d=2-6	1/d=2,3	1/d=4,5		1/d=6	1/d=2-6	1/d=2,3
P Mild steel (SS400·S10C, etc.) Carbon steel Alloy steel (S45C, SCM440, etc.) Carbon steel Alloy steel (SNCM439, etc.) Alloy tool steel (SKD, SKT, etc.)	≤HB200	HPA025B	200 (180-235)	0.07 (0.04-0.08)	0.06 (0.04-0.07)	0.05 (0.04-0.06)	200 (180-235)	0.08 (0.06-0.10)	0.07 (0.06-0.08)	0.06 (0.06-0.07)
	HB180-280	HPA025B	140 (115-180)	0.12 (0.08-0.18)	0.10 (0.08-0.12)	0.09 (0.08-0.10)	140 (115-180)	0.14 (0.08-0.24)	0.12 (0.08-0.16)	0.11 (0.10-0.12)
	HB280-350	HPA025B	100 (75-140)	0.12 (0.08-0.18)	0.10 (0.08-0.12)	0.09 (0.08-0.10)	100 (75-140)	0.14 (0.08-0.24)	0.12 (0.08-0.16)	0.11 (0.10-0.12)
	≤HB350	HPA025B	135 (100-170)	0.12 (0.08-0.18)	0.10 (0.08-0.12)	0.09 (0.08-0.10)	135 (100-170)	0.14 (0.08-0.24)	0.12 (0.08-0.16)	0.10 (0.08-0.12)
M Austenitic stainless steel (SUS304, SUS316, etc.) Austenitic stainless steel (SUS304LN, SUS316LN, etc.) Ferritic, precipitation hardening stainless steel (SUS410, SUS430, etc.) Ferritic, precipitation hardening stainless steel (SUS431, SUS20J2, etc.)	≤HB200	HPA225B	140 (115-180)	0.09 (0.06-0.12)	0.08 (0.06-0.09)	0.07 (0.06-0.08)	140 (115-180)	0.11 (0.06-0.16)	0.08 (0.06-0.11)	0.07 (0.06-0.10)
	>HB200	HPA225B	140 (115-180)	0.09 (0.06-0.12)	0.08 (0.06-0.09)	0.07 (0.06-0.08)	140 (115-180)	0.11 (0.06-0.16)	0.08 (0.06-0.11)	0.07 (0.06-0.10)
	≤HB200	HPA225B	140 (115-180)	0.10 (0.06-0.14)	0.05 (0.04-0.06)	0.07 (0.06-0.08)	140 (115-165)	0.11 (0.06-0.16)	0.09 (0.06-0.11)	0.08 (0.06-0.10)
	>HB200	HPA225B	140 (115-165)	0.10 (0.06-0.14)	0.05 (0.04-0.06)	0.07 (0.06-0.08)	140 (115-165)	0.11 (0.06-0.16)	0.09 (0.06-0.11)	0.08 (0.06-0.10)
K Grey cast iron (FC300 and so on) Nodular cast iron (FCD450 and so on) Nodular cast iron (FCD700 and so on)	Tensile strength ≤350Mpa	HPA225B	160 (130-195)	0.14 (0.10-0.18)	0.11 (0.10-0.12)	0.09 (0.08-0.10)	160 (130-195)	0.15 (0.10-0.20)	0.12 (0.11-0.13)	0.11 (0.10-0.12)
	Tensile strength ≤450MPa	HPA225B	100 (80-135)	0.14 (0.10-0.18)	0.11 (0.10-0.12)	0.09 (0.08-0.10)	160 (130-195)	0.15 (0.10-0.20)	0.12 (0.11-0.13)	0.11 (0.10-0.12)
	Tensile strength ≤800MPa	HPA225B	100 (70-125)	0.14 (0.10-0.18)	0.11 (0.10-0.12)	0.09 (0.08-0.10)	160 (130-195)	0.15 (0.10-0.20)	0.12 (0.11-0.13)	0.11 (0.10-0.12)
N Titanium alloy cooper alloy non-metal	-	HWK001B	30-80	0.12-0.2	0.12-0.2	0.12-0.2	30-80	0.14-0.24	0.14-0.24	0.14-0.24
	-	HWK001B	150-230	0.12-0.18	0.12-0.18	0.12-0.18	150-230	0.14-0.24	0.14-0.24	0.14-0.24
	-	HWK001B	150-230	0.08-0.13	0.08-0.13	0.08-0.13	150-230	0.08-0.14	0.08-0.14	0.08-0.14

# Double-side chamfering short-hole drill

## Product feature

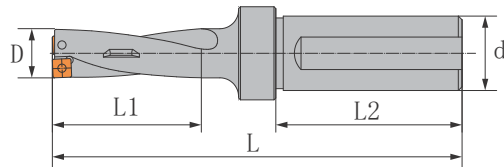
Using elastic floating insert to complete the positive and negative chamfering of the through-hole, and the chamfer uniformly. Drilling and chamfering can be completed at one time, which greatly improves production efficiency.

It is used for one-time drilling and chamfering bolt holes of railway trunk rail, switch rail and rut rail.

Good processing quality, simple process and low processing cost.



## Tool specification

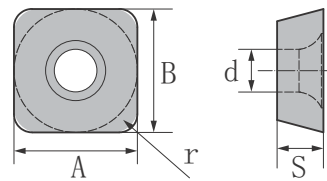


Part number	D	d	L1	L2	L	Central insert	Perlpheral insert	Chamfer insert	Cylindrical pin	Inventory
SCP22.5-CED-XP25	22	25	88	56	174	SPGX0703	SCGX060204	CED45-22.5	DS4025-SR1.5	●
SCP23.5-CED-XP25	23	25	92	56	178	SPGX0703	SCGX070308	CED45-23.5		●
SCP24.5-CED-XP25	24	25	96	56	182	SPGX0703	SCGX070308	CED45-24.5		●
SCP25.5-CED-XP32	25	32	100	60	190	SPGX0703	SCGX070308	CED45-25.5		●
SCP26.5-CED-XP32	26	32	104	60	194	SPGX0903	SCGX070308	CED45-26.5		●
SCP27.5-CED-XP32	27	32	108	60	198	SPGX0903	SCGX070308	CED45-27.5		●
SCP28.5-CED-XP32	28	32	112	60	202	SPGX0903	SCGX09T308	CED45-28.5		●
SCP29.5-CED-XP32	29	32	116	60	206	SPGX0903	SCGX09T308	CED45-29.5	DS4925-SR1.5	●
SCP30.5-CED-XP32	30	32	120	60	210	SPGX0903	SCGX09T308	CED45-30.5		●
SCP31.5-CED-XP32	31	32	124	60	214	SPGX0903	SCGX09T308	CED45-31.5		●
SCP32.5-CED-XP32	32	40	128	70	226	SPGX11T3	SCGX09T308	CED45-32.5		●
SCP33.5-CED-XP32	33	40	132	70	230	SPGX11T3	SCGX09T308	CED45-33.5		●
SCP34.5-CED-XP32	34	40	136	70	234	SPGX11T3	SCGX09T308	CED45-34.5		●

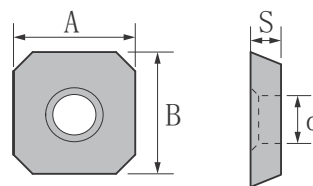
Note: ● have stock, ○ for reservation

Central insert	Screw for central insert	Wrench	Perlpheral insert	Pcrew for perlpheral insert	Wrench
SPGX0703	S2506	T8	SCGX060204	S2506	T8
SPGX0903	S3008	T8	SCGX070308	S3006	T8
SPGX11T3	S35085	T10	SCGX09T308	S4009	T15

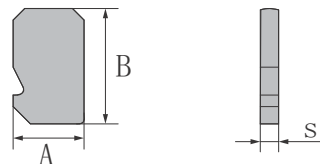
## Insert specification



Part number	Material (PVD)	Size				
	HPP025D	A	B	s	d	r
SCGX060204	●	6.35	6.35	2.8	2.38	0.4
SCGX070308	●	7.94	7.94	3.5	3.18	0.8
SCGX09T308	●	9.53	9.53	4.5	3.97	0.8



Part number	Material (PVD)	Size			
	HPP025D	A	B	s	d
SPGX0703	●	7.94	7.94	2.8	3.18
SPGX0903	●	9.53	9.53	3.4	3.18
SPGX11T3	●	11.5	11.5	3.8	3.97



Part number	Material (PVD)	Size		
	HPP125D	A	B	s
CED45-22.5	●	12.3	17.5	3.2
CED45-23.5	●	12.3	18	3.2
CED45-24.5	●	12.3	18.5	3.2
CED45-25.5	●	12.3	20	3.2
CED45-26.5	●	12.3	20.5	3.2
CED45-27.5	●	12.3	21	3.2
CED45-28.5	●	12.3	21.5	3.2
CED45-29.5	●	12.3	22	3.2
CED45-30.5	●	12.3	23.5	3.2
CED45-31.5	●	12.3	24	3.2
CED45-32.5	●	12.3	24.5	3.2
CED45-33.5	●	12.3	25	3.2
CED45-34.5	●	12.3	25.5	3.2

Note: ● have stock, ○ for reservation

A

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C

D

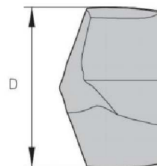
E



- A
- B
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- E

# Interchangeable crown drill tip

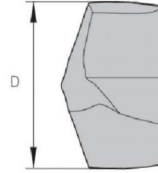
## Drill tip Ap1



Part number	size		Part number	size	
	D	shim Size		D	shim Size
CDDLA-1250-AP1	12.5	C	CDDLA-1770-AP1	17.7	1
CDDLA-1270-AP1	12.7	C	CDDLA-1790-AP1	17.9	1
CDDLA-1280-AP1	12.8	C	CDDLA-1800-AP1	18	1
CDDLA-1300-AP1	13	C	CDDLA-1830-AP1	18.3	2
CDDLA-1310-AP1	13.1	C	CDDLA-1850-AP1	18.5	2
CDDLA-1320-AP1	13.2	C	CDDLA-1880-AP1	18.8	2
CDDLA-1350-AP1	13.5	C	CDDLA-1900-AP1	19	2
CDDLA-1370-AP1	13.7	B	CDDLA-1925-AP1	19.25	2
CDDLA-1380-AP1	13.8	B	CDDLA-1930-AP1	19.3	2
CDDLA-1400-AP1	14	B	CDDLA-1950-AP1	19.5	2
CDDLA-1410-AP1	14.1	B	CDDLA-1970-AP1	19.7	2
CDDLA-1420-AP1	14.2	B	CDDLA-2000-AP1	20	3
CDDLA-1450-AP1	14.5	B	CDDLA-2050-AP1	20.5	3
CDDLA-1470-AP1	14.7	A	CDDLA-2100-AP1	21	3
CDDLA-1480-AP1	14.8	A	CDDLA-2150-AP1	21.5	3
CDDLA-1500-AP1	15	A	CDDLA-2200-AP1	22	3
CDDLA-1510-AP1	15.1	A	CDDLA-2250-AP1	22.5	4
CDDLA-1530-AP1	15.3	A	CDDLA-2300-AP1	23	4
CDDLA-1550-AP1	15.5	A	CDDLA-2350-AP1	23.5	4
CDDLA-1570-AP1	15.7	A	CDDLA-2400-AP1	24	4
CDDLA-1580-AP1	15.8	A	CDDLA-2450-AP1	24.5	5
CDDLA-1600-AP1	16	1	CDDLA-2500-AP1	25	5
CDDLA-1610-AP1	16.1	1	CDDLA-2550-AP1	25.5	5
CDDLA-1620-AP1	16.2	1	CDDLA-2567-AP1	25.67	5
CDDLA-1650-AP1	16.5	1	CDDLA-2600-AP1	26	5
CDDLA-1660-AP1	16.6	1	CDDLA-2650-AP1	26.5	6
CDDLA-1670-AP1	16.7	1	CDDLA-2700-AP1	27	6
CDDLA-1700-AP1	17	1	CDDLA-2750-AP1	27.5	6
CDDLA-1750-AP1	17.5	1	CDDLA-2800-AP1	28	6
CDDLA-1760-AP1	17.6	1	CDDLA-2850-AP1	28.5	7

# Interchangeable crown drill tip

## Drill tip Ap1



Part number	size		Part number	size	
	D	shim Size		D	shim Size
CDDLA-2900-AP1	29	7	CDDLA-3100-AP1	31	8
CDDLA-2950-AP1	29.5	7	CDDLA-3150-AP1	31.5	8
CDDLA-3000-AP1	30	7	CDDLA-3200-AP1	32	8
CDDLA-3050-AP1	30.5	8			

Note: Starting from 5 pcs

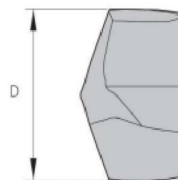
## AP1 Recommended Processing Parameters for Groove Type

	Carbon structural steel			alloy steel			stainless steel
	C-0.25%	C0.25-0.45%	C0.45%-	HRC-25	HRC25-35	HRC35-45	Cr<17%
Cutting speed (m/min)	60-110			60-110		45-70	15-60
Diameter(mm)	Recommended feed according to drill diameter (mm/r)						
12.5	0.15-0.31			0.15-0.31			0.09-0.14
16	0.17-0.36			0.17-0.36			0.11-0.17
20	0.19-0.41			0.19-0.41			0.13-0.2
25.4	0.25-0.53			0.25-0.53			0.16-0.25
32	0.29-0.6			0.29-0.6			0.18-0.28

- A
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- D
- E

# Interchangeable crown drill tip

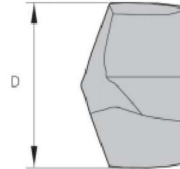
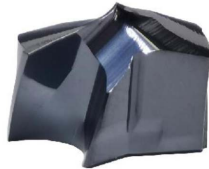
## Drill tip Ap2



Part number	size		Part number	size	
	D	shim Size		D	shim Size
CDDLA-1250-AP2	12.5	C	CDDLA-1770-AP2	17.7	1
CDDLA-1270-AP2	12.7	C	CDDLA-1790-AP2	17.9	1
CDDLA-1280-AP2	12.8	C	CDDLA-1800-AP2	18	1
CDDLA-1300-AP2	13	C	CDDLA-1830-AP2	18.3	2
CDDLA-1310-AP2	13.1	C	CDDLA-1850-AP2	18.5	2
CDDLA-1320-AP2	13.2	C	CDDLA-1880-AP2	18.8	2
CDDLA-1350-AP2	13.5	C	CDDLA-1900-AP2	19	2
CDDLA-1370-AP2	13.7	B	CDDLA-1925-AP2	19.25	2
CDDLA-1380-AP2	13.8	B	CDDLA-1930-AP2	19.3	2
CDDLA-1400-AP2	14	B	CDDLA-1950-AP2	19.5	2
CDDLA-1410-AP2	14.1	B	CDDLA-1970-AP2	19.7	2
CDDLA-1420-AP2	14.2	B	CDDLA-2000-AP2	20	3
CDDLA-1450-AP2	14.5	B	CDDLA-2050-AP2	20.5	3
CDDLA-1470-AP2	14.7	A	CDDLA-2100-AP2	21	3
CDDLA-1480-AP2	14.8	A	CDDLA-2150-AP2	21.5	3
CDDLA-1500-AP2	15	A	CDDLA-2200-AP2	22	3
CDDLA-1510-AP2	15.1	A	CDDLA-2250-AP2	22.5	4
CDDLA-1530-AP2	15.3	A	CDDLA-2300-AP2	23	4
CDDLA-1550-AP2	15.5	A	CDDLA-2350-AP2	23.5	4
CDDLA-1570-AP2	15.7	A	CDDLA-2400-AP2	24	4
CDDLA-1580-AP2	15.8	A	CDDLA-2450-AP2	24.5	5
CDDLA-1600-AP2	16	1	CDDLA-2500-AP2	25	5
CDDLA-1610-AP2	16.1	1	CDDLA-2550-AP2	25.5	5
CDDLA-1620-AP2	16.2	1	CDDLA-2567-AP2	25.67	5
CDDLA-1650-AP2	16.5	1	CDDLA-2600-AP2	26	5
CDDLA-1660-AP2	16.6	1	CDDLA-2650-AP2	26.5	6
CDDLA-1670-AP2	16.7	1	CDDLA-2700-AP2	27	6
CDDLA-1700-AP2	17	1	CDDLA-2750-AP2	27.5	6
CDDLA-1750-AP2	17.5	1	CDDLA-2800-AP2	28	6
CDDLA-1760-AP2	17.6	1	CDDLA-2850-AP2	28.5	7

# Interchangeable crown drill tip

## Drill tip Ap2



Part number	size		Part number	size	
	D	shim Size		D	shim Size
CDDLA-2900-AP2	29	7	CDDLA-3100-AP2	31	8
CDDLA-2950-AP2	29.5	7	CDDLA-3150-AP2	31.5	8
CDDLA-3000-AP2	30	7	CDDLA-3200-AP2	32	8
CDDLA-3050-AP2	30.5	8			

Note: Starting from 5 pcs

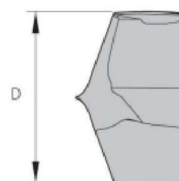
## AP2 Recommended Processing Parameters for Groove Type

	Carbon structural steel			alloy steel			stainless steel	
	C-0.25%	C0.25-0.45%	C0.45%-	HRC-25	HRC25-35	HRC35-45	Cr<17%	
Cutting speed (m/min)	60-110			60-110			45-70	15-60
Diameter(mm)	Recommended feed according to drill diameter (mm/r)							
12.5	0.15-0.31			0.15-0.31			0.09-0.14	
16	0.17-0.36			0.17-0.36			0.11-0.17	
20	0.19-0.41			0.19-0.41			0.13-0.2	
25.4	0.25-0.53			0.25-0.53			0.16-0.25	
32	0.29-0.6			0.29-0.6			0.18-0.28	

- A
- B
- C
- D
- E

# Interchangeable crown drill tip

## Drill tip Ap3

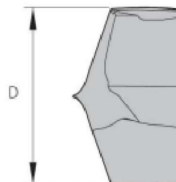


Part number	size		Part number	size	
	D	shim Size		D	shim Size
CDDLA-1250-AP3	12.5	C	CDDLA-1770-AP3	17.7	1
CDDLA-1270-AP3	12.7	C	CDDLA-1790-AP3	17.9	1
CDDLA-1280-AP3	12.8	C	CDDLA-1800-AP3	18	1
CDDLA-1300-AP3	13	C	CDDLA-1830-AP3	18.3	2
CDDLA-1310-AP3	13.1	C	CDDLA-1850-AP3	18.5	2
CDDLA-1320-AP3	13.2	C	CDDLA-1880-AP3	18.8	2
CDDLA-1350-AP3	13.5	C	CDDLA-1900-AP3	19	2
CDDLA-1370-AP3	13.7	B	CDDLA-1925-AP3	19.25	2
CDDLA-1380-AP3	13.8	B	CDDLA-1930-AP3	19.3	2
CDDLA-1400-AP3	14	B	CDDLA-1950-AP3	19.5	2
CDDLA-1410-AP3	14.1	B	CDDLA-1970-AP3	19.7	2
CDDLA-1420-AP3	14.2	B	CDDLA-2000-AP3	20	3
CDDLA-1450-AP3	14.5	B	CDDLA-2050-AP3	20.5	3
CDDLA-1470-AP3	14.7	A	CDDLA-2100-AP3	21	3
CDDLA-1480-AP3	14.8	A	CDDLA-2150-AP3	21.5	3
CDDLA-1500-AP3	15	A	CDDLA-2200-AP3	22	3
CDDLA-1510-AP3	15.1	A	CDDLA-2250-AP3	22.5	4
CDDLA-1530-AP3	15.3	A	CDDLA-2300-AP3	23	4
CDDLA-1550-AP3	15.5	A	CDDLA-2350-AP3	23.5	4
CDDLA-1570-AP3	15.7	A	CDDLA-2400-AP3	24	4
CDDLA-1580-AP3	15.8	A	CDDLA-2450-AP3	24.5	5
CDDLA-1600-AP3	16	1	CDDLA-2500-AP3	25	5
CDDLA-1610-AP3	16.1	1	CDDLA-2550-AP3	25.5	5
CDDLA-1620-AP3	16.2	1	CDDLA-2567-AP3	25.67	5
CDDLA-1650-AP3	16.5	1	CDDLA-2600-AP3	26	5
CDDLA-1660-AP3	16.6	1	CDDLA-2650-AP3	26.5	6
CDDLA-1670-AP3	16.7	1	CDDLA-2700-AP3	27	6
CDDLA-1700-AP3	17	1	CDDLA-2750-AP3	27.5	6
CDDLA-1750-AP3	17.5	1	CDDLA-2800-AP3	28	6
CDDLA-1760-AP3	17.6	1	CDDLA-2850-AP3	28.5	7

A
B
C
D
E

# Interchangeable crown drill tip

## Drill tip Ap3



Part number	size	
	D	shim Size
CDDLA-2900-AP3	29	7
CDDLA-2950-AP3	29.5	7
CDDLA-3000-AP3	30	7
CDDLA-3050-AP3	30.5	8

Part number	size	
	D	shim Size
CDDLA-3100-AP3	31	8
CDDLA-3150-AP3	31.5	8
CDDLA-3200-AP3	32	8

Note: Starting from 5 pcs

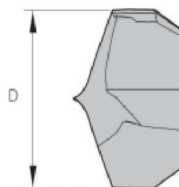
## AP3 Recommended Processing Parameters for Groove Type

	Carbon structural steel			cast iron
	C-0.25%	C0.25-0.45%	C0.45%-	Si-2.5%
Cutting speed (m/min)	60-110			70-150
Diameter(mm)	Recommended feed according to drill diameter (mm/r)			
12.5	0.15-0.31			0.17-0.34
16	0.17-0.36			0.19-0.39
20	0.19-0.41			0.21-0.44
25.4	0.25-0.53			0.27-0.56
32	0.29-0.6			0.31-0.63

- A
- B
- C
- D
- E

# Interchangeable crown drill tip

## Drill tip AP3A

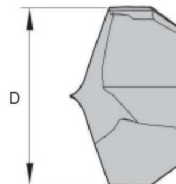


Part number	size		Part number	size	
	D	shim Size		D	shim Size
CDDLA-1250-AP3A	12.5	C	CDDLA-1770-AP3A	17.7	1
CDDLA-1270-AP3A	12.7	C	CDDLA-1790-AP3A	17.9	1
CDDLA-1280-AP3A	12.8	C	CDDLA-1800-AP3A	18	1
CDDLA-1300-AP3A	13	C	CDDLA-1830-AP3A	18.3	2
CDDLA-1310-AP3A	13.1	C	CDDLA-1850-AP3A	18.5	2
CDDLA-1320-AP3A	13.2	C	CDDLA-1880-AP3A	18.8	2
CDDLA-1350-AP3A	13.5	C	CDDLA-1900-AP3A	19	2
CDDLA-1370-AP3A	13.7	B	CDDLA-1925-AP3A	19.25	2
CDDLA-1380-AP3A	13.8	B	CDDLA-1930-AP3A	19.3	2
CDDLA-1400-AP3A	14	B	CDDLA-1950-AP3A	19.5	2
CDDLA-1410-AP3A	14.1	B	CDDLA-1970-AP3A	19.7	2
CDDLA-1420-AP3A	14.2	B	CDDLA-2000-AP3A	20	3
CDDLA-1450-AP3A	14.5	B	CDDLA-2050-AP3A	20.5	3
CDDLA-1470-AP3A	14.7	A	CDDLA-2100-AP3A	21	3
CDDLA-1480-AP3A	14.8	A	CDDLA-2150-AP3A	21.5	3
CDDLA-1500-AP3A	15	A	CDDLA-2200-AP3A	22	3
CDDLA-1510-AP3A	15.1	A	CDDLA-2250-AP3A	22.5	4
CDDLA-1530-AP3A	15.3	A	CDDLA-2300-AP3A	23	4
CDDLA-1550-AP3A	15.5	A	CDDLA-2350-AP3A	23.5	4
CDDLA-1570-AP3A	15.7	A	CDDLA-2400-AP3A	24	4
CDDLA-1580-AP3A	15.8	A	CDDLA-2450-AP3A	24.5	5
CDDLA-1600-AP3A	16	1	CDDLA-2500-AP3A	25	5
CDDLA-1610-AP3A	16.1	1	CDDLA-2550-AP3A	25.5	5
CDDLA-1620-AP3A	16.2	1	CDDLA-2567-AP3A	25.67	5
CDDLA-1650-AP3A	16.5	1	CDDLA-2600-AP3A	26	5
CDDLA-1660-AP3A	16.6	1	CDDLA-2650-AP3A	26.5	6
CDDLA-1670-AP3A	16.7	1	CDDLA-2700-AP3A	27	6
CDDLA-1700-AP3A	17	1	CDDLA-2750-AP3A	27.5	6
CDDLA-1750-AP3A	17.5	1	CDDLA-2800-AP3A	28	6

A
B
C
D
E

# Interchangeable crown drill tip

## Drill tip AP3A



Part number	size		Part number	size	
	D	shim Size		D	shim Size
CDDLA-2900-AP3A	29	7	CDDLA-3100-AP3A	31	8
CDDLA-2950-AP3A	29.5	7	CDDLA-3150-AP3A	31.5	8
CDDLA-3000-AP3A	30	7	CDDLA-3200-AP3A	32	8
CDDLA-3050-AP3A	30.5	8			

Note: Starting from 5 pcs

## AP3A Recommended Processing Parameters for Groove Type

	Carbon structural steel			cast iron
	C-0.25%	C0.25-0.45%	C0.45%-	Si-2.5%
Cutting speed (m/min)	60-110			70-150
Diameter(mm)	Recommended feed according to drill diameter (mm/r)			
12.5	0.15-0.31			0.17-0.34
16	0.17-0.36			0.19-0.39
20	0.19-0.41			0.21-0.44
25.4	0.25-0.53			0.27-0.56
32	0.29-0.6			0.31-0.63





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