KYOCERA

New versatile coated solid carbide drill | QDA

QDA series

Cost effective drill for higher speeds and better surfaces

Highly versatile drill series applicable to a wide range of workpiece materials

Three styles available starting from diameter Ø1 mm with coolant supply

Excellent chip control and long tool life.

NEW

QDA long

New general purpose deep hole drill

12×D, 15×D, 20×D, 25×D and 30×D
Ø3 – 10 mm

KEEPS YOU AHEAD

Economical and versatile drill for higher productivity

QDA series

The general purpose QDA drill series offers good chip evacuation and the rigid tool design improves tool life significantly.

Materials

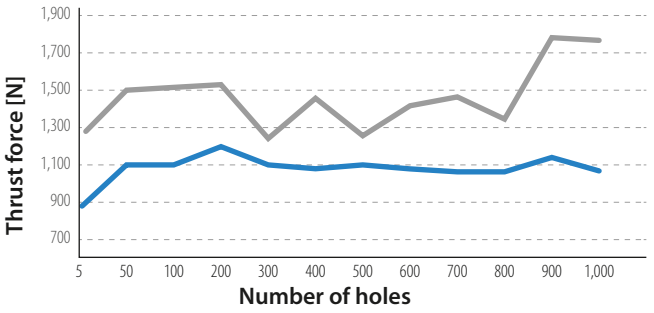
Versatility — **Suitable for 5 material groups**

Chip condition — **Good chip forming**

Cutting conditions: workpiece: stainless steel 316L,
VC = 60 mm, f = 0.16 mm/rev.

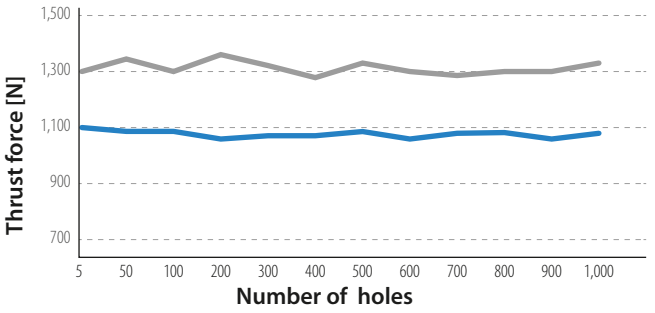
Thrust force (Internal evaluation) (Fz)

P St. 52



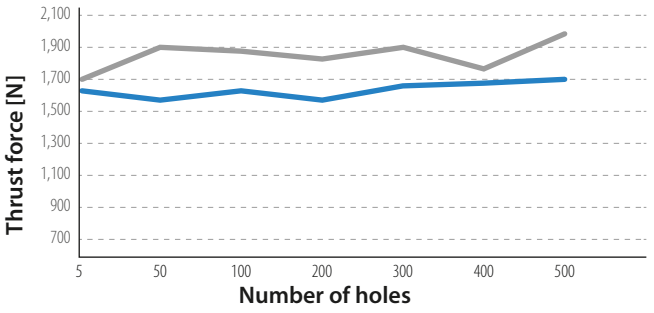
- From average value competitor is **35% higher**
- Lower and more stable thrust force from QDA

K GGG40



- From average value competitor is **23% higher**
- Lower thrust force from QDA

M AISI 304



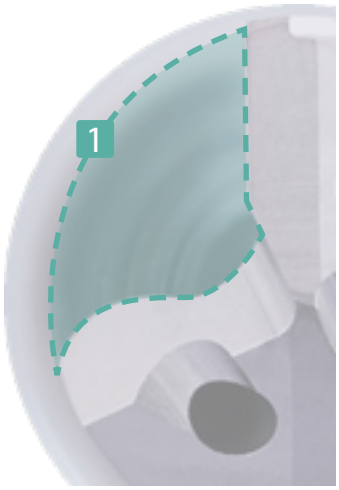
- From average value competitor is **13% higher**
- Lower and more stable thrust force from QDA

High feed technology

Coated solid carbide drill

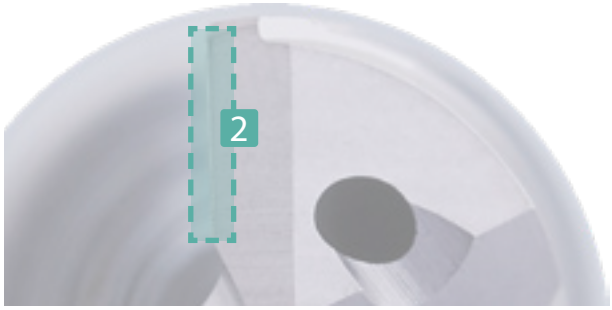
Wider chip pocket

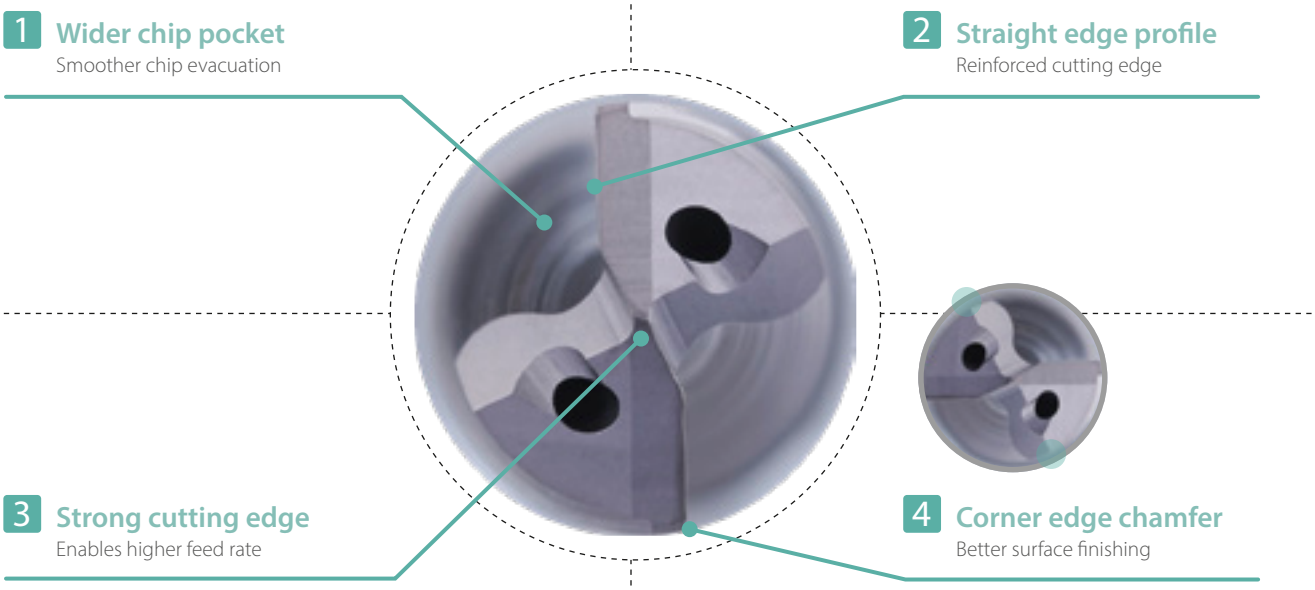
The wider area is offering more space so that the chip pocket enhances a better and smoother chip evacuation.

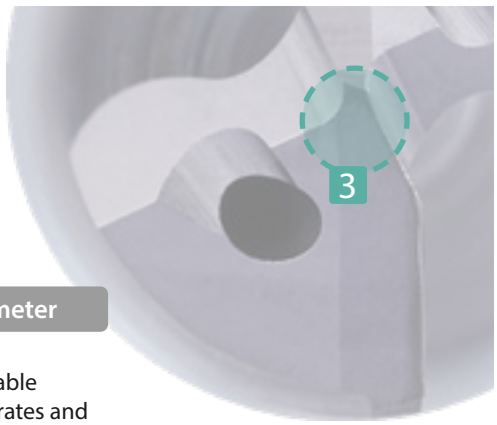


Straight edge profile

Creating shorter chips and offering a reinforced cutting edge for longer tool life while machining on high level.

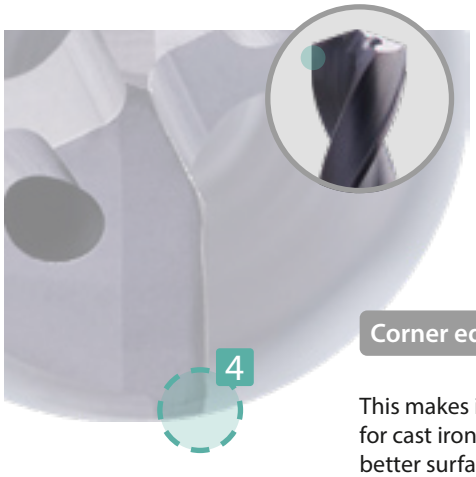






Core diameter

The QDA is suitable for higher feed rates and the bigger core diameter enhances tool durability drastically.



Corner edge chamfer

This makes it an ideal tool for cast iron and offering better surface finishing in general.

Visit us on LinkedIn


QDA
series

QDA mini

INTERNAL COOLANT

Coolant-through design provides extended tool life and stable machining in small dimensions.

Diameter range

5×D	8×D
Ø1.0 - Ø3.0 mm	

For 35 – 68 HRC

1 Split point design

Provides self centering ability and reduced thrust.

2 Special tip thinning

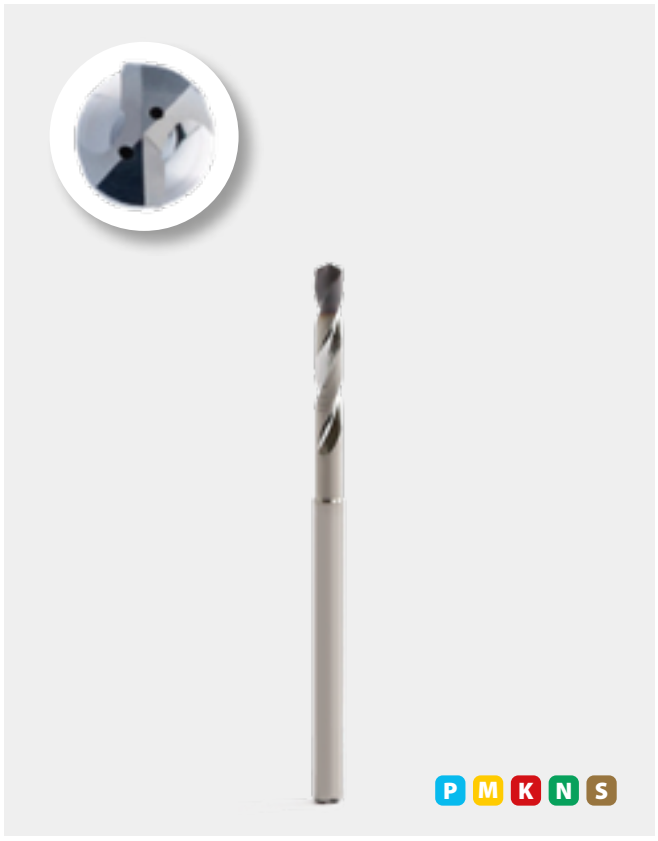
Better self-centering on initial cutting.

3 Straight edge profile

Shorter chip and reinforced cutting edge.

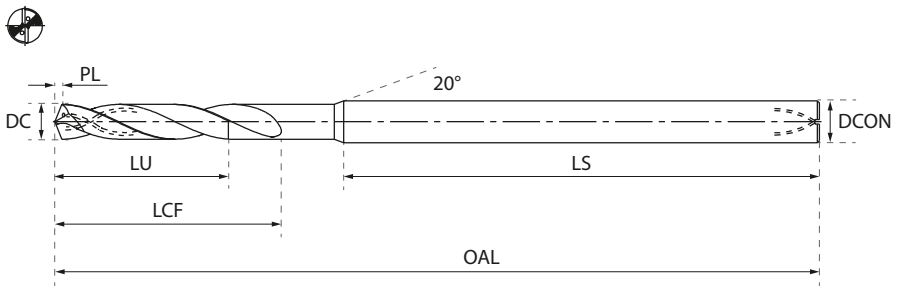
4 Polished flute

Smoother chip evacuation.
Less build up edge.



QDA mini Internal coolant

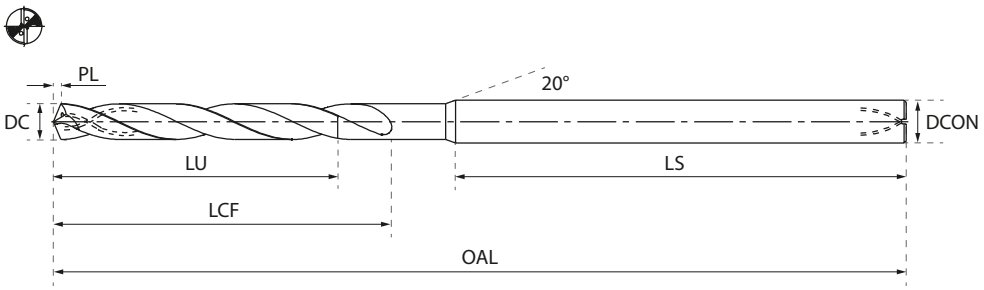
5×D



Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0100X05S030C	●	1	3	50	5	6.5	39.5	0.2
QDA0110X05S030C	●	1.1	3	50	5.7	7.2	38.8	0.2
QDA0120X05S030C	●	1.2	3	50	6.3	7.8	38.2	0.2
QDA0130X05S030C	●	1.3	3	50	7	8.5	37.5	0.3
QDA0140X05S030C	●	1.4	3	50	7.6	9.1	36.9	0.3
QDA0150X05S030C	●	1.5	3	50	8.3	9.8	36.2	0.3
QDA0160X05S030C	●	1.6	3	55	8.9	10.4	35.6	0.3
QDA0170X05S030C	●	1.7	3	55	9.6	11.1	39.9	0.3
QDA0180X05S030C	●	1.8	3	55	10.2	11.7	39.3	0.4
QDA0190X05S030C	●	1.9	3	55	10.9	12.4	38.6	0.4
QDA0200X05S030C	●	2	3	55	11.5	13	38	0.4
QDA0210X05S030C	●	2.1	3	55	12.2	13.7	37.3	0.4
QDA0220X05S030C	●	2.2	3	55	12.8	14.3	36.7	0.4
QDA0230X05S030C	●	2.3	3	55	13.5	15	36	0.5
QDA0240X05S030C	●	2.4	3	55	14.1	15.6	35.4	0.5
QDA0250X05S030	●	2.5	3	55	14.8	16.3	34.7	0.5
QDA0260X05S030C	●	2.6	3	55	15.4	16.9	34.1	0.5
QDA0270X05S030C	●	2.7	3	55	16.1	17.6	33.4	0.5
QDA0280X05S030C	●	2.8	3	55	16.7	18.2	32.8	0.6
QDA0290X05S030C	●	2.9	3	55	17.4	18.9	32.1	0.6

QDA mini Internal coolant

8×D



Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0100X08S030C	●	1	3	50	8	9.5	36.5	0.2
QDA0110X08S030C	●	1.1	3	50	9	10.5	35.5	0.2
QDA0120X08S030C	●	1.2	3	50	9.9	11.4	34.6	0.2
QDA0130X08S030C	●	1.3	3	50	10.9	12.4	33.6	0.3
QDA0140X08S030C	●	1.4	3	50	11.8	13.3	32.7	0.3
QDA0150X08S030C	●	1.5	3	50	12.8	14.3	31.7	0.3
QDA0160X08S030C	●	1.6	3	50	13.7	15.2	30.8	0.3
QDA0170X08S030C	●	1.7	3	60	14.7	16.2	39.8	0.3
QDA0180X08S030C	●	1.8	3	60	15.6	17.1	38.9	0.4
QDA0190X08S030C	●	1.9	3	60	16.6	18.1	37.9	0.4
QDA0200X08S030C	●	2	3	60	17.5	19	37	0.4
QDA0210X08S030C	●	2.1	3	60	18.5	20	36	0.4
QDA0220X08S030C	●	2.2	3	60	19.4	20.9	35.1	0.4
QDA0230X08S030C	●	2.3	3	60	20.4	21.9	34.1	0.5
QDA0240X08S030C	●	2.4	3	60	21.3	22.8	33.2	0.5
QDA0250X08S030C	●	2.5	3	60	22.3	23.8	32.2	0.5
QDA0260X08S030C	●	2.6	3	60	23.2	24.7	31.3	0.5
QDA0270X08S030C	●	2.7	3	60	24.2	25.7	30.3	0.5
QDA0280X08S030C	●	2.8	3	60	25.1	26.6	29.4	0.6
QDA0290X08S030C	●	2.9	3	60	26.1	27.6	28.4	0.6

Cutting conditions Reference table

QDA mini • Internal coolant 5D 8D

Workpiece	P01		P02		P03		M01		M02		K01		K02		S01		S02	
	Carbon steel		Alloy steel		Prehardened steel		Stainless steel				Grey cast iron		Ductile cast iron		Titanium alloy		Nickel Alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High machinability		Low machinability		-		-		-		-	
D (mm)	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**
Ø1.0		0.017		0.016		0.014		0.015		0.014		0.018		0.016		0.013		0.009
Ø1.5		0.026		0.024		0.022		0.022		0.021		0.027		0.024		0.019		0.016
Ø2.0	90	0.035	80	0.031	65	0.029	60	0.029	40	0.028	85	0.035	65	0.032	30	0.025	20	0.025
Ø2.5		0.043		0.039		0.036		0.036		0.035		0.044		0.040		0.031		0.035
Ø3.0		0.052		0.047		0.043		0.044		0.042		0.053		0.048		0.038		0.045

Workpiece	N01		N02		N03	
	Wrought aluminium		Cast aluminium		Copper alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45	
D (mm)	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**
Ø1.0		0.017		0.018		0.016
Ø1.5		0.026		0.026		0.024
Ø2.0	145	0.035	125	0.035	115	0.032
Ø2.5		0.043		0.044		0.040
Ø3.0		0.052		0.053		0.049

Mini

Reference cutting data for QDA mini drill with internal coolant.

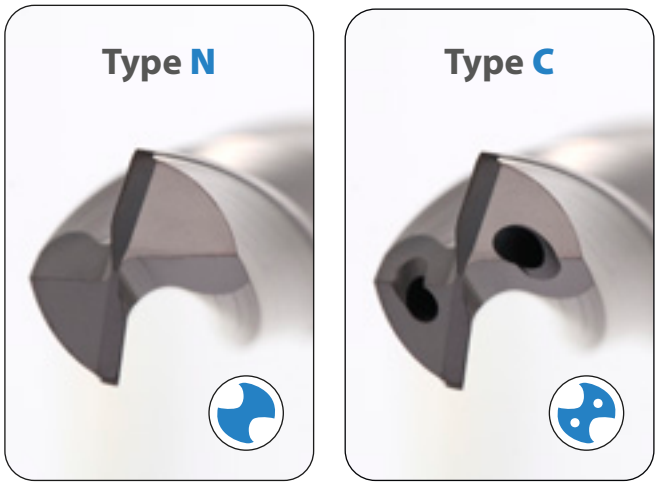
Note! These reference cutting data indicators are just for reference. They should be adjusted according to the different cutting environments.

QDA

WITH OR WITHOUT COOLANT HOLES

Standard type for drilling applications on the widest range of materials. Economical drill series for general machining.

Type N:	3×D	5×D	
Type C:	3×D	5×D	8×D
Diameters:	Ø3.0 - Ø20.0 mm		



For 35 – 68 HRC

1 Wider chip pocket

Enhances and smoother chip evacuation.

2 Straight edge profile

Shorter chip and reinforced cutting edge.

3 Strong core

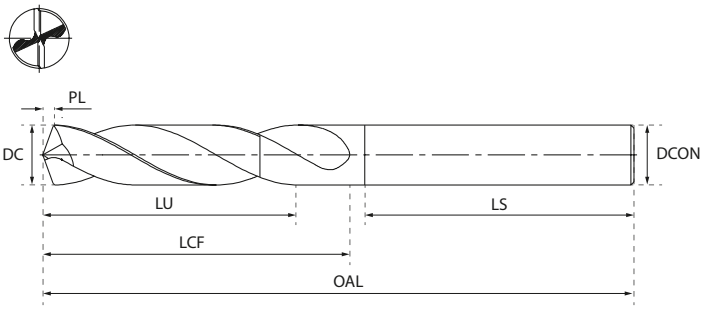
Strong cutting edge and core design enables higher feed rate and enhances tool durability.

4 Corner chamfer edge

Ideal for cast iron and better surface finishing.

QDA type N No coolant holes

3×D



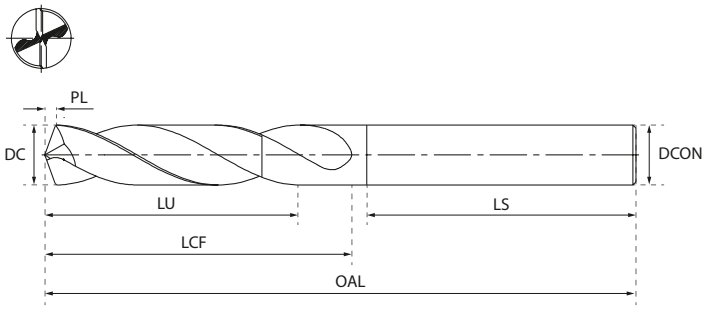
Carbide | 140° | 30° | DC m7 | DCON h6

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0300X03S060N	●	3	6	62	14	20	36	0.6
QDA0310X03S060N	●	3.1	6	62	14	20	36	0.6
QDA0320X03S060N	●	3.2	6	62	14	20	36	0.6
QDA0330X03S060N	●	3.3	6	62	14	20	36	0.7
QDA0340X03S060N	●	3.4	6	62	14	20	36	0.7
QDA0350X03S060N	●	3.5	6	62	14	20	36	0.7
QDA0360X03S060N	●	3.6	6	62	14	20	36	0.7
QDA0370X03S060N	●	3.7	6	62	14	20	36	0.7
QDA0380X03S060N	●	3.8	6	66	17	24	36	0.8
QDA0390X03S060N	●	3.9	6	66	17	24	36	0.8
QDA0400X03S060N	●	4	6	66	17	24	36	0.8
QDA0410X03S060N	●	4.1	6	66	17	24	36	0.8
QDA0420X03S060N	●	4.2	6	66	17	24	36	0.8
QDA0430X03S060N	●	4.3	6	66	17	24	36	0.9
QDA0440X03S060N	●	4.4	6	66	17	24	36	0.9
QDA0450X03S060N	●	4.5	6	66	17	24	36	0.9
QDA0460X03S060N	●	4.6	6	66	17	24	36	0.9
QDA0470X03S060N	●	4.7	6	66	17	24	36	0.9
QDA0480X03S060N	●	4.8	6	66	20	28	36	1.0
QDA0490X03S060N	●	4.9	6	66	20	28	36	1.0
QDA0500X03S060N	●	5	6	66	20	28	36	1.0
QDA0510X03S060N	●	5.1	6	66	20	28	36	1.0
QDA0520X03S060N	●	5.2	6	66	20	28	36	1.0
QDA0530X03S060N	●	5.3	6	66	20	28	36	1.0
QDA0540X03S060N	●	5.4	6	66	20	28	36	1.1
QDA0550X03S060N	●	5.5	6	66	20	28	36	1.1
QDA0560X03S060N	●	5.6	6	66	20	28	36	1.1
QDA0570X03S060N	●	5.7	6	66	20	28	36	1.1

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0580X03S060N	●	5.8	6	66	20	28	36	1.1
QDA0590X03S060N	●	5.9	6	66	20	28	36	1.2
QDA0600X03S060N	●	6	6	66	20	28	36	1.2
QDA0610X03S080N	●	6.1	8	79	24	34	36	1.2
QDA0620X03S080N	●	6.2	8	79	24	34	36	1.2
QDA0630X03S080N	●	6.3	8	79	24	34	36	1.2
QDA0640X03S080N	●	6.4	8	79	24	34	36	1.3
QDA0650X03S080N	●	6.5	8	79	24	34	36	1.3
QDA0660X03S080N	●	6.6	8	79	24	34	36	1.3
QDA0670X03S080N	●	6.7	8	79	24	34	36	1.3
QDA0680X03S080N	●	6.8	8	79	24	34	36	1.3
QDA0690X03S080N	●	6.9	8	79	24	34	36	1.4
QDA0700X03S080N	●	7	8	79	24	34	36	1.4
QDA0710X03S080N	●	7.1	8	79	29	41	36	1.4
QDA0720X03S080N	●	7.2	8	79	29	41	36	1.4
QDA0730X03S080N	●	7.3	8	79	29	41	36	1.4
QDA0740X03S080N	●	7.4	8	79	29	41	36	1.5
QDA0750X03S080N	●	7.5	8	79	29	41	36	1.5
QDA0760X03S080N	●	7.6	8	79	29	41	36	1.5
QDA0770X03S080N	●	7.7	8	79	29	41	36	1.5
QDA0780X03S080N	●	7.8	8	79	29	41	36	1.5
QDA0790X03S080N	●	7.9	8	79	29	41	36	1.6
QDA0800X03S080N	●	8	8	79	29	41	36	1.6
QDA0810X03S100N	●	8.1	10	89	35	47	40	1.6
QDA0820X03S100N	●	8.2	10	89	35	47	40	1.6
QDA0830X03S100N	●	8.3	10	89	35	47	40	1.6
QDA0840X03S100N	●	8.4	10	89	35	47	40	1.7
QDA0850X03S100N	●	8.5	10	89	35	47	40	1.7

QDA type N No coolant holes

3×D



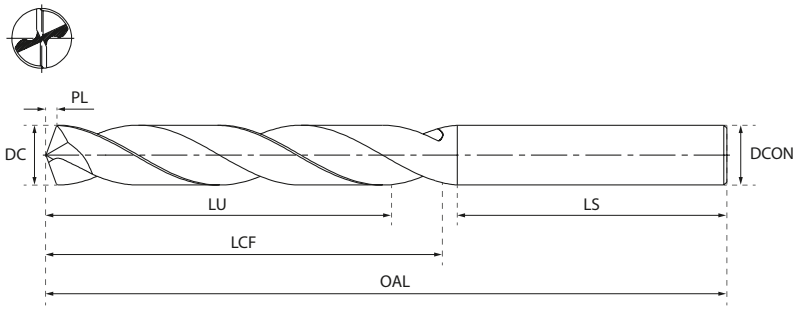
Carbide | 140° | 30° | DC m7 | DCON h6

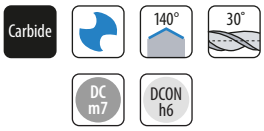
Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0860X03S100N	●	8.6	10	89	35	47	40	1.7
QDA0870X03S100N	●	8.7	10	89	35	47	40	1.7
QDA0880X03S100N	●	8.8	10	89	35	47	40	1.7
QDA0890X03S100N	●	8.9	10	89	35	47	40	1.8
QDA0900X03S100N	●	9	10	89	35	47	40	1.8
QDA0910X03S100N	●	9.1	10	89	35	47	40	1.8
QDA0920X03S100N	●	9.2	10	89	35	47	40	1.8
QDA0930X03S100N	●	9.3	10	89	35	47	40	1.8
QDA0940X03S100N	●	9.4	10	89	35	47	40	1.9
QDA0950X03S100N	●	9.5	10	89	35	47	40	1.9
QDA0960X03S100N	●	9.6	10	89	35	47	40	1.9
QDA0970X03S100N	●	9.7	10	89	35	47	40	1.9
QDA0980X03S100N	●	9.8	10	89	35	47	40	1.9
QDA0990X03S100N	●	9.9	10	89	35	47	40	2.0
QDA1000X03S100N	●	10	10	89	35	47	40	2.0
QDA1010X03S120N	●	10.1	12	102	40	55	45	2.0
QDA1020X03S120N	●	10.2	12	102	40	55	45	2.0
QDA1030X03S120N	●	10.3	12	102	40	55	45	2.0
QDA1040X03S120N	●	10.4	12	102	40	55	45	2.1
QDA1050X03S120N	●	10.5	12	102	40	55	45	2.1
QDA1060X03S120N	●	10.6	12	102	40	55	45	2.1
QDA1070X03S120N	●	10.7	12	102	40	55	45	2.1
QDA1080X03S120N	●	10.8	12	102	40	55	45	2.1
QDA1090X03S120N	●	10.9	12	102	40	55	45	2.2
QDA1100X03S120N	●	11	12	102	40	55	45	2.2
QDA1110X03S120N	●	11.1	12	102	40	55	45	2.2
QDA1120X03S120N	●	11.2	12	102	40	55	45	2.2
QDA1130X03S120N	●	11.3	12	102	40	55	45	2.2

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA1140X03S120N	●	11.4	12	102	40	55	45	2.3
QDA1150X03S120N	●	11.5	12	102	40	55	45	2.3
QDA1160X03S120N	●	11.6	12	102	40	55	45	2.3
QDA1170X03S120N	●	11.7	12	115	40	55	45	2.3
QDA1180X03S120N	●	11.8	12	115	40	55	45	2.3
QDA1190X03S120N	●	11.9	12	115	40	55	45	2.4
QDA1200X03S120N	●	12	12	115	40	55	45	2.4
QDA1250X03S140N	●	12.5	14	107	43	60	45	2.5
QDA1270X03S140N	●	12.7	14	107	43	60	45	2.5
QDA1300X03S140N	●	13	14	107	43	60	45	2.6
QDA1350X03S140N	●	13.5	14	107	43	60	45	2.7
QDA1370X03S140N	●	13.7	14	107	43	60	45	2.7
QDA1400X03S140N	●	14	14	107	43	60	45	2.8
QDA1450X03S160N	●	14.5	16	115	45	65	48	2.9
QDA1500X03S160N	●	15	16	115	45	65	48	3.0
QDA1550X03S160N	●	15.5	16	115	45	65	48	3.1
QDA1600X03S160N	●	16	16	115	45	65	48	3.2
QDA1650X03S180N	●	16.5	18	123	51	73	48	3.3
QDA1700X03S180N	●	17	18	123	51	73	48	3.4
QDA1750X03S180N	●	17.5	18	123	51	73	48	3.5
QDA1800X03S180N	●	18	18	123	51	73	48	3.6
QDA1850X03S200N	●	18.5	20	131	55	79	50	3.7
QDA1900X03S200N	●	19	20	131	55	79	50	3.8
QDA1950X03S200N	●	19.5	20	131	55	79	50	3.9
QDA2000X03S200N	●	20	20	131	55	79	50	4.0

QDA type N No coolant holes

5×D



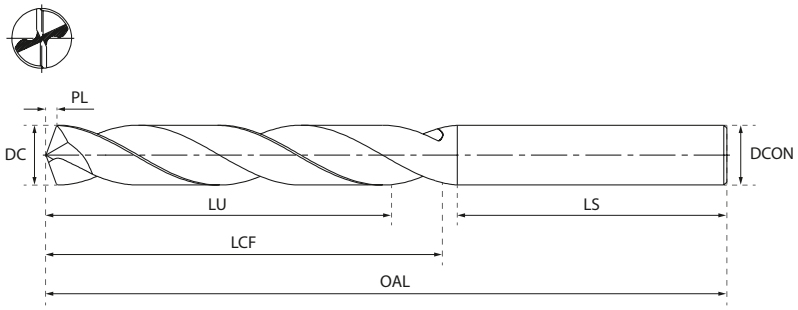


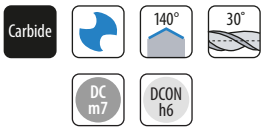
Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0300X05S060N	●	3	6	66	23	28	36	0.6
QDA0310X05S060N	●	3.1	6	66	23	28	36	0.6
QDA0320X05S060N	●	3.2	6	66	23	28	36	0.6
QDA0330X05S060N	●	3.3	6	66	23	28	36	0.7
QDA0340X05S060N	●	3.4	6	66	23	28	36	0.7
QDA0350X05S060N	●	3.5	6	66	23	28	36	0.7
QDA0360X05S060N	●	3.6	6	66	23	28	36	0.7
QDA0370X05S060N	●	3.7	6	66	23	28	36	0.7
QDA0380X05S060N	●	3.8	6	74	29	36	36	0.8
QDA0390X05S060N	●	3.9	6	74	29	36	36	0.8
QDA0400X05S060N	●	4	6	74	29	36	36	0.8
QDA0410X05S060N	●	4.1	6	74	29	36	36	0.8
QDA0420X05S060N	●	4.2	6	74	29	36	36	0.8
QDA0430X05S060N	●	4.3	6	74	29	36	36	0.9
QDA0440X05S060N	●	4.4	6	74	29	36	36	0.9
QDA0450X05S060N	●	4.5	6	74	29	36	36	0.9
QDA0460X05S060N	●	4.6	6	74	29	36	36	0.9
QDA0470X05S060N	●	4.7	6	74	29	36	36	0.9
QDA0480X05S060N	●	4.8	6	82	35	44	36	1.0
QDA0490X05S060N	●	4.9	6	82	35	44	36	1.0
QDA0500X05S060N	●	5	6	82	35	44	36	1.0
QDA0510X05S060N	●	5.1	6	82	35	44	36	1.0
QDA0520X05S060N	●	5.2	6	82	35	44	36	1.0
QDA0530X05S060N	●	5.3	6	82	35	44	36	1.0
QDA0540X05S060N	●	5.4	6	82	35	44	36	1.1
QDA0550X05S060N	●	5.5	6	82	35	44	36	1.1
QDA0560X05S060N	●	5.6	6	82	35	44	36	1.1
QDA0570X05S060N	●	5.7	6	82	35	44	36	1.1

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0580X05S060N	●	5.8	6	82	35	44	36	1.1
QDA0590X05S060N	●	5.9	6	82	35	44	36	1.2
QDA0600X05S060N	●	6	6	82	35	44	36	1.2
QDA0610X05S080N	●	6.1	8	91	43	53	36	1.2
QDA0620X05S080N	●	6.2	8	91	43	53	36	1.2
QDA0630X05S080N	●	6.3	8	91	43	53	36	1.2
QDA0640X05S080N	●	6.4	8	91	43	53	36	1.3
QDA0650X05S080N	●	6.5	8	91	43	53	36	1.3
QDA0660X05S080N	●	6.6	8	91	43	53	36	1.3
QDA0670X05S080N	●	6.7	8	91	43	53	36	1.3
QDA0680X05S080N	●	6.8	8	91	43	53	36	1.3
QDA0690X05S080N	●	6.9	8	91	43	53	36	1.4
QDA0700X05S080N	●	7	8	91	43	53	36	1.4
QDA0710X05S080N	●	7.1	8	91	43	53	36	1.4
QDA0720X05S080N	●	7.2	8	91	43	53	36	1.4
QDA0730X05S080N	●	7.3	8	91	43	53	36	1.4
QDA0740X05S080N	●	7.4	8	91	43	53	36	1.5
QDA0750X05S080N	●	7.5	8	91	43	53	36	1.5
QDA0760X05S080N	●	7.6	8	91	43	53	36	1.5
QDA0770X05S080N	●	7.7	8	91	43	53	36	1.5
QDA0780X05S080N	●	7.8	8	91	43	53	36	1.5
QDA0790X05S080N	●	7.9	8	91	43	53	36	1.6
QDA0800X05S080N	●	8	8	91	43	53	36	1.6
QDA0810X05S100N	●	8.1	10	91	43	53	36	1.6
QDA0820X05S100N	●	8.2	10	103	49	61	36	1.6
QDA0830X05S100N	●	8.3	10	103	49	61	36	1.6
QDA0840X05S100N	●	8.4	10	103	49	61	36	1.7
QDA0850X05S100N	●	8.5	10	103	49	61	36	1.7

QDA type N No coolant holes

5×D



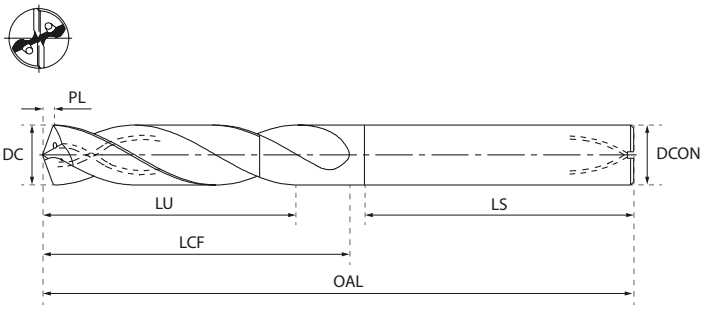


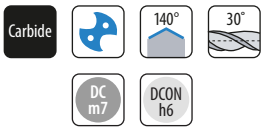
Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0860X05S100N	●	8.6	10	103	49	61	36	1.7
QDA0870X05S100N	●	8.7	10	103	49	61	36	1.7
QDA0880X05S100N	●	8.8	10	103	49	61	36	1.7
QDA0890X05S100N	●	8.9	10	103	49	61	36	1.8
QDA0900X05S100N	●	9	10	103	49	61	40	1.8
QDA0910X05S100N	●	9.1	10	103	49	61	40	1.8
QDA0920X05S100N	●	9.2	10	103	49	61	40	1.8
QDA0930X05S100N	●	9.3	10	103	49	61	40	1.8
QDA0940X05S100N	●	9.4	10	103	49	61	40	1.9
QDA0950X05S100N	●	9.5	10	103	49	61	40	1.9
QDA0960X05S100N	●	9.6	10	103	49	61	40	1.9
QDA0970X05S100N	●	9.7	10	103	49	61	40	1.9
QDA0980X05S100N	●	9.8	10	103	49	61	40	1.9
QDA0990X05S100N	●	9.9	10	103	49	61	40	2.0
QDA1000X05S100N	●	10	10	103	49	61	40	2.0
QDA1020X05S120N	●	10.2	12	118	56	71	45	2.0
QDA1050X05S120N	●	10.5	12	118	56	71	45	2.1
QDA1080X05S120N	●	10.8	12	118	56	71	45	2.1
QDA1100X05S120N	●	11	12	118	56	71	45	2.2
QDA1120X05S120N	●	11.2	12	118	56	71	45	2.2
QDA1130X05S120N	●	11.3	12	118	56	71	45	2.2
QDA1150X05S120N	●	11.5	12	118	56	71	45	2.3
QDA1180X05S120N	●	11.8	12	118	56	71	45	2.3
QDA1200X05S120N	●	12	12	118	56	71	45	2.4
QDA1220X05S140N	●	12.2	14	124	60	77	45	2.4
QDA1250X05S140N	●	12.5	14	124	60	77	45	2.5
QDA1270X05S140N	●	12.7	14	124	60	77	45	2.5
QDA1280X05S140N	●	12.8	14	124	60	77	45	2.5

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA1300X05S140N	●	13	14	124	60	77	45	2.6
QDA1330X05S140N	●	13.3	14	124	60	77	45	2.6
QDA1350X05S140N	●	13.5	14	124	60	77	45	2.7
QDA1370X05S140N	●	13.7	14	124	60	77	45	2.7
QDA1380X05S140N	●	13.8	14	124	60	77	45	2.7
QDA1400X05S140N	●	14	14	124	60	77	45	2.7
QDA1450X05S160N	●	14.5	16	133	63	83	48	2.9
QDA1500X05S160N	●	15	16	133	63	83	48	3.0
QDA1530X05S160N	●	15.3	16	133	63	83	48	3.0
QDA1550X05S160N	●	15.5	16	133	63	83	48	3.1
QDA1580X05S160N	●	15.8	16	133	63	83	48	3.1
QDA1600X05S160N	●	16	16	133	63	83	48	3.2
QDA1650X05S180N	●	16.5	18	143	71	93	48	3.3
QDA1700X05S180N	●	17	18	143	71	93	48	3.4
QDA1750X05S180N	●	17.5	18	143	71	93	48	3.5
QDA1800X05S180N	●	18	18	143	71	93	48	3.6
QDA1850X05S200N	●	18.5	20	153	77	101	50	3.7
QDA1900X05S200N	●	19	20	153	77	101	50	3.8
QDA1950X05S200N	●	19.5	20	153	77	101	50	3.9
QDA2000X05S200N	●	20	20	153	77	101	50	4.0

QDA type C With coolant holes

3×D



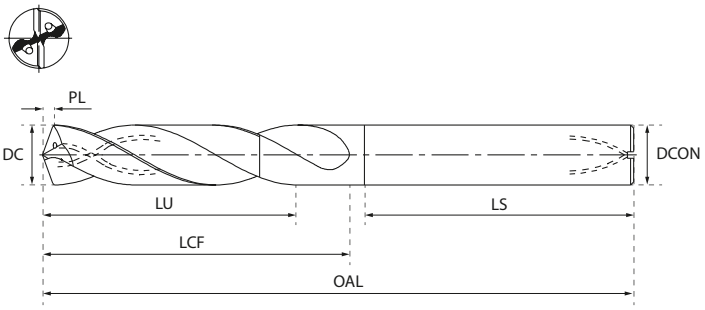


Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0300X03S060C	●	3	6	62	14	20	36	0.6
QDA0310X03S060C	●	3.1	6	62	14	20	36	0.6
QDA0320X03S060C	●	3.2	6	62	14	20	36	0.6
QDA0330X03S060C	●	3.3	6	62	14	20	36	0.7
QDA0340X03S060C	●	3.4	6	62	14	20	36	0.7
QDA0350X03S060C	●	3.5	6	62	14	20	36	0.7
QDA0360X03S060C	●	3.6	6	62	14	20	36	0.7
QDA0370X03S060C	●	3.7	6	62	14	20	36	0.7
QDA0380X03S060C	●	3.8	6	66	17	24	36	0.8
QDA0390X03S060C	●	3.9	6	66	17	24	36	0.8
QDA0400X03S060C	●	4	6	66	17	24	36	0.8
QDA0410X03S060C	●	4.1	6	66	17	24	36	0.8
QDA0420X03S060C	●	4.2	6	66	17	24	36	0.8
QDA0430X03S060C	●	4.3	6	66	17	24	36	0.9
QDA0440X03S060C	●	4.4	6	66	17	24	36	0.9
QDA0450X03S060C	●	4.5	6	66	17	24	36	0.9
QDA0460X03S060C	●	4.6	6	6	17	24	36	0.9
QDA0470X03S060C	●	4.7	6	66	17	24	36	0.9
QDA0480X03S060C	●	4.8	6	66	20	28	36	1.0
QDA0490X03S060C	●	4.9	6	66	20	28	36	1.0
QDA0500X03S060C	●	5	6	66	20	28	36	1.0
QDA0510X03S060C	●	5.1	6	66	20	28	36	1.0
QDA0520X03S060C	●	5.2	6	66	20	28	36	1.0
QDA0530X03S060C	●	5.3	6	66	20	28	36	1.0
QDA0540X03S060C	●	5.4	6	66	20	28	36	1.1
QDA0550X03S060C	●	5.5	6	66	20	28	36	1.1
QDA0560X03S060C	●	5.6	6	66	20	28	36	1.1
QDA0570X03S060C	●	5.7	6	66	20	28	36	1.1

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0580X03S060C	●	5.8	6	66	20	28	36	1.1
QDA0590X03S060C	●	5.9	6	66	20	28	36	1.2
QDA0600X03S060C	●	6	6	66	20	28	36	1.2
QDA0610X03S080C	●	6.1	8	79	24	34	36	1.2
QDA0620X03S080C	●	6.2	8	79	24	34	36	1.2
QDA0630X03S080C	●	6.3	8	79	24	34	36	1.2
QDA0640X03S080C	●	6.4	8	79	24	34	36	1.3
QDA0650X03S080C	●	6.5	8	79	24	34	36	1.3
QDA0660X03S080C	●	6.6	8	79	24	34	36	1.3
QDA0670X03S080C	●	6.7	8	79	24	34	36	1.3
QDA0680X03S080C	●	6.8	8	79	24	34	36	1.3
QDA0690X03S080C	●	6.9	8	79	24	34	36	1.4
QDA0700X03S080C	●	7	8	79	24	34	36	1.4
QDA0710X03S080C	●	7.1	8	79	29	41	36	1.4
QDA0720X03S080C	●	7.2	8	79	29	41	36	1.4
QDA0730X03S080C	●	7.3	8	79	29	41	36	1.4
QDA0740X03S080C	●	7.4	8	79	29	41	36	1.5
QDA0750X03S080C	●	7.5	8	79	29	41	36	1.5
QDA0760X03S080C	●	7.6	8	79	29	41	36	1.5
QDA0770X03S080C	●	7.7	8	79	29	41	36	1.5
QDA0780X03S080C	●	7.8	8	79	29	41	36	1.5
QDA0790X03S080C	●	7.9	8	79	29	41	36	1.6
QDA0800X03S080C	●	8	8	79	29	41	36	1.6
QDA0810X03S100C	●	8.1	10	89	35	47	40	1.6
QDA0820X03S100C	●	8.2	10	89	35	47	40	1.6
QDA0830X03S100C	●	8.3	10	89	35	47	40	1.6
QDA0840X03S100C	●	8.4	10	89	35	47	40	1.7
QDA0850X03S100C	●	8.5	10	89	35	47	40	1.7

QDA type C With coolant holes

3×D



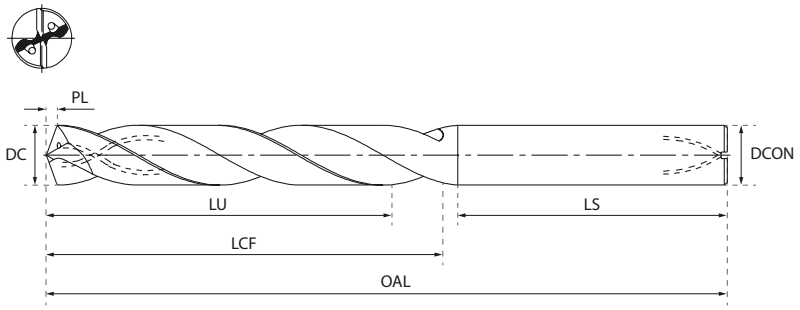
Carbide | 140° | 30° | DC m7 | DCON h6

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0860X03S100C	●	8.6	10	89	35	47	40	1.7
QDA0870X03S100C	●	8.7	10	89	35	47	40	1.7
QDA0880X03S100C	●	8.8	10	89	35	47	40	1.7
QDA0890X03S100C	●	8.9	10	89	35	47	40	1.8
QDA0900X03S100C	●	9	10	89	35	47	40	1.8
QDA0910X03S100C	●	9.1	10	89	35	47	40	1.8
QDA0920X03S100C	●	9.2	10	89	35	47	40	1.8
QDA0930X03S100C	●	9.3	10	89	35	47	40	1.8
QDA0940X03S100C	●	9.4	10	89	35	47	40	1.9
QDA0950X03S100C	●	9.5	10	89	35	47	40	1.9
QDA0960X03S100C	●	9.6	10	89	35	47	40	1.9
QDA0970X03S100C	●	9.7	10	89	35	47	40	1.9
QDA0980X03S100C	●	9.8	10	89	35	47	40	1.9
QDA0990X03S100C	●	9.9	10	89	35	47	40	2.0
QDA1000X03S100C	●	10	10	89	35	47	40	2.0
QDA1020X03S120C	●	10.2	12	102	40	55	45	2.0
QDA1050X03S120C	●	10.5	12	102	40	55	45	2.1
QDA1080X03S120C	●	10.8	12	102	40	55	45	2.1
QDA1100X03S120C	●	11	12	102	40	55	45	2.2
QDA1120X03S120C	●	11.2	12	102	40	55	45	2.2
QDA1130X03S120C	●	11.3	12	102	40	55	45	2.2
QDA1150X03S120C	●	11.5	12	102	40	55	45	2.3
QDA1180X03S120C	●	11.8	12	102	40	55	45	2.3
QDA1200X03S120C	●	12	12	102	40	55	45	2.4
QDA1220X03S140C	●	12.2	14	107	43	60	45	2.4
QDA1250X03S140C	●	12.5	14	107	43	60	45	2.5
QDA1270X03S140C	●	12.7	14	107	43	60	45	2.5
QDA1280X03S140C	●	12.8	14	107	43	60	45	2.5

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA1300X03S140C	●	13	14	107	43	60	45	2.6
QDA1330X03S140C	●	13.3	14	107	43	60	45	2.6
QDA1350X03S140C	●	13.5	14	107	43	60	45	2.7
QDA1370X03S140C	●	13.7	14	107	43	60	45	2.7
QDA1380X03S140C	●	13.8	14	107	43	60	45	2.5
QDA1400X03S140C	●	14	14	107	43	60	45	2.8
QDA1450X03S160C	●	14.5	16	115	45	65	48	2.9
QDA1500X03S160C	●	15	16	115	45	65	48	3.0
QDA1530X03S160C	●	15.3	16	115	45	65	48	3.0
QDA1550X03S160C	●	15.5	16	115	45	65	48	3.1
QDA1580X03S160C	●	15.8	16	115	45	65	48	3.1
QDA1600X03S160C	●	16	16	115	45	65	48	3.2
QDA1650X03S180C	●	16.5	18	123	51	73	48	3.3
QDA1700X03S180C	●	17	16	123	51	73	48	3.4
QDA1750X03S180C	●	17.5	18	123	51	73	48	3.5
QDA1800X03S180C	●	18	18	123	51	73	48	3.6
QDA1850X03S200C	●	18.5	20	131	55	79	50	3.7
QDA1900X03S200C	●	19	20	131	55	79	50	3.8
QDA1950X03S200C	●	19.5	20	131	55	79	50	3.9
QDA2000X03S200C	●	20	20	131	55	79	50	4.0

QDA type C With coolant holes

5×D



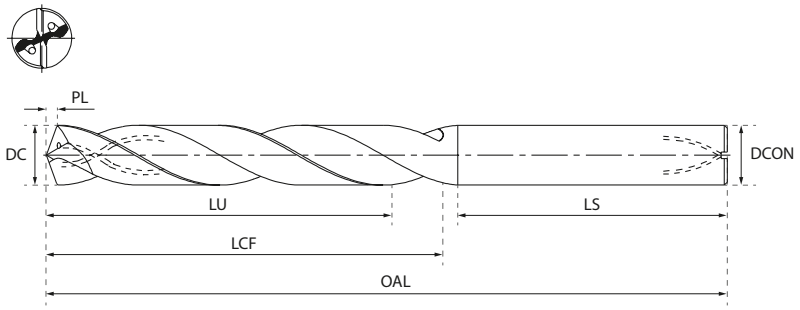
Carbide | 140° | 30° | DC m7 | DCON h6

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0300X05S060C	●	3	6	66	23	28	36	0.6
QDA0310X05S060C	●	3.1	6	66	23	28	36	0.6
QDA0320X05S060C	●	3.2	6	66	23	28	36	0.6
QDA0330X05S060C	●	3.3	6	66	23	8	6	0.7
QDA0340X05S060C	●	3.4	6	66	23	28	36	0.7
QDA0350X05S060C	●	3.5	6	66	23	28	36	0.7
QDA0360X05S060C	●	3.6	6	66	23	28	36	0.7
QDA0370X05S060C	●	3.7	6	66	23	28	36	0.7
QDA0380X05S060C	●	3.8	6	74	29	36	36	0.8
QDA0390X05S060C	●	3.9	6	74	29	36	36	0.8
QDA0400X05S060C	●	4	6	74	29	36	36	0.8
QDA0410X05S060C	●	4.1	6	74	29	36	36	0.8
QDA0420X05S060C	●	4.2	6	74	29	36	36	0.8
QDA0430X05S060C	●	4.3	6	74	29	36	36	0.9
QDA0440X05S060C	●	4.4	6	74	29	36	36	0.9
QDA0450X05S060C	●	4.5	6	74	29	36	36	0.9
QDA0460X05S060C	●	4.6	6	74	29	36	36	0.9
QDA0470X05S060C	●	4.7	6	74	29	36	36	0.9
QDA0480X05S060C	●	4.8	6	82	35	44	36	1.0
QDA0490X05S060C	●	4.9	6	82	35	44	36	1.0
QDA0500X05S060C	●	5	6	82	35	44	36	1.0
QDA0510X05S060C	●	5.1	6	82	35	44	36	1.0
QDA0520X05S060C	●	5.2	6	82	35	44	36	1.0
QDA0530X05S060C	●	5.3	6	82	35	44	36	1.0
QDA0540X05S060C	●	5.4	6	82	35	44	36	1.1
QDA0550X05S060C	●	5.5	6	82	35	44	36	1.1
QDA0560X05S060C	●	5.6	6	82	35	44	36	1.1
QDA0570X05S060C	●	5.7	6	82	35	44	36	1.1

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0580X05S060C	●	5.8	6	82	35	44	36	1.1
QDA0590X05S060C	●	5.9	6	82	35	44	36	1.2
QDA0600X05S060C	●	6	6	82	35	44	36	1.2
QDA0610X05S080C	●	6.1	8	91	43	53	36	1.2
QDA0620X05S080C	●	6.2	8	91	43	53	36	1.2
QDA0630X05S080C	●	6.3	8	91	43	53	36	1.2
QDA0640X05S080C	●	6.4	8	91	43	53	36	1.3
QDA0650X05S080C	●	6.5	8	91	43	53	36	1.3
QDA0660X05S080C	●	6.6	8	91	43	53	36	1.3
QDA0670X05S080C	●	6.7	8	91	43	53	36	1.3
QDA0680X05S080C	●	6.8	8	91	43	53	36	1.3
QDA0690X05S080C	●	6.9	8	91	43	53	36	1.4
QDA0700X05S080C	●	7	8	91	43	53	36	1.4
QDA0710X05S080C	●	7.1	8	91	43	53	36	1.4
QDA0720X05S080C	●	7.2	8	91	43	53	36	1.4
QDA0730X05S080C	●	7.3	8	91	43	53	36	1.4
QDA0740X05S080C	●	7.4	8	91	43	53	36	1.5
QDA0750X05S080C	●	7.5	8	91	43	53	36	1.5
QDA0760X05S080C	●	7.6	8	91	43	53	36	1.5
QDA0770X05S080C	●	7.7	8	91	43	53	36	1.5
QDA0780X05S080C	●	7.8	8	91	43	53	36	1.5
QDA0790X05S080C	●	7.9	8	91	43	53	36	1.6
QDA0800X05S080C	●	8	8	91	43	53	36	1.6
QDA0810X05S100C	●	8.1	10	103	49	61	40	1.6
QDA0820X05S100C	●	8.2	10	103	49	61	40	1.6
QDA0830X05S100C	●	8.3	10	103	49	61	40	1.6
QDA0840X05S100C	●	8.4	10	103	49	61	40	1.7
QDA0850X05S100C	●	8.5	10	103	49	61	40	1.7

QDA type C With coolant holes

5×D



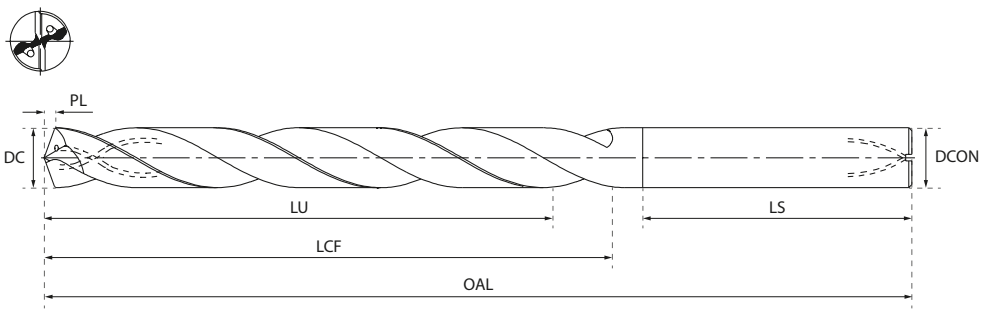
Carbide | 140° | 30° | DC m7 | DCON h6

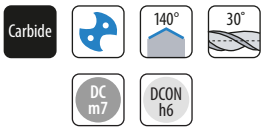
Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0860X05S100C	●	8.6	10	103	43	61	40	1.7
QDA0870X05S100C	●	8.7	10	103	43	61	40	1.7
QDA0880X05S100C	●	8.8	10	103	43	61	40	1.7
QDA0890X05S100C	●	8.9	10	103	43	61	40	1.8
QDA0900X05S100C	●	9	10	103	43	61	40	1.8
QDA0910X05S100C	●	9.1	10	103	43	61	40	1.8
QDA0920X05S100C	●	9.2	10	103	43	61	40	1.8
QDA0930X05S100C	●	9.3	10	103	43	61	40	1.8
QDA0940X05S100C	●	9.4	10	103	43	61	40	1.9
QDA0950X05S100C	●	9.5	10	103	43	61	40	1.9
QDA0960X05S100C	●	9.6	10	103	43	61	40	1.9
QDA0970X05S100C	●	9.7	10	103	43	61	40	1.9
QDA0980X05S100C	●	9.8	10	103	43	61	40	1.9
QDA0990X05S100C	●	9.9	10	103	49	61	40	2.0
QDA1000X05S100C	●	10	10	103	49	61	40	2.0
QDA1020X05S120C	●	10.2	12	118	56	71	45	2.0
QDA1050X05S120C	●	10.5	12	118	56	71	45	2.1
QDA1080X05S120C	●	10.8	12	118	56	71	45	2.1
QDA1100X05S120C	●	11	12	118	56	71	45	2.2
QDA1120X05S120C	●	11.2	12	118	56	71	45	2.2
QDA1130X05S120C	●	11.3	12	118	56	71	45	2.2
QDA1150X05S120C	●	11.5	12	118	56	71	45	2.3
QDA1180X05S120C	●	11.8	12	118	56	71	45	2.3
QDA1200X05S120C	●	12	12	118	56	71	45	2.4
QDA1220X05S140C	●	12.2	14	124	60	77	45	2.4
QDA1250X05S140C	●	12.5	14	124	60	77	45	2.5
QDA1270X05S140C	●	12.7	14	124	60	77	45	2.5
QDA1280X05S140C	●	12.8	14	124	60	77	45	2.5

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA1300X05S140C	●	13	14	124	60	77	45	2.6
QDA1330X05S140C	●	13.3	14	124	60	77	45	2.6
QDA1350X05S140C	●	13.5	14	124	60	77	45	2.7
QDA1370X05S140C	●	13.7	14	124	60	77	45	2.7
QDA1380X05S140C	●	13.8	14	124	60	77	45	2.7
QDA1400X05S140C	●	14	14	124	60	77	45	2.8
QDA1450X05S160C	●	14.5	16	133	63	83	45	2.9
QDA1500X05S160C	●	15	16	133	63	83	48	3.0
QDA1530X05S160C	●	15.3	16	133	63	83	48	3.0
QDA1550X05S160C	●	15.5	16	133	63	83	48	3.1
QDA1580X05S160C	●	15.8	16	133	63	83	48	3.1
QDA1600X05S160C	●	16	16	133	63	83	48	3.2
QDA1650X05S180C	●	16.5	18	143	71	93	48	3.3
QDA1700X05S180C	●	17	18	143	71	93	48	3.4
QDA1750X05S180C	●	17.5	18	143	71	93	48	3.5
QDA1800X05S180C	●	18	18	143	71	93	48	3.6
QDA1850X05S200C	●	18.5	20	153	77	101	50	3.7
QDA1900X05S200C	●	19	20	153	77	101	50	3.8
QDA1950X05S200C	●	19.5	20	153	77	101	50	3.9
QDA2000X05S200C	●	20	20	153	77	101	50	4.0

QDA type C With coolant holes

8×D



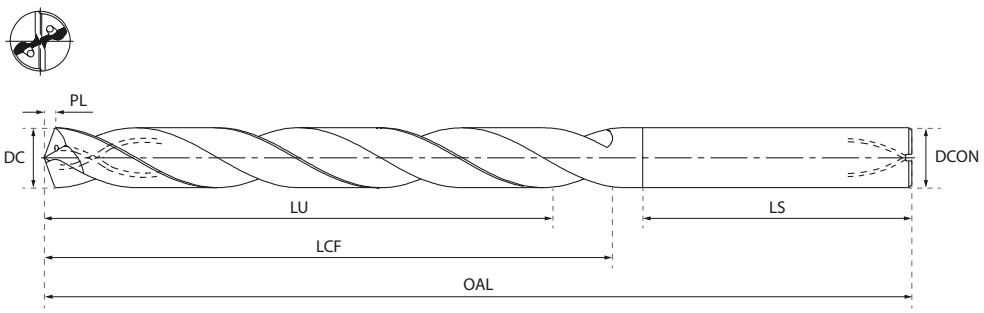


Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0300X08S060C	●	3	6	85	32	40	36	0.6
QDA0310X08S060C	●	3.1	6	85	32	40	36	0.6
QDA0320X08S060C	●	3.2	6	85	32	40	36	0.6
QDA0330X08S060C	●	3.3	6	85	32	40	36	0.7
QDA0340X08S060C	●	3.4	6	85	32	40	36	0.7
QDA0350X08S060C	●	3.5	6	85	32	40	36	0.7
QDA0360X08S060C	●	3.6	6	85	36	40	36	0.7
QDA0370X08S060C	●	3.7	6	85	36	40	36	0.7
QDA0380X08S060C	●	3.8	6	85	36	40	36	0.8
QDA0390X08S060C	●	3.9	6	85	36	40	36	0.8
QDA0400X08S060C	●	4	6	85	38	46	36	0.8
QDA0410X08S060C	●	4.1	6	85	38	46	36	0.8
QDA0420X08S060C	●	4.2	6	85	38	46	36	0.8
QDA0430X08S060C	●	4.3	6	97	40	46	36	0.9
QDA0440X08S060C	●	4.4	6	97	40	46	36	0.9
QDA0450X08S060C	●	4.5	6	97	44	46	36	0.9
QDA0460X08S060C	●	4.6	6	97	44	46	36	0.9
QDA0470X08S060C	●	4.7	6	97	44	46	36	0.9
QDA0480X08S060C	●	4.8	6	97	44	46	36	1.0
QDA0490X08S060C	●	4.9	6	97	44	46	36	1.0
QDA0500X08S060C	●	5	6	97	48	57	36	1.0
QDA0510X08S060C	●	5.1	6	97	48	57	36	1.0
QDA0520X08S060C	●	5.2	6	97	48	57	36	1.0
QDA0530X08S060C	●	5.3	6	97	48	57	36	1.0
QDA0540X08S060C	●	5.4	6	97	48	57	36	1.1
QDA0550X08S060C	●	5.5	6	97	48	57	36	1.1
QDA0560X08S060C	●	5.6	6	97	48	57	36	1.1
QDA0570X08S060C	●	5.7	6	97	48	57	36	1.1

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0580X08S060C	●	5.8	6	97	48	57	36	1.1
QDA0590X08S060C	●	5.9	6	97	48	57	36	1.2
QDA0600X08S060C	●	6	6	97	48	57	36	1.2
QDA0610X08S080C	●	6.1	8	116	64	76	36	1.2
QDA0620X08S080C	●	6.2	8	116	64	76	36	1.2
QDA0630X08S080C	●	6.3	8	116	64	76	36	1.2
QDA0640X08S080C	●	6.4	8	116	64	76	45	1.3
QDA0650X08S080C	●	6.5	8	116	64	76	36	1.3
QDA0660X08S080C	●	6.6	8	116	64	76	36	1.3
QDA0670X08S080C	●	6.7	8	116	64	76	36	1.3
QDA0680X08S080C	●	6.8	8	116	64	76	36	1.3
QDA0690X08S080C	●	6.9	8	116	64	76	36	1.4
QDA0700X08S080C	●	7	8	116	64	76	36	1.4
QDA0710X08S080C	●	7.1	8	116	64	76	36	1.4
QDA0720X08S080C	●	7.2	8	116	64	76	36	1.4
QDA0730X08S080C	●	7.3	8	116	64	76	36	1.4
QDA0740X08S080C	●	7.4	8	116	64	76	36	1.5
QDA0750X08S080C	●	7.5	8	116	64	76	36	1.5
QDA0760X08S080C	●	7.6	8	116	64	76	36	1.5
QDA0770X08S080C	●	7.7	8	116	64	76	36	1.5
QDA0780X08S080C	●	7.8	8	116	64	76	36	1.5
QDA0790X08S080C	●	7.9	8	116	64	76	36	1.6
QDA0800X08S080C	●	8	8	116	64	76	36	1.6
QDA0810X08S100C	●	8.1	10	142	80	95	40	1.6
QDA0820X08S100C	●	8.2	10	142	80	95	40	1.6
QDA0830X08S100C	●	8.3	10	142	80	95	40	1.6
QDA0840X08S100C	●	8.4	10	142	80	95	40	1.7
QDA0850X08S100C	●	8.5	10	142	80	95	40	1.7

QDA type C With coolant holes

8×D



Carbide | 140° | 30° | DC m7 | DCON h6

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0860X08S100C	●	8.6	10	142	80	95	40	1.7
QDA0870X08S100C	●	8.7	10	142	80	95	40	1.7
QDA0880X08S100C	●	8.8	10	142	80	95	40	1.7
QDA0890X08S100C	●	8.9	10	142	80	95	40	1.8
QDA0900X08S100C	●	9	10	142	80	95	40	1.8
QDA0910X08S100C	●	9.1	10	142	80	95	40	1.8
QDA0920X08S100C	●	9.2	10	142	80	95	40	1.8
QDA0930X08S100C	●	9.3	10	142	80	95	40	1.8
QDA0940X08S100C	●	9.4	10	142	80	95	40	1.9
QDA0950X08S100C	●	9.5	10	142	80	95	40	1.9
QDA0960X08S100C	●	9.6	10	142	80	95	40	1.9
QDA0970X08S100C	●	9.7	10	142	80	95	40	1.9
QDA0980X08S100C	●	9.8	10	142	80	95	40	1.9
QDA0990X08S100C	●	9.9	10	142	80	95	40	2.0
QDA1000X08S100C	●	10	10	142	80	95	40	2.0
QDA1020X08S120C	●	10.2	12	163	96	114	45	2.0
QDA1050X08S120C	●	10.5	12	163	96	114	45	2.1
QDA1080X08S120C	●	10.8	12	163	96	114	45	2.1
QDA1100X08S120C	●	11	12	163	96	114	45	2.2
QDA1120X08S120C	●	11.2	12	163	96	114	45	2.2
QDA1130X08S120C	●	11.3	12	163	96	114	45	2.2
QDA1150X08S120C	●	11.5	12	163	96	114	45	2.3
QDA1180X08S120C	●	11.8	12	163	96	114	45	2.3
QDA1200X08S120C	●	12	12	163	96	114	45	2.4
QDA1220X08S140C	●	12.2	14	182	112	133	45	2.4
QDA1250X08S140C	●	12.5	14	182	112	133	45	2.5
QDA1270X08S140C	●	12.7	14	182	112	133	45	2.5
QDA1280X08S140C	●	12.8	14	182	112	133	45	2.5

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA1300X08S140C	●	13	14	182	112	133	45	2.6
QDA1330X08S140C	●	13.3	14	182	112	133	45	2.6
QDA1350X08S140C	●	13.5	14	182	112	133	45	2.7
QDA1370X08S140C	●	13.7	14	182	112	133	45	2.7
QDA1380X08S140C	●	13.8	14	182	112	133	45	2.7
QDA1400X08S140C	●	14	14	182	112	133	45	2.8
QDA1450X08S160C	●	14.5	16	204	128	152	48	2.9
QDA1500X08S160C	●	15	16	204	128	152	48	3.0
QDA1530X08S160C	●	15.3	16	204	128	152	48	3.0
QDA1550X08S160C	●	15.5	16	204	128	152	48	3.1
QDA1580X08S160C	●	15.8	16	204	128	152	48	3.1
QDA1600X08S160C	●	16	16	204	128	152	48	3.2
QDA1650X08S180C	●	16.5	18	222	144	171	48	3.3
QDA1700X08S180C	●	17	18	222	144	171	48	3.4
QDA1750X08S180C	●	17.5	18	222	144	171	48	3.5
QDA1800X08S180C	●	18	18	222	144	171	48	3.6
QDA1850X08S200C	●	18.5	20	243	160	190	50	3.7
QDA1900X08S200C	●	19	20	243	160	190	50	3.8
QDA1950X08S200C	●	19.5	20	243	160	190	50	3.9
QDA2000X08S200C	●	20	20	243	160	190	50	4.0

Cutting conditions Reference table

QDA • External coolant

3D 5D

Workpiece	P01		P02		P03		M01		M02		K01		K02		S01		S02	
	Carbon steel		Alloy steel		Prehardened steel		Stainless steel				Grey cast iron		Ductile cast iron		Titanium alloy		Nickel alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High machinability		Low machinability		-		-		-		-	
DC (mm)	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**
Ø3		0.072		0.061		0.060		0.049		0.042		0.070		0.052		0.037		0.036
Ø4		0.100		0.085		0.083		0.069		0.061		0.095		0.073		0.055		0.056
Ø5		0.128		0.111		0.107		0.088		0.074		0.120		0.096		0.069		0.069
Ø6		0.157		0.138		0.132		0.109		0.095		0.145		0.119		0.086		0.082
Ø7		0.188		0.166		0.157		0.132		0.113		0.170		0.144		0.100		0.090
Ø8		0.221		0.197		0.184		0.156		0.136		0.200		0.171		0.130		0.125
Ø9		0.250		0.230		0.212		0.173		0.146		0.226		0.200		0.144		0.125
Ø10		0.285		0.264		0.241		0.208		0.167		0.252		0.230		0.175		0.143
Ø11		0.319		0.300		0.272		0.233		0.182		0.282		0.263		0.175		0.167
Ø12	105	0.361	80	0.338	50	0.303	40	0.255	35	0.200	95	0.308	70	0.296	25	0.200	20	0.167
Ø13		0.385		0.357		0.323		0.280		0.222		0.333		0.314		0.200		0.200
Ø14		0.413		0.375		0.342		0.270		0.250		0.359		0.332		0.233		0.200
Ø15		0.422		0.391		0.360		0.300		0.238		0.371		0.348		0.233		0.200
Ø16		0.457		0.406		0.377		0.325		0.271		0.405		0.365		0.260		0.250
Ø17		0.475		0.419		0.394		0.313		0.271		0.428		0.379		0.260		0.250
Ø18		0.489		0.431		0.409		0.313		0.257		0.447		0.393		0.260		0.250
Ø19		0.511		0.442		0.423		0.343		0.300		0.469		0.406		0.260		0.250
Ø20		0.529		0.452		0.437		0.329		0.283		0.463		0.418		0.300		0.225

Workpiece	N01		N02		N03	
	Wrought aluminium		Cast aluminium		Copper alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45	
D (mm)	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**
Ø3		0.058		0.063		0.062
Ø4		0.081		0.087		0.085
Ø5		0.104		0.111		0.110
Ø6		0.128		0.138		0.136
Ø7		0.155		0.164		0.165
Ø8		0.183		0.194		0.194
Ø9		0.211		0.222		0.224
Ø10		0.241		0.254		0.257
Ø11		0.272		0.287		0.290
Ø12	200	0.300	165	0.321	140	0.318
Ø13		0.322		0.339		0.339
Ø14		0.335		0.357		0.361
Ø15		0.349		0.368		0.378
Ø16		0.365		0.391		0.393
Ø17		0.374		0.409		0.399
Ø18		0.383		0.412		0.418
Ø19		0.394		0.429		0.426
Ø20		0.406		0.432		0.430

Type N

Reference cutting data for QDA drill without internal coolant.

Note! These reference cutting data indicators are just for reference. They should be adjusted according to the different cutting environments.

Cutting conditions Reference table

QDA • Internal coolant

3D 5D

Workpiece	P01		P02		P03		M01		M02		K01		K02		S01		S02	
	Carbon steel		Alloy steel		Prehardened steel		Stainless steel				Grey cast iron		Ductile cast iron		Titanium alloy		Nickel alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High machinability		Low machinability		-		-		-		-	
D (mm)	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**
Ø3		0.063		0.068		0.080		0.048		0.054		0.073		0.071		0.047		0.026
Ø4		0.090		0.098		0.110		0.067		0.075		0.104		0.099		0.066		0.039
Ø5		0.119		0.132		0.143		0.085		0.094		0.136		0.128		0.085		0.048
Ø6		0.151		0.171		0.178		0.106		0.115		0.172		0.160		0.105		0.058
Ø7		0.185		0.214		0.215		0.125		0.135		0.211		0.194		0.126		0.075
Ø8		0.222		0.261		0.253		0.150		0.160		0.252		0.230		0.156		0.086
Ø9		0.262		0.312		0.294		0.168		0.178		0.297		0.268		0.173		0.092
Ø10		0.304		0.368		0.337		0.190		0.206		0.344		0.308		0.208		0.108
Ø11		0.349		0.427		0.382		0.217		0.220		0.394		0.351		0.233		0.118
Ø12	175	0.396	120	0.491	65	0.429	60	0.250	50	0.236	140	0.447	105	0.395	40	0.255	35	0.130
Ø13		0.417		0.503		0.457		0.267		0.254		0.472		0.415		0.280		0.133
Ø14		0.437		0.511		0.484		0.279		0.275		0.495		0.433		0.270		0.150
Ø15		0.454		0.515		0.509		0.292		0.291		0.517		0.449		0.289		0.150
Ø16		0.470		0.514		0.534		0.317		0.320		0.537		0.463		0.313		0.157
Ø17		0.484		0.509		0.557		0.308		0.320		0.554		0.475		0.313		0.157
Ø18		0.496		0.499		0.578		0.336		0.344		0.570		0.485		0.300		0.157
Ø19		0.506		0.485		0.599		0.327		0.344		0.585		0.494		0.329		0.183
Ø20		0.514		0.466		0.618		0.350		0.375		0.597		0.500		0.314		0.183

Workpiece	N01		N02		N03	
	Wrought aluminium		Cast aluminium		Copper alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45	
D (mm)	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**
Ø3		0.076		0.073		0.077
Ø4		0.107		0.102		0.107
Ø5		0.140		0.134		0.139
Ø6		0.176		0.169		0.172
Ø7		0.216		0.204		0.206
Ø8		0.256		0.244		0.245
Ø9		0.301		0.287		0.281
Ø10		0.347		0.327		0.324
Ø11		0.397		0.377		0.369
Ø12	310	0.446	220	0.424	190	0.408
Ø13		0.471		0.450		0.434
Ø14		0.486		0.461		0.452
Ø15		0.505		0.483		0.472
Ø16		0.516		0.500		0.499
Ø17		0.522		0.505		0.513
Ø18		0.536		0.526		0.531
Ø19		0.544		0.532		0.548
Ø20		0.540		0.525		0.549

Type C

Reference cutting data for QDA drill with internal coolant.

Note! These reference cutting data indicators are just for reference. They should be adjusted according to the different cutting environments.

Cutting conditions Reference table

QDA • Internal coolant 8D

Workpiece	P01		P02		P03		M01		M02		K01		K02		S01		S02	
	Carbon steel		Alloy steel		Prehardened steel		Stainless steel				Grey cast iron		Ductile cast iron		Titanium alloy		Nickel alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High machinability		Low machinability		-		-		-		-	
D (mm)	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**
Ø3		0.051		0.056		0.066		0.041		0.047		0.059		0.058		0.037		0.022
Ø4		0.073		0.083		0.091		0.055		0.066		0.084		0.082		0.054		0.033
Ø5		0.097		0.111		0.117		0.072		0.081		0.110		0.103		0.065		0.040
Ø6		0.124		0.141		0.143		0.089		0.100		0.141		0.131		0.084		0.050
Ø7		0.151		0.178		0.173		0.109		0.116		0.173		0.161		0.106		0.057
Ø8		0.182		0.220		0.209		0.125		0.138		0.206		0.189		0.129		0.067
Ø9		0.211		0.258		0.240		0.144		0.147		0.242		0.222		0.138		0.073
Ø10		0.248		0.309		0.272		0.169		0.177		0.277		0.255		0.158		0.090
Ø11		0.282		0.359		0.319		0.180		0.192		0.320		0.281		0.182		0.100
Ø12	150	0.325	100	0.407	55	0.353	50	0.200	40	0.209	120	0.366	90	0.325	35	0.200	30	0.113
Ø13		0.338		0.416		0.371		0.215		0.230		0.377		0.330		0.222		0.100
Ø14		0.349		0.426		0.385		0.225		0.230		0.396		0.348		0.238		0.114
Ø15		0.369		0.418		0.417		0.245		0.244		0.419		0.365		0.225		0.114
Ø16		0.387		0.430		0.445		0.270		0.275		0.438		0.383		0.257		0.133
Ø17		0.383		0.426		0.436		0.260		0.275		0.443		0.394		0.257		0.133
Ø18		0.400		0.417		0.470		0.289		0.275		0.450		0.406		0.243		0.133
Ø19		0.400		0.406		0.460		0.278		0.314		0.462		0.388		0.267		0.133
Ø20		0.421		0.394		0.511		0.313		0.300		0.470		0.400		0.250		0.160

Workpiece	N01		N02		N03	
	Wrought aluminium		Cast aluminium		Copper alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45	
D (mm)	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**
Ø3		0.064		0.059		0.064
Ø4		0.090		0.083		0.089
Ø5		0.117		0.109		0.116
Ø6		0.148		0.138		0.145
Ø7		0.179		0.166		0.173
Ø8		0.214		0.199		0.203
Ø9		0.252		0.231		0.235
Ø10		0.290		0.266		0.273
Ø11		0.329		0.307		0.302
Ø12	260	0.375	190	0.343	160	0.340
Ø13		0.392		0.362		0.360
Ø14		0.403		0.375		0.376
Ø15		0.416		0.388		0.400
Ø16		0.431		0.405		0.416
Ø17		0.441		0.411		0.433
Ø18		0.450		0.424		0.438
Ø19		0.450		0.431		0.456
Ø20		0.450		0.426		0.462

Type C

Reference cutting data for QDA drill with internal coolant.

Note! These reference cutting data indicators are just for reference. They should be adjusted according to the different cutting environments.

QDA long

INTERNAL COOLANT

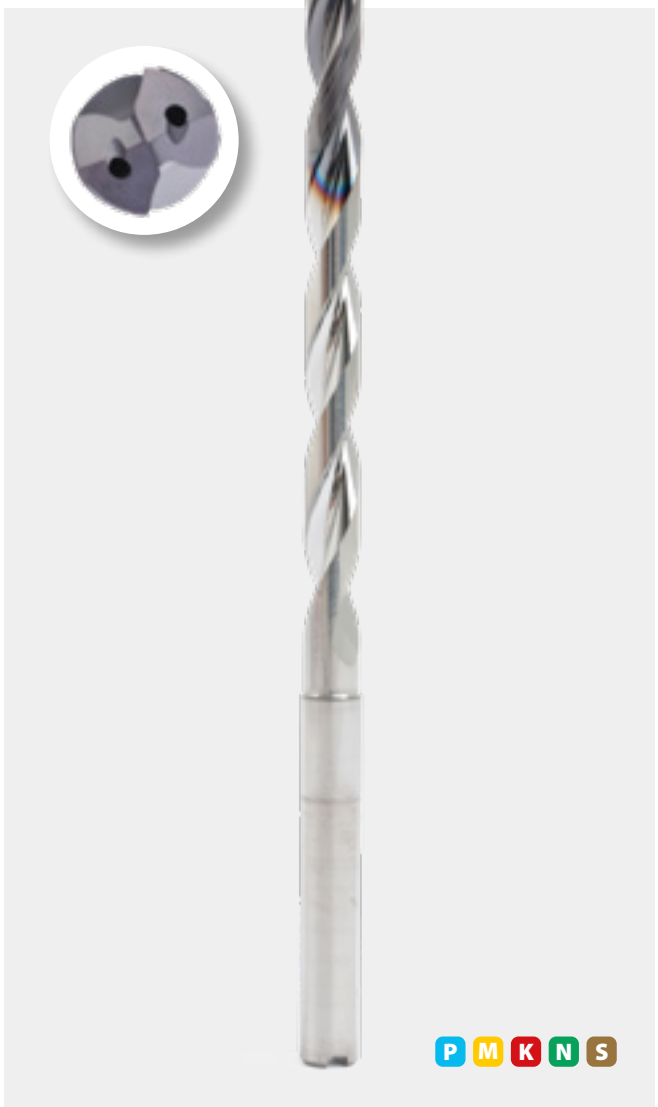
Deep hole drill with coolant-through design
provides high efficiency and stable machining.

Diameter range

12×D | 15×D | 20×D | 25×D | 30×D

Ø3.0 - Ø10.0 mm

For 35 – 68 HRC



1 Flexible drilling

Able to drill reliably in continuous and peck drilling.

2 Versatile machining condition

Able to drill reliably with various coolant pressure and cutting data.

3 Polished flutes

Smoother chips evacuation and less build-up edge.

4 Strong tip coating

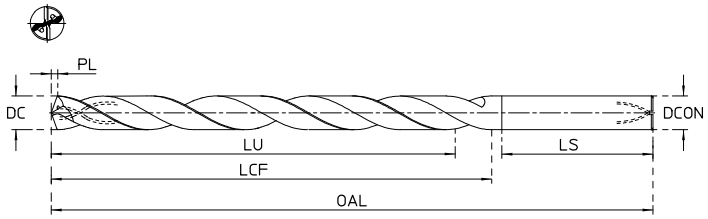
Results in low friction and high wear resistance.

5 State-of-the-art geometry

- For prolonged durability and excellent quality.
- Wider flute shape
  Better chip evacuation.
- Tougher core diameter
  Ensure chip can evacuate smooth yet rigid.

QDA long Internal coolant

12×D



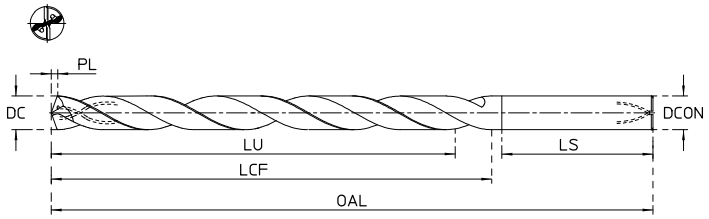
Carbide | 135° | 30° | DC h7 | DCON h6

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0300X12S030C	●	3,0	3	85	45	50	32	0,621
QDA0310X12S040C	●	3,1	4	85	45	50	32	0,642
QDA0320X12S040C	●	3,2	4	85	45	50	32	0,663
QDA0330X12S040C	●	3,3	4	85	45	50	32	0,683
QDA0340X12S040C	●	3,4	4	90	48	54	32	0,704
QDA0350X12S040C	●	3,5	4	90	48	54	32	0,725
QDA0360X12S040C	●	3,6	4	90	48	54	32	0,746
QDA0370X12S040C	●	3,7	4	90	48	54	32	0,766
QDA0380X12S040C	●	3,8	4	100	57	64	32	0,787
QDA0390X12S040C	●	3,9	4	100	57	64	32	0,808
QDA0400X12S040C	●	4	4	100	57	64	32	0,828
QDA0410X12S050C	●	4,1	5	100	57	64	34	0,849
QDA0420X12S050C	●	4,2	5	100	57	64	34	0,87
QDA0430X12S050C	●	4,3	5	100	57	64	34	0,891
QDA0440X12S050C	●	4,4	5	100	57	64	34	0,911
QDA0450X12S050C	●	4,5	5	100	57	64	34	0,932
QDA0460X12S050C	●	4,6	5	100	57	64	34	0,953
QDA0470X12S050C	●	4,7	5	100	57	64	34	0,973
QDA0480X12S050C	●	4,8	5	110	67	74	34	0,994
QDA0490X12S050C	●	4,9	5	120	72	81	34	1,015
QDA0500X12S050C	●	5	5	120	72	81	34	1,036
QDA0510X12S060C	●	5,1	6	120	72	81	36	1,056
QDA0520X12S060C	●	5,2	6	120	72	81	36	1,077
QDA0530X12S060C	●	5,3	6	120	72	81	36	1,098
QDA0540X12S060C	●	5,4	6	120	72	81	36	1,118
QDA0550X12S060C	●	5,5	6	120	72	81	36	1,139
QDA0560X12S060C	●	5,6	6	120	72	81	36	1,16
QDA0570X12S060C	●	5,7	6	120	72	81	36	1,181

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0580X12S060C	●	5,8	6	120	72	81	36	1,201
QDA0590X12S060C	●	5,9	6	120	72	81	36	1,222
QDA0600X12S060C	●	6	6	120	72	81	36	1,243
QDA0610X12S080C	●	6,1	8	135	88	97	36	1,263
QDA0620X12S080C	●	6,2	8	135	88	97	36	1,284
QDA0630X12S080C	●	6,3	8	135	88	97	36	1,305
QDA0640X12S080C	●	6,4	8	145	96	108	36	1,325
QDA0650X12S080C	●	6,5	8	145	96	108	36	1,346
QDA0660X12S080C	●	6,6	8	145	96	108	36	1,367
QDA0670X12S080C	●	6,7	8	145	96	108	36	1,388
QDA0680X12S080C	●	6,8	8	145	96	108	36	1,408
QDA0690X12S080C	●	6,9	8	145	96	108	36	1,429
QDA0700X12S080C	●	7	8	145	96	108	36	1,45
QDA0710X12S080C	●	7,1	8	145	96	108	36	1,47
QDA0720X12S080C	●	7,2	8	145	96	108	36	1,491
QDA0730X12S080C	●	7,3	8	145	96	108	36	1,512
QDA0740X12S080C	●	7,4	8	145	96	108	36	1,533
QDA0750X12S080C	●	7,5	8	145	96	108	36	1,553
QDA0760X12S080C	●	7,6	8	145	96	108	36	1,574
QDA0770X12S080C	●	7,7	8	145	96	108	36	1,595
QDA0780X12S080C	●	7,8	8	145	96	108	36	1,615
QDA0790X12S080C	●	7,9	8	145	96	108	36	1,636
QDA0800X12S080C	●	8	8	145	96	108	36	1,657
QDA0810X12S100C	●	8,1	10	170	115	127	40	1,678
QDA0820X12S100C	●	8,2	10	180	120	135	40	1,698
QDA0830X12S100C	●	8,3	10	180	120	135	40	1,719
QDA0840X12S100C	●	8,4	10	180	120	135	40	1,74
QDA0850X12S100C	●	8,5	10	180	120	135	40	1,76

QDA long Internal coolant

12×D

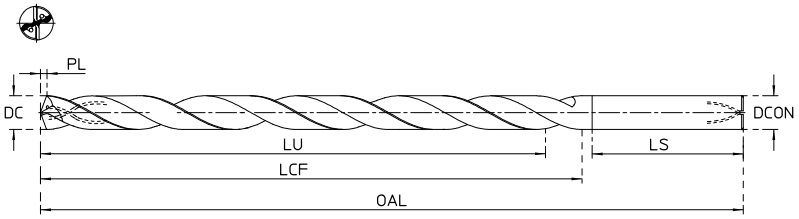


Carbide | 135° | 30° | DC h7 | DCON h6

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0860X12S100C	●	8,6	10	180	120	135	40	1,781
QDA0870X12S100C	●	8,7	10	180	120	135	40	1,802
QDA0880X12S100C	●	8,8	10	180	120	135	40	1,823
QDA0890X12S100C	●	8,9	10	180	120	135	40	1,843
QDA0900X12S100C	●	9	10	180	120	135	40	1,864
QDA0910X12S100C	●	9,1	10	180	120	135	40	1,885
QDA0920X12S100C	●	9,2	10	180	120	135	40	1,905
QDA0930X12S100C	●	9,3	10	180	120	135	40	1,926
QDA0940X12S100C	●	9,4	10	180	120	135	40	1,947
QDA0950X12S100C	●	9,5	10	180	120	135	40	1,968
QDA0960X12S100C	●	9,6	10	180	120	135	40	1,988
QDA0970X12S100C	●	9,7	10	180	120	135	40	2,009
QDA0980X12S100C	●	9,8	10	180	120	135	40	2,03
QDA0990X12S100C	●	9,9	10	180	120	135	40	2,05
QDA1000X12S100C	●	10	10	180	120	135	40	2,071

QDA long Internal coolant

15×D



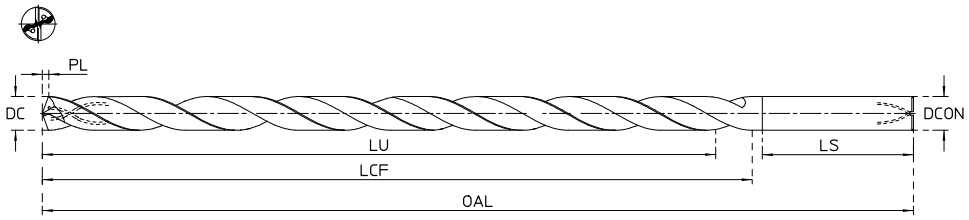
Carbide | 135° | 30° | DC h7 | DCON h6

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0300X15S030C	●	3,0	3	90	50	55	32	0,621
QDA0310X15S040C	●	3,1	4	90	50	55	32	0,642
QDA0350X15S040C	●	3,5	4	95	54,5	60	32	0,725
QDA0380X15S040C	●	3,8	4	100	60	65	32	0,787
QDA0400X15S040C	●	4	4	105	62	68	32	0,828
QDA0410X15S050C	●	4,1	5	105	64	70	34	0,849
QDA0420X15S050C	●	4,2	5	110	65	71	34	0,87
QDA0450X15S050C	●	4,5	5	115	69,5	76	34	0,932
QDA0500X15S050C	●	5	5	120	77	85	34	1,036
QDA0510X15S060C	●	5,1	6	125	78,5	86	36	1,056
QDA0550X15S060C	●	5,5	6	130	84,5	93	36	1,139
QDA0600X15S060C	●	6	6	140	92	101	36	1,243
QDA0630X15S080C	●	6,3	8	145	98	108	36	1,305
QDA0650X15S080C	●	6,5	8	150	99,5	110	36	1,346

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0700X15S080C	●	7	8	160	107	118	38	1,45
QDA0750X15S080C	●	7,5	8	165	114,5	126	38	1,553
QDA0800X15S080C	●	8	8	175	122	134	40	1,657
QDA0850X15S100C	●	8,5	10	185	129,5	142	40	1,76
QDA0880X15S100C	●	8,8	10	190	134	147	40	1,823
QDA0900X15S100C	●	9	10	195	137	151	40	1,864
QDA0950X15S100C	●	9,5	10	200	145	159	40	1,968
QDA0980X15S100C	●	9,8	10	205	149	164	40	2,03
QDA1000X15S100C	●	10	10	210	152	167	40	2,071

QDA long Internal coolant

20×D



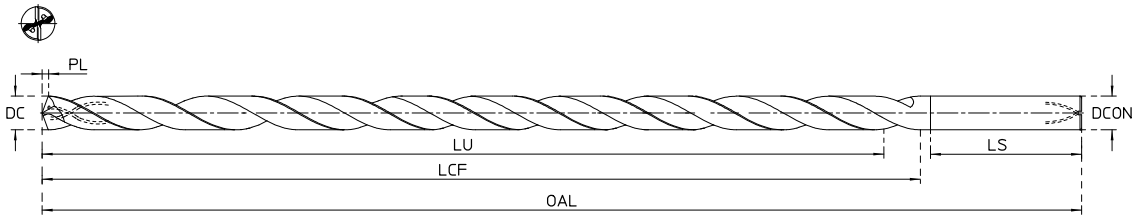
Carbide | 135° | 30° | DC h7 | DCON h6

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0300X20S030C	●	3,0	3	105	64	69	32	0,621
QDA0310X20S040C	●	3,1	4	105	64	69	32	0,642
QDA0350X20S040C	●	3,5	4	110	72	77	32	0,725
QDA0380X20S040C	●	3,8	4	120	78	84	32	0,787
QDA0400X20S040C	●	4	4	125	82	88	32	0,828
QDA0420X20S050C	●	4,2	5	130	86	92	34	0,87
QDA0450X20S050C	●	4,5	5	135	92	99	34	0,932
QDA0500X20S050C	●	5	5	145	102	110	34	1,036
QDA0510X20S060C	●	5,1	6	150	104	112	36	1,056
QDA0550X20S060C	●	5,5	6	160	112	120	36	1,139
QDA0600X20S060C	●	6	6	170	122	131	36	1,243
QDA0630X20S080C	●	6,3	8	175	128	137	36	1,305
QDA0650X20S080C	●	6,5	8	180	132	142	36	1,346

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0700X20S080C	●	7	8	195	142	153	38	1,45
QDA0750X20S080C	●	7,5	8	205	152	163	38	1,553
QDA0800X20S080C	●	8	8	215	162	174	40	1,657
QDA0850X20S100C	●	8,5	10	230	172	185	40	1,76
QDA0880X20S100C	●	8,8	10	235	178	191	40	1,823
QDA0900X20S100C	●	9	10	240	182	196	40	1,864
QDA0950X20S100C	●	9,5	10	250	192	206	40	1,968
QDA1000X20S100C	●	10	10	260	202	217	40	2,071

QDA long Internal coolant

25×D



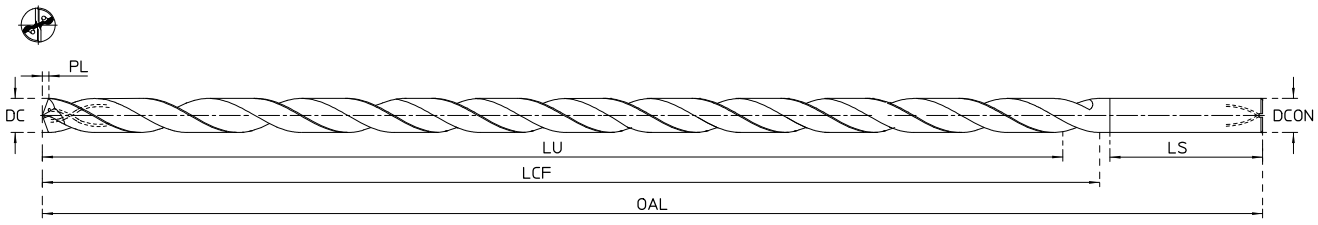
Carbide | 135° | 30° | DC h7 | DCON h6

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0300X25S030C	●	3,0	3	120	78,5	83	32	0,621
QDA0310X25S040C	●	3,1	4	120	78,5	83	32	0,642
QDA0350X25S040C	●	3,5	4	130	88,5	94	32	0,725
QDA0380X25S040C	●	3,8	4	135	96	102	32	0,787
QDA0400X25S040C	●	4	4	140	101	107	32	0,828
QDA0420X25S050C	●	4,2	5	150	106	112	34	0,87
QDA0450X25S050C	●	4,5	5	155	113,5	120	34	0,932
QDA0500X25S050C	●	5	5	170	126	134	34	1,036
QDA0510X25S060C	●	5,1	6	175	128,5	136	36	1,056
QDA0550X25S060C	●	5,5	6	185	138,5	147	36	1,139
QDA0600X25S060C	●	6	6	200	151	160	36	1,243
QDA0630X25S080C	●	6,3	8	205	158,5	168	36	1,305
QDA0650X25S080C	●	6,5	8	210	163,5	173	36	1,346

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0700X25S080C	●	7	8	230	176	187	38	1,45
QDA0750X25S080C	●	7,5	8	240	188,5	200	38	1,553
QDA0800X25S080C	●	8	8	255	201	213	40	1,657
QDA0850X25S100C	●	8,5	10	270	213,5	226	40	1,76
QDA0880X25S100C	●	8,8	10	275	221	234	40	1,823
QDA0900X25S100C	●	9	10	285	226	240	40	1,864
QDA0950X25S100C	●	9,5	10	295	239	253	40	1,968
QDA1000X25S100C	●	10	10	310	252	267	40	2,071

QDA long Internal coolant

30×D



Carbide | 135° | 30° | DC h7 | DCON h6

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0300X30S030C	●	3,0	3	135	94	99	32	0,621
QDA0310X30S040C	●	3,1	4	135	94	99	32	0,642
QDA0350X30S040C	●	3,5	4	145	106	111	32	0,725
QDA0380X30S040C	●	3,8	4	155	115	121	32	0,787
QDA0400X30S040C	●	4	4	160	121	127	32	0,828
QDA0420X30S050C	●	4,2	5	170	127	133	34	0,87
QDA0450X30S050C	●	4,5	5	180	136	143	34	0,932
QDA0500X30S050C	●	5	5	195	151	159	34	1,036
QDA0510X30S060C	●	5,1	6	200	154	162	36	1,056
QDA0550X30S060C	●	5,5	6	215	166	174	36	1,139

Description	Availability	Dimensions (mm)						
		DC	DCON	OAL	LU	LCF	LS	PL
QDA0600X30S060C	●	6	6	230	181	190	36	1,243
QDA0630X30S080C	●	6,3	8	240	190	199	36	1,305
QDA0650X30S080C	●	6,5	8	245	196	206	36	1,346
QDA0700X30S080C	●	7	8	265	211	222	38	1,45
QDA0750X30S080C	●	7,5	8	280	226	237	38	1,553
QDA0800X30S080C	●	8	8	295	241	253	40	1,657
QDA0850X30S100C	●	8,5	10	315	258	272	40	1,76

Cutting conditions Reference table

QDA long • Internal coolant 12D

Workpiece	P01		P02		P03		M01		M02		K01		K02	
	Carbon steel		Alloy steel		Prehardened steel		Stainless steel				Grey cast iron		Ductile cast iron	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High machinability		Low machinability		-		-	
D (mm)	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**
Ø3		0.066		0.064		0.063		0.066		0.062		0.067		0.067
Ø4		0.095		0.092		0.088		0.094		0.088		0.097		0.094
Ø5		0.126		0.123		0.120		0.122		0.113		0.130		0.126
Ø6		0.164		0.153		0.153		0.158		0.147		0.164		0.160
Ø7	80 – 120	0.202	65 – 110	0.189	55 – 80	0.192	50 – 75	0.190	35 – 50	0.176	70 – 110	0.209	55 – 80	0.200
Ø8		0.245		0.232		0.231		0.234		0.218		0.251		0.242
Ø9		0.272		0.246		0.249		0.248		0.224		0.262		0.262
Ø10		0.294		0.263		0.266		0.259		0.248		0.280		0.273
Ø12		0.339		0.287		0.280		0.298		0.267		0.304		0.288

QDA long • Internal coolant 15D 20D

Workpiece	P01		P02		P03		M01		M02		K01		K02	
	Carbon steel		Alloy steel		Prehardened steel		Stainless steel				Grey cast iron		Ductile cast iron	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High machinability		Low machinability		-		-	
D (mm)	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**
Ø3		0.077		0.076		0.076		0.073		0.060		0.081		0.081
Ø4		0.101		0.098		0.098		0.095		0.078		0.105		0.105
Ø5		0.148		0.144		0.144		0.140		0.115		0.154		0.154
Ø6		0.171		0.168		0.168		0.161		0.133		0.179		0.179
Ø7	75 –110	0.193	60 – 100	0.192	50 – 70	0.193	45 – 65	0.189	30– 45	0.147	65 – 100	0.204	50 – 70	0.204
Ø8		0.239		0.237		0.242		0.231		0.183		0.249		0.255
Ø9		0.248		0.256		0.252		0.249		0.186		0.260		0.266
Ø10		0.295		0.297		0.294		0.286		0.227		0.309		0.309
Ø12		0.342		0.336		0.336		0.322		0.266		0.358		0.358

QDA long • Internal coolant 25D 30D

Workpiece	P01		P02		P03		M01		M02		K01		K02	
	Carbon steel		Alloy steel		Prehardened steel		Stainless steel				Grey cast iron		Ductile cast iron	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High machinability		Low machinability		-		-	
D (mm)	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**	**Vc (m/min)**	**fn (mm/rev)**
Ø3		0.085		0.083		0.082		0.082		0.073		0.088		0.088
Ø4		0.117		0.114		0.111		0.113		0.101		0.120		0.118
Ø5		0.162		0.158		0.156		0.155		0.137		0.168		0.165
Ø6		0.200		0.191		0.191		0.191		0.169		0.204		0.201
Ø7	60 – 85	0.238	45 – 70	0.228	35 – 45	0.231	30 – 40	0.228	20 – 30	0.197	50 – 75	0.248	35 – 45	0.242
Ø8		0.291		0.281		0.283		0.279		0.245		0.300		0.297
Ø9		0.314		0.301		0.300		0.298		0.250		0.313		0.316
Ø10		0.354		0.333		0.333		0.324		0.287		0.351		0.346
Ø12		0.408		0.369		0.364		0.370		0.320		0.392		0.381

QDA long • Internal coolant 12D

Workpiece	N01		N02		N03		S01		S02	
	Wrought aluminium		Cast aluminium		Copper alloy		Titanium alloy		Nickel alloy	
Properties	Si < 9%		Si ≥ 9%		-		-		-	
D (mm)	Vc (m/min)	fn (mm/rev)	Vc (m/min)	fn (mm/rev)	Vc (m/min)	fn (mm/rev)	Vc (m/min)	fn (mm/rev)	Vc (m/min)	fn (mm/rev)
Ø3		0.084		0.083		0.081		0.062		0.052
Ø4		0.120		0.119		0.116		0.088		0.077
Ø5		0.161		0.160		0.155		0.112		0.097
Ø6		0.209		0.203		0.196		0.158		0.120
Ø7	120 – 170	0.259	105 – 150	0.253	90 – 140	0.245	25 – 35	0.190	20 – 30	0.140
Ø8		0.311		0.305		0.298		0.234		0.182
Ø9		0.332		0.323		0.321		0.242		0.202
Ø10		0.351		0.350		0.340		0.252		0.210
Ø12		0.381		0.371		0.365		0.280		0.220

QDA long • Internal coolant 15D 20D

Workpiece	N01		N02		N03		S01		S02	
	Wrought aluminium		Cast aluminium		Copper alloy		Titanium alloy		Nickel alloy	
Properties	Si < 9%		Si ≥ 9%		-		-		-	
D (mm)	Vc (m/min)	fn (mm/rev)	Vc (m/min)	fn (mm/rev)	Vc (m/min)	fn (mm/rev)	Vc (m/min)	fn (mm/rev)	Vc (m/min)	fn (mm/rev)
Ø3		0.102		0.098		0.095		0.078		0.049
Ø4		0.132		0.126		0.123		0.102		0.063
Ø5		0.193		0.186		0.181		0.150		0.091
Ø6		0.227		0.218		0.210		0.174		0.109
Ø7	115 – 160	0.255	100 – 140	0.248	85 – 130	0.248	20 – 30	0.190	15 – 25	0.116
Ø8		0.311		0.304		0.300		0.234		0.154
Ø9		0.340		0.325		0.316		0.242		0.171
Ø10		0.398		0.381		0.370		0.294		0.196
Ø12		0.454		0.437		0.421		0.347		0.218

QDA long • Internal coolant 25D 30D

Workpiece	N01		N02		N03		S01		S02	
	Wrought aluminium		Cast aluminium		Copper alloy		Titanium alloy		Nickel alloy	
Properties	Si < 9%		Si ≥ 9%		-		-		-	
D (mm)	Vc (m/min)	fn (mm/rev)	Vc (m/min)	fn (mm/rev)	Vc (m/min)	fn (mm/rev)	Vc (m/min)	fn (mm/rev)	Vc (m/min)	fn (mm/rev)
Ø3		0.110		0.107		0.104		0.082		0.061
Ø4		0.150		0.146		0.143		0.113		0.085
Ø5		0.209		0.205		0.199		0.153		0.113
Ø6		0.259		0.251		0.242		0.198		0.139
Ø7	100 – 130	0.309	85 – 115	0.301	70 – 100	0.295	15 – 20	0.228	15 – 20	0.156
Ø8		0.373		0.366		0.359		0.281		0.204
Ø9		0.402		0.389		0.383		0.291		0.227
Ø10		0.445		0.435		0.423		0.323		0.245
Ø12		0.493		0.478		0.466		0.370		0.263

Wet coolant

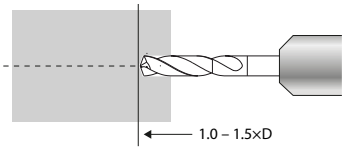
Reference cutting data for QDA drill with internal coolant.

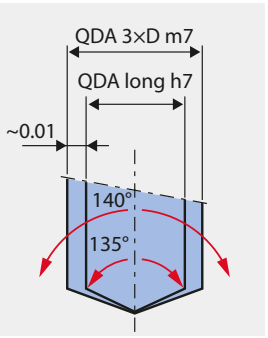
Note! These reference cutting data indicators are just for reference.
They should be adjusted according to the different cutting environments.

General purpose QDA deep hole drill (12×D – 30×D)

1 Pilot hole

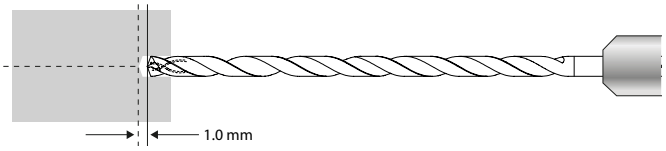
- Using a 3×D pilot drill (QDA) with point angle 140° and tolerance m7 (4 – 25 micron > Ø deep hole drill).
- Drilling pilot hole depth with minimum of 1 – 1.5×D.





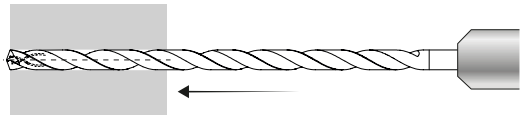
2 Enter according to pilot hole

- Enter without coolant be upon 1 mm before the end of pilot hole (12×D – 30×D).
- Approximate 300 RPM and feed rate of 500 mm/min.
- Then start high pressure coolant.



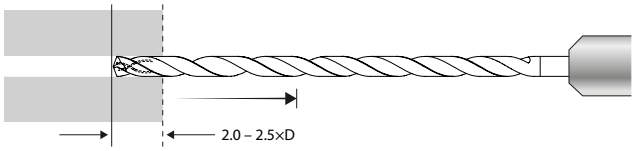
3 Deep drilling process

- Use spindle speed (Vc) and feed rate (f) as recommended.
- Continuous drilling until complete hole depth without chip removal cycles/peck drilling cycles.
- For through holes, reduce 30% of feed rate approximate 1 mm before complete the hole depth.



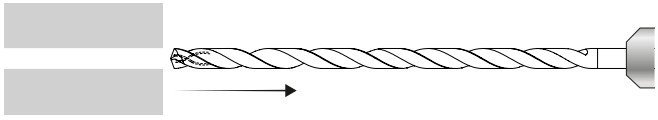
4 Retract

- Switch off coolant supply.
- Retract the drill after completed drilling the hole depth.
- Existing spindle speed (Vc) and double up the feed rate (f).
- Withdraw towards approximate 2 – 2.5×D of the beginning part of pilot hole.



5 Retracting from hole

- Retract with lower and constant speed (50 – 100 RPM) from the remaining part.



Coolant pressure

Bar (pressure)	<Ø6 mm	<Ø8 mm	<Ø12 mm	<Ø20 mm
Internal oil feed	70	50	30	25
MQL	15	12	10	8

Note!

Using a G73 peck cycle helps chip evacuation in deep hole drilling and materials which have a poor chip formation.

15×D – 30×D must utilize a Pilot hole drill.

Slow the feed ratio 30% when breaking through the material in through holes.
– The tool exit should not exceed 2 – 3 mm.

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