



Revolution Drill™ & Core Drill™



The AMEC® range of adjustable indexable carbide drills provide the ultimate in versatility with its revolutionary designed adjustable cartridge system and large diameter range from 38.10 to 142.75mm.

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Features and Benefits

- Revolutionary design allows adjustability up to 5.1mm on diameter
- Drills depths up to 4.5 times diameter
- Less tool inventory needed for a wide range of diameters
- Removable cartridges for easy replacement
- Insert design allows for excellent chip control and aggressive penetration rates



Innovative high performance drilling systems

AMEC's market leading range of adjustable indexable carbide drills provide the ultimate in versatility. Their revolutionary design allows the diameter to be pre-set to cut any hole diameter from 38.10mm to 101.00mm.

The product range incorporates two exceptionally rigid and high performance drilling systems, each of which has been designed to complement the other. The Revolution Drilling system uses "over-centre" cutting to drill from solid without the need for a pilot hole, while the Core Drill is designed to increase the diameter of existing holes.



Features and Benefits

- Drills from Solid, no pilot required
- Revolutionary design allows adjustability up to 5.1mm on diameter
- Drill Depths up to 4.5 times diameter
- Replaceable insert cartridges protect your investment
- Stack plate cartridge available
- Insert design allows for excellent chip control and aggressive penetration rates
- Less tool inventory needed for range of diameters
- The proprietary AM300® and AM200® coating increases tool life above competitors premium coatings.

Available in a range of shank styles and capable of drilling to depths up to 4.5 x diameter, the AMEC indexable Revolution and Core range is a powerful and versatile drilling solution that can deliver high productivity and a low cost per hole in a diversity of applications. Available in diameters from 50.80mm to 142.75mm.

For additional information on Revolution and Core range, please visit www.alliedmaxcut.com or contact our technical department for support and assistance on +44 (0)1384 400900, email engineering@alliedmaxcut.com



Features and Benefits

- Opens an existing hole in a single operation
- Ignores core shifts up to 3.175mm (1/8") providing straight and true holes without boring
- Allows for large amounts of material removal
- Unique design enables larger holes to be made on lower powered machines
- Multi-insert design reduces chip size for easy chip evacuation
- Smooth cutting action and quiet operation in lathes and mills
- Can be used as a rotating or stationary tool
- Useable in rough boring operations
- Special lengths, diameters and shanks available upon request



Insert Geometry Information

Standard Geometry

Inserts OP-05T308 have been designed to have an increased thickness compared to standard ISO inserts, increasing their strength and special radial clearance angles for improved performance in hole making applications.

When utilising these inserts in the Core Drill® and Revolution Drill® these features allow for excellent chip control and aggressive penetration rates in a wide range of materials.

The inserts are stocked in our

P35 Carbide

- AM300® coating
- AM200® coating
- TiN coating

K35 Carbide

- AM300® coating
- AM200® coating
- TiN coating

NEW High Rake Geometry

The High Rake geometry for the Revolution Drill® inserts and the Core Drill® inserts is a new geometry which achieves superior chip formation and tool life over competitive tools in long chipping, carbon and alloy steels below 200Bhn (700 N/mm)

High Rake with AM200® coating = HHR

High Rake with AM300® coating = PHR

- Allows superior chip formation, even at lighter feed rates than competitive products
- The inserts are stocked in our C5 (P35) carbide grade in both AM200® and AM300® coatings

Inserts are fully interchangeable between both products

Item Number, Coating and Availability - 10 Piece Packs

Grades	AM300® 	Stk.	AM200® 	Stk.	TiN 	Stk.	TiAlN 	Stk.	TiCN 	Stk.
OP04 Inserts for part numbers R26 - R32 Revolution Drill										
P35	OP-040304-P	●	OP-040304-H	●	OP-040304-T	●	OP-040304-A	◆	OP-040304-N	◆
K35	OP-040304-1P	●	OP-040304-1H	●	OP-040304-1T	●	OP-040304-1A	◆	OP-040304-1N	◆
OP05 Inserts for Revolution & Core Drill										
P35	OP-05T308-P	●	OP-05T308-H	●	OP-05T308-T	●	OP-05T308-A	◆	OP-05T308-N	◆
K35	OP-05T308-1P	●	OP-05T308-1H	●	OP-05T308-1T	●	OP-05T308-1A	◆	OP-05T308-1N	◆

Substrates

P35 Carbide

Excellent choice for drilling, free machining steel, low/medium carbon steels, alloy steels, high strength steels, tools steels, hardened steels and certain stainless steels

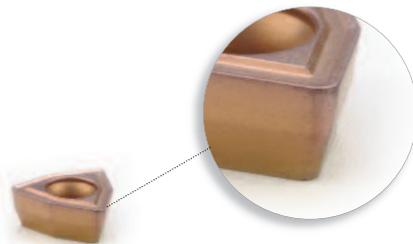
K35 Carbide

First choice when a tougher grade is required for drilling free machining steel, low/medium carbon steels, alloy steels, high strength steels, tools steels, hardened steels and certain stainless steels

P	M	K	N	S	H
Steel N/mm ²	Stainless Steel N/mm ²	Cast and Ductile Iron N/mm ²	Non-ferrous Material N/mm ²	High Temperature Materials N/mm ²	Hardened Materials N/mm ²
<1365	<940	<1020	<855	<990	<1365

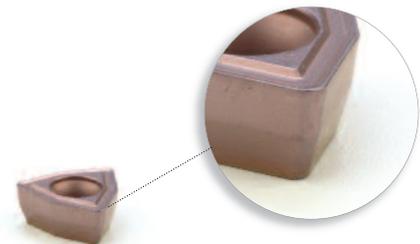
For further information on Material, Hardnesses and Cutting Data, please refer to the Technical Section from page 158.

Insert Coatings



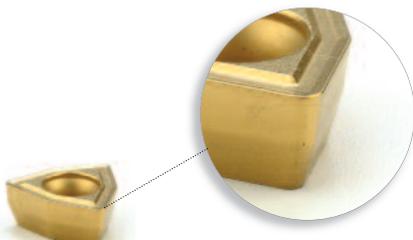
AM300®

- Increased heat resistance over AM200®
- Provides superior tool life at high penetration rates
- Up to a 20% increase in tool life over AM200®
- Colour Light Bronze



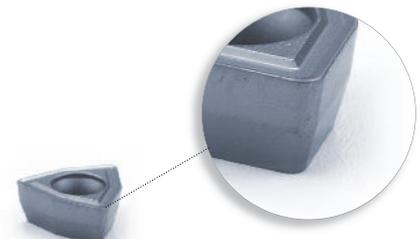
AM200®

- First choice for increased heat resistance over Tin, TiCN and TiAlN with Improved wear capabilities
- Allows for improved tool life and higher penetration rates
- Over 20% increased tool life over TiAlN coating
- Colour Copper / Bronze



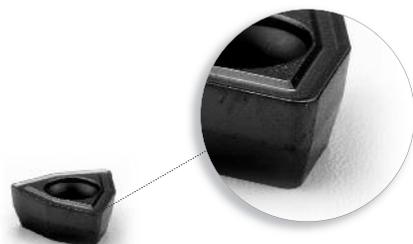
TiN

- General purpose coating
- Improved tool life over a non coated insert
- First choice when machining Aluminium
- Colour Gold / Yellow



TiCN

- Non Standard coating
- Excellent choice for wear resistance over low surface speeds
- Maximum working temperature 400° C
- Colour Blue / Grey



TiAlN

- Non Standard coating
- Excellent choice for wear resistance over high surface speeds
- Excellent oxidation resistance
- Colour Violet / Grey



Revolution Drill™ & Core Drill™ How to order information

Revolution Drill™



Core Drill™

Revolution Drill™ Body

R34 X22-40M

Revolution Drill Series	Drill Ø Range (mm)	Length to Diameter Ratio	Shank
R26	R26 (38.10 - 41.28)		40M
R28	R28 (41.28 - 44.45)	1.0	50M
R32	R32 (44.45 - 47.63)	2.2	
R34	R34 (47.75 - 50.80)	2.5	
R36	R36 (50.80 - 55.88)	3.5	
R38	R38 (55.88 - 60.96)	4.5	
R42	R42 (60.96 - 66.04)		
R44	R44 (66.04 - 71.12)		
R46	R46 (71.12 - 76.20)		
R48	R48 (76.20 - 81.28)		
R52	R52 (81.28 - 86.36)		
R54	R54 (86.36 - 91.44)		
R56	R56 (91.44 - 96.52)		
R58	R58 (96.52 - 101.00)		

Core Drill™ Body

OP1-1S-40M

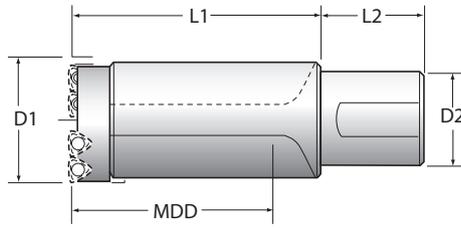
AMEC Core Drill	Drill Ø Range	Length	Shank	
OP1	1 (50.80-63.50)	1S - Short	40M	HSK 100A/C
OP2	2 (63.50-76.20)	1L - Long	50M	ABS63
OP3	3 (76.20-104.65)		BT40	DV40
OP4	4 (104.65-142.75)		BT50	DV50
			HSK 63A/C	

Revolution Drill™ Insert

Core Drill™ Insert

OP - 05T308 - 1H

For use with:	Insert Specification	Substrate	Coating
Revolution Drill Core Drill		C5 (P35) - Blank C1 (K35) - 1	Standard Geometry P - AM300® H - AM200® A - TiAlN N - TiCN T - TiN U - Uncoated
			High Rake Geometry PHR - AM300® HHR - AM200®



STRAIGHT SHANK
ISO 9766

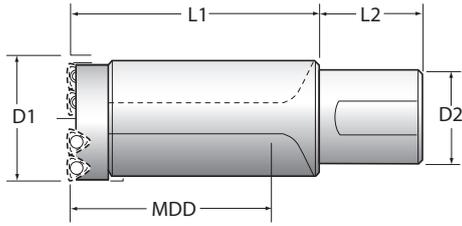
Part Number	Diameter Range (D1)	Max Drill Depth (MDD)	Body Length (L1)	Shank Dia (D2)	Shank Length (L2)	Stk.	Replacements				Stk.
							Cartridges	Mounting Screw (1 Pack)	Adjustment Screw (1 Pack)	Insert Screws (10 Pack)	
R26X20-40M*	38.10mm	82.6mm	114.3mm	40mm	70mm	○	C26-FIX C26-ADJ C26SP-FIX* C26SP-ADJ*	MS-16M-4	AS-16T8-4	IS-8-10	●
R26X30-40M	to	123.8mm	155.6mm			○					
R26X40-40M	41.28mm	165.1mm	196.9mm			○					
R28X20-40M*	41.28mm	88.9mm	120.7mm	40mm	70mm	○	C28-FIX C28-ADJ C28SP-FIX* C28SP-ADJ*	MS-16M-4	AS-16T8-4	IS-8-10	●
R28X30-40M	to	133.3mm	165.1mm			○					
R28X40-40M	44.45mm	177.8mm	209.6mm			○					
R32X20-40M*	44.45mm	95.3mm	127.0mm	40mm	70mm	○	C32-FIX C32-ADJ C32SP-FIX* C32SP-ADJ*	MS-17M-4	AS-16T8-4	IS-10-10	●
R32X30-40M	to	142.9mm	174.6mm			○					
R32X40-40M	47.63mm	191.0mm	222.3mm			○					
R34X22-40M*	47.75mm	114mm	136.6mm	40mm	70mm	○	C34-FIX C34-ADJ C34SP-FIX* C34SP-ADJ*	MS-17M-4	AS-16T9-4	IS-10-10	●
R34X35-40M	to	178mm	200.1mm			○					
R34X45-40M	50.80mm	228mm	251.0mm			○					
R36X22-40M*	50.80mm	127mm	149.2mm	40mm	70mm	○	C36-FIX C36-ADJ C36SP-FIX* C36SP-ADJ*	MS-17M-4	AS-18T9-4	IS-10-10	●
R36X35-40M	to	197mm	219.1mm			○					
R36X45-40M	55.88mm	254mm	276.2mm			○					
R38X22-40M*	55.88mm	140mm	162.0mm	40mm	70mm	○	C38-FIX C38-ADJ C38SP-FIX* C38SP-ADJ*	MS-17M-4	AS-18T9-4	IS-10-10	●
R38X35-40M	to	216mm	238.1mm			○					
R38X45-40M	60.96mm	280mm	301.6mm			○					
R42X22-40M*	60.96mm	146mm	171.5mm	40mm	70mm	○	C42-FIX C42-ADJ C42SP-FIX* C42SP-ADJ*	MS-19M-4	AS-18T9-4	IS-10-10	●
R42X35-40M	to	235mm	260.4mm			○					
R42X45-40M	66.04mm	298mm	323.9mm			○					
R44X22-40M*	66.04mm	159mm	191.0mm	40mm	70mm	○	C44-FIX C44-ADJ C44SP-FIX* C44SP-ADJ*	MS-19M-4	AS-18T9-4	IS-10-10	●
R44X35-40M	to	254mm	285.0mm			○					
	71.12mm										
R46X22-40M*	71.12mm	172mm	203.0mm	40mm	70mm	○	C46-FIX C46-ADJ C46SP-FIX* C46SP-ADJ*	MS-21M-4	AS-18T9-4	IS-10-10	●
R46X35-40M	to	267mm	299.9mm			○					
	76.20mm										
R48X10-50M*	76.20mm	82mm	114.3mm	50mm	80mm	○	C48-FIX C48-ADJ C48SP-FIX* C48SP-ADJ*	MS-21M-4	AS-18T9-4	IS-10-10	●
R48X25-50M	to	203mm	235.0mm			○					
	81.28mm										
R52X10-50M*	81.28mm	89mm	127.0mm	50mm	80mm	○	C52-FIX C52-ADJ C52SP-FIX* C52SP-ADJ*	MS-19M-4	AS-18T9-4	IS-10-10	●
R52X25-50M	to	216mm	254.0mm			○					
	86.36mm										
R54X10-50M*	86.36mm	95mm	133.4mm	50mm	80mm	○	C54-FIX C54-ADJ C54SP-FIX* C54SP-ADJ*	MS-19M-4	AS-18T9-4	IS-10-10	●
R54X25-50M	to	229mm	266.7mm			○					
	91.44mm										
R56X10-50M*	91.44mm	102mm	146.1mm	50mm	80mm	○	C56-FIX C56-ADJ C56SP-FIX* C56SP-ADJ*	MS-21M-4	AS-18T9-4	IS-10-10	●
R56X25-50M	to	241mm	285.8mm			○					
	96.52mm										
R58X10-50M*	96.52mm	102mm	146.1mm	50mm	80mm	○	C58-FIX C58-ADJ C58SP-FIX* C58SP-ADJ*	MS-21M-4	AS-18T9-4	IS-10-10	●
R58X25-50M	to	254mm	298.5mm			○					
	101.0mm										

*NOTE: Stacked plate (SP) cartridges available upon request for use in short length holders **only**, please contact AMEC technical department for details.
NOTE: High rake geometry (HR) available in P35 Substrate.

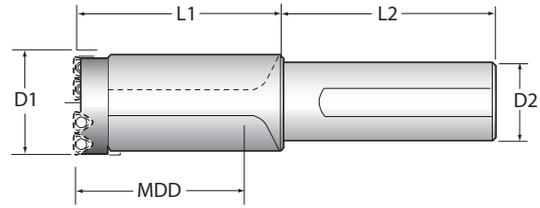
Item Number, Coating and Availability - 10 Piece Packs											
Grades	AM300®	Stk.	AM200®	Stk.	TiN	Stk.	TiAlN	Stk.	TiCN	Stk.	
OP04 Inserts for part numbers R26 - R32											
P35	OP-040304-P	●	OP-040304-H	●	OP-040304-T	●	OP-040304-A	◆	OP-040304-N	◆	
K35	OP-040304-1P	●	OP-040304-1H	●	OP-040304-1T	●	OP-040304-1A	◆	OP-040304-1N	◆	
OP05 Inserts for part numbers R34 - R58											
P35	OP-05T308-P	●	OP-05T308-H	●	OP-05T308-T	●	OP-05T308-A	◆	OP-05T308-N	◆	
K35	OP-05T308-1P	●	OP-05T308-1H	●	OP-05T308-1T	●	OP-05T308-1A	◆	OP-05T308-1N	◆	



Core Drill™ - Straight Shank and ABS



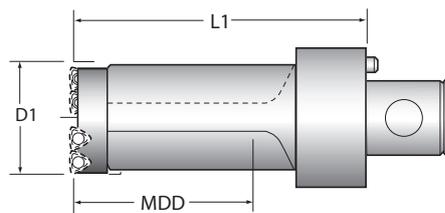
STRAIGHT SHANK ISO 9766
Short Length



STRAIGHT SHANK
Long Length

	Item Number	Item Description	Diameter Range (D1)	Body Length (L1)	Max Drill Depth (MDD)	Shank Length (L2)	Shank Diameter (D2)	Stk.
Straight Shank (Metric)	OP1-1S-40M	OP1 SS40M Short Length	50.80-63.50	101.60	82.55	70	40	○
	OP1-1L-40M	OP1 SS40M Long Length	50.80-63.50	158.75	139.70	70	40	○
	OP2-1S-40M	OP2 SS40M Short Length	63.50-76.20	139.70	120.65	70	40	○
	OP2-1L-40M	OP2 SS40M Long Length	63.50-76.20	215.90	196.85	70	40	○
	OP3-1S-40M	OP3 SS40M Short Length	76.20-104.65	152.40	127.00	70	40	○
	OP3-1L-40M	OP3 SS40M Long Length	76.20-104.65	254.00	228.60	70	40	○
	OP4-1S-50M	OP4 SS50M Short Length	104.65-142.75	152.40	127.00	80	50	○
OP4-1L-50M	OP4 SS50M Long Length	104.65-142.75	292.10	266.70	80	50	○	

	Item Number	Item Description	Diameter Range (D1)	Body Length (L1)	Max Drill Depth (MDD)	Shank Length (L2)	Shank Diameter (D2)	Stk.
Straight Shank (Imperial)	OP1-1S-SS1.5	OP1 SS 1.50 Short Length	50.80-63.50	101.60	82.55	101.6	38.1	○
	OP1-1L-SS1.5	OP1 SS 1.50 Long Length	50.80-63.50	158.75	139.70	101.6	38.1	○
	OP2-1S-SS1.5	OP2 SS 1.50 Short Length	63.50-76.20	139.70	120.65	101.6	38.1	○
	OP2-1L-SS1.5	OP2 SS 1.50 Long Length	63.50-76.20	215.90	196.85	101.6	38.1	○
	OP3-1S-SS1.5	OP3 SS 1.50 Short Length	76.20-104.65	152.40	127.00	101.6	38.1	○
	OP3-1L-SS1.5	OP3 SS 1.50 Long Length	76.20-104.65	254.00	228.60	101.6	38.1	○
	OP4-1S-SS2.0	OP4 SS 2.00 Short Length	104.65-142.75	152.40	127.00	114.3	50.8	○
OP4-1L-SS2.0	OP4 SS 2.00 Long Length	104.65-142.75	292.10	266.70	114.3	50.8	○	



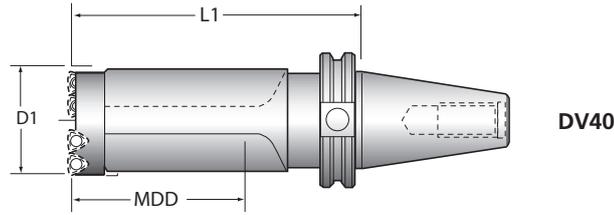
ABS 63

	Item Number	Item Description	Diameter Range (D1)	Body Length (L1)	Max Drill Depth (MDD)	Stk.
ABS63	OP1-1S-ABS63	OP1 ABS63 Short Length	50.80-63.50	139.70	82.55	◆
	OP1-1L-ABS63	OP1 ABS63 Long Length	50.80-63.50	196.85	139.70	◆
	OP2-1S-ABS63	OP2 ABS63 Short Length	63.50-76.20	158.75	120.65	◆
	OP2-1L-ABS63	OP2 ABS63 Long Length	63.50-76.20	234.95	196.85	◆
	OP3-1S-ABS63	OP3 ABS63 Short Length	76.20-104.65	171.45	127.00	◆
	OP3-1L-ABS63	OP3 ABS63 Long Length	76.20-104.65	273.05	228.60	◆
	OP4-1S-ABS63	OP4 ABS63 Short Length	104.65-142.75	171.45	127.00	◆

Stk. - Stock Availability.

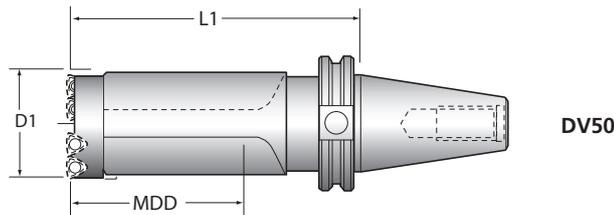
- Stocked Item
- Stocked in limited quantities
- ◆ Non-Stocked Standard (6 week lead time)

Core Drill™ - DV40/DV50 Flange



DIN 69871 FORM 'A'

	Item Number	Item Description	Diameter Range (D1)	Body Length (L1)	Max Drill Depth (MDD)	Stk.
DV40	OP1-1S-DV40	OP1 DV40 Short Length	50.80-63.50	136.65	82.55	◆
	OP1-1L-DV40	OP1 DV40 Long Length	50.80-63.50	193.80	139.70	◆
	OP2-1S-DV40	OP2 DV40 Short Length	63.50-76.20	174.75	120.65	◆
	OP2-1L-DV40	OP2 DV40 Long Length	63.50-76.20	250.95	196.85	◆
	OP3-1S-DV40	OP3 DV40 Short Length	76.20-104.65	187.45	127.00	◆
	OP3-1L-DV40	OP3 DV40 Long Length	76.20-104.65	289.05	228.60	◆
	OP4-1S-DV40	OP4 DV40 Short Length	104.65-142.75	187.45	127.00	◆



DIN 69871 FORM 'A'

	Item Number	Item Description	Diameter Range (D1)	Body Length (L1)	Max Drill Depth (MDD)	Stk.
DV50	OP1-1S-DV50	OP1 DV50 Short Length	50.80-63.50	136.65	82.55	●
	OP1-1L-DV50	OP1 DV50 Long Length	50.80-63.50	193.80	139.70	●
	OP2-1S-DV50	OP2 DV50 Short Length	63.50-76.20	174.75	120.65	●
	OP2-1L-DV50	OP2 DV50 Long Length	63.50-76.20	250.95	196.85	●
	OP3-1S-DV50	OP3 DV50 Short Length	76.20-104.65	187.45	127.00	●
	OP3-1L-DV50	OP3 DV50 Long Length	76.20-104.65	289.05	228.60	●
	OP4-1S-DV50	OP4 DV50 Short Length	104.65-142.75	187.05	127.00	●
	OP4-1L-DV50	OP4 DV50 Long Length	104.65-142.75	327.15	266.70	●

Stk. - Stock Availability.

- Stocked Item
- Stocked in limited quantities
- ◆ Non-Stocked Standard (6 week lead time)

Item Number, Coating and Availability - 10 Piece Packs

Grades	AM300®	Stk.	AM200®	Stk.	TiN	Stk.	TiAlN	Stk.	TiCN	Stk.
P35	OP-05T308-P	●	OP-05T308-H	●	OP-05T308-T	●	OP-05T308-A	◆	OP-05T308-N	◆
K35	OP-05T308-1P	●	OP-05T308-1H	●	OP-05T308-1T	●	OP-05T308-1A	◆	OP-05T308-1N	◆



Core Drill™ - BT40/BT50 Flange

T-A & GEN2 T-A

GEN3SYS

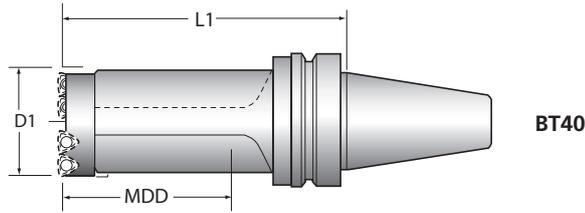
Revolution & Core Drill

ASC 320 Solid Carbide

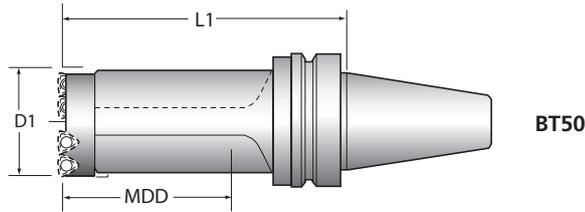
AccuPort 432

Thread Milling

Special Tooling



	Item Number	Item Description	Diameter Range (D1)	Body Length (L1)	Max Drill Depth (MDD)	Stk.
BT40	OP1-1S-BT40	OP1 BT40 Short Length	50.80-63.50	136.65	82.55	◆
	OP1-1L-BT40	OP1 BT40 Long Length	50.80-63.50	193.80	139.70	◆
	OP2-1S-BT40	OP2 BT40 Short Length	63.50-76.20	174.75	120.65	◆
	OP2-1L-BT40	OP2 BT40 Long Length	63.50-76.20	250.95	196.85	◆
	OP3-1S-BT40	OP3 BT40 Short Length	76.20-104.65	187.45	127.00	◆
	OP3-1L-BT40	OP3 BT40 Long Length	76.20-104.65	289.05	228.60	◆
	OP4-1S-BT40	OP4 BT40 Short Length	104.65-142.75	187.45	127.00	◆



	Item Number	Item Description	Diameter Range (D1)	Body Length (L1)	Max Drill Depth (MDD)	Stk.
BT50	OP1-1S-BT50	OP1 BT50 Short Length	50.80-63.50	146.05	82.55	◆
	OP1-1L-BT50	OP1 BT50 Long Length	50.80-63.50	203.20	139.70	◆
	OP2-1S-BT50	OP2 BT50 Short Length	63.50-76.20	184.15	120.65	◆
	OP2-1L-BT50	OP2 BT50 Long Length	63.50-76.20	260.35	196.85	◆
	OP3-1S-BT50	OP3 BT50 Short Length	76.20-104.65	196.85	127.00	◆
	OP3-1L-BT50	OP3 BT50 Long Length	76.20-104.65	298.45	228.60	◆
	OP4-1S-BT50	OP4 BT50 Short Length	104.65-142.75	196.85	127.00	◆
	OP4-1L-BT50	OP4 BT50 Long Length	104.65-142.75	336.55	266.70	◆

Stk. - Stock Availability.

- Stocked Item
- Stocked in limited quantities
- ◆ Non-Stocked Standard (6 week lead time)

Item Number, Coating and Availability - 10 Piece Packs

Grades	AM300®	Stk.	AM200®	Stk.	TiN	Stk.	TiAlN	Stk.	TiCN	Stk.
P35	OP-05T308-P	●	OP-05T308-H	●	OP-05T308-T	●	OP-05T308-A	◆	OP-05T308-N	◆
K35	OP-05T308-1P	●	OP-05T308-1H	●	OP-05T308-1T	●	OP-05T308-1A	◆	OP-05T308-1N	◆

Core Drill™ - HSK63A/C & HSK100A/C

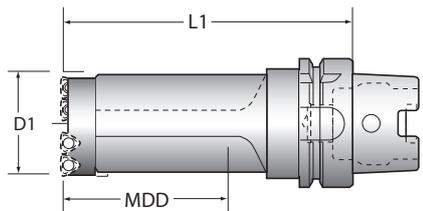


T-A &

□	OP1-WC05	Q		2	IS-10-10	Q	MS-13M-4	Q
	OP2-WC05	Q		2	IS-10-10	Q	MS-15M-4	Q
	OP3-WC05	Q		2	IS-10-10	Q	MS-15M-4	Q
	OP4-WC05	Q		3	IS-10-10	Q	MS-15M-4	Q

MDD

	Item Number	Item Description	Diameter Range (D1)	Body Length (L1)	Max Drill Depth (MDD)	Stk.
HSK63A/C	OP1-1S-HSK63	OP1 HSK63A/C Short Length	50.80-63.50	143.51	82.55	◆
	OP1-1L-HSK63	OP1 HSK63A/C Long Length	50.80-63.50	200.66	139.70	◆
	OP2-1S-HSK63	OP2 HSK63A/C Short Length	63.50-76.20	181.61	120.65	◆
	OP2-1L-HSK63	OP2 HSK63A/C Long Length	63.50-76.20	257.81	196.85	◆
	OP3-1S-HSK63	OP3 HSK63A/C Short Length	76.20-104.65	194.31	127.00	◆
	OP3-1L-HSK63	OP3 HSK63A/C Long Length	76.20-104.65	295.91	228.60	◆
	OP4-1S-HSK63	OP4 HSK63A/C Short Length	104.65-142.75	194.31	127.00	◆



HSK 100A/C

	Item Number	Item Description	Diameter Range (D1)	Body Length (L1)	Max Drill Depth (MDD)	Stk.
HSK 100A/C	OP1-1S-HSK100	OP1 HSK100A/C Short Length	50.80-63.50	149.86	82.55	◆
	OP1-1L-HSK100	OP1 HSK100A/C Long Length	50.80-63.50	207.01	139.70	◆
	OP2-1S-HSK100	OP2 HSK100A/C Short Length	63.50-76.20	187.96	120.65	◆
	OP2-1L-HSK100	OP2 HSK100A/C Long Length	63.50-76.20	264.16	196.85	◆
	OP3-1S-HSK100	OP3 HSK100A/C Short Length	76.20-104.65	200.66	127.00	◆
	OP3-1L-HSK100	OP3 HSK100A/C Long Length	76.20-104.65	302.26	228.60	◆
	OP4-1S-HSK100	OP4 HSK100A/C Short Length	104.65-142.75	200.66	127.00	◆
	OP4-1L-HSK100	OP4 HSK100A/C Long Length	104.65-142.75	340.36	266.70	◆

Stk. - Stock Availability.

- Stocked Item
- Stocked in limited quantities
- ◆ Non-Stocked Standard (6 week lead time)

Holder accessories

Item Number	Replacement Cartridges	Stk.	Qty Inserts Required	Insert Screw 10 Pack	Stk.	Mounting Screw 4 Pack	Stk.	Adjusting Screw 4 Pack	Stk.
	OP1-WC05	●	2	IS-10-10	●	MS-13M-4	●	AS-10T9-4	●
	OP2-WC05	●	2	IS-10-10	●	MS-15M-4	●	AS-10T9-4	●
	OP3-WC05	●	2	IS-10-10	●	MS-15M-4	●	AS-12T9-4	●
	OP4-WC05	●	3	IS-10-10	●	MS-15M-4	●	AS-14T9-4	●

GEN3SYS

Revolution & Core Drill

ASC 320 Solid Carbide

AccuPort 432

Thread Milling

Special Tooling



Recommended Cutting Data

Material	Material Hardness (BHN)	Speed M/min			Feed (mm/rev)
		AM300®	AM200®	TiN	
Free Machining Steel	110-250	274-396	260-380	215-275	0.09-0.18
Low Carbon Steel	85-275	259-381	245-365	200-260	0.08-0.17
Medium Carbon Steel	125-325	244-320	230-305	180-260	0.09-0.17
Alloy Steel	125-375	229-305	215-290	180-260	0.09-0.17
High Strength Alloy	225-400	183-259	170-245	120-200	0.08-0.13
Structural Steel	100-350	259-320	245-305	200-260	0.08-0.17
Tool Steel	150-250	122-244	110-230	75-200	0.06-0.13
Stainless Steel	135-275	183-259	170-245	120-200	0.08-0.15
Cast Iron	120-320	213-274	200-260	150-215	0.10-0.20
Aluminium (use TiN coated insert)	30-180	381-503	365-490	290-335	0.15-0.30
Brass	30-125	290-411	275-395	230-335	0.13-0.23

Formulas: $\text{mm/min} = \text{rev/min} \cdot \text{mm/rev}$ $\text{M/min} = \text{rev/min} \cdot 0.003 \cdot \text{DIA}$ $\text{rev/min} = \text{M/min} \cdot 318.47/\text{DIA}$

The speeds and feeds listed above are considered a general starting point for all applications. Technical assistance is also available for your specific applications through the AMEC Application Engineering Team. Please provide any details about the application to the Application Engineering Team. Accurate information will enable Allied Maxcut's Application Engineers to give you the best possible solution.

P	M	K	N	S	H
Steel N/mm ²	Stainless Steel N/mm ²	Cast and Ductile Iron N/mm ²	Non-ferrous Material N/mm ²	High Temperature Materials N/mm ²	Hardened Materials N/mm ²
<1365	<940	<1020	<855	<990	<1365



Recommended Cutting Data

Material	Material Hardness (BHN)	Speed M/min			Feed (mm/rev)
		AM300®	AM200®	TiN	
Free Machining Steel	110-250	274-396	260-380	215-275	0.09-0.18
Low Carbon Steel	85-275	259-381	245-365	200-260	0.08-0.17
Medium Carbon Steel	125-325	244-320	230-305	180-260	0.09-0.17
Alloy Steel	125-375	229-305	215-290	180-260	0.09-0.17
High Strength Alloy	225-400	183-259	170-245	120-200	0.08-0.13
Structural Steel	100-350	259-320	245-305	200-260	0.08-0.17
Tool Steel	150-250	122-244	110-230	75-200	0.06-0.13
Stainless Steel	135-275	183-259	170-245	120-200	0.08-0.15
Cast Iron Grey, Ductile, Nodular	120-320	213-274	200-260	150-215	0.10-0.20
Aluminium (Use TiN on Cast Aluminium)	30-180	381-503	365-490	290-335	0.15-0.30
Brass	30-125	290-411	275-395	230-335	0.13-0.23

TiAlN & TiCN coatings are available upon request

Formulas:	$\text{mm/min} = \text{rev/min} \cdot \text{mm/rev}$	$\text{M/min} = \text{rev/min} \cdot 0.003 \cdot \text{DIA}$	$\text{rev/min} = \text{M/min} \cdot 318.47/\text{DIA}$
------------------	------------------------------------------------------	--------------------------------------------------------------	---------------------------------------------------------

The speeds recommended for all coated tools are based on empirical data obtained under "Optimum Conditions". Many applications do not exhibit "Optimum Conditions." (Reductions in speed parameters may be required due to excessive tool wear generated in the application.)

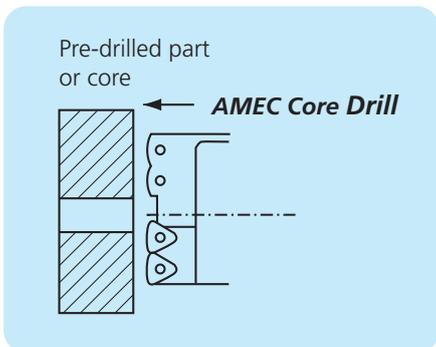
The speeds and feeds listed above are considered a general starting point for all applications. Factory technical assistance is also available for your specific applications through our Application Engineering Team. Please have item number, hole diameter, depth, material grade, BHN hardness and coolant pressure information available when you call. Additional information such as part and machine rigidity, horsepower and thrust limits, vertical or horizontal spindle, revolving or stationary tool, flood or through holder coolant will enable our Application Engineers to give you the best possible solution.

Minimum Pilot Hole Calculation

To determine the minimum diameter of the pilot hole, use the following calculation:

$$\text{FINISH DIAMETER MINUS OPENING RANGE} = \text{MINIMUM PILOT HOLE DIAMETER}$$

For example: To open up an existing diameter hole to 66mm diameter, OP2 tool would be used and the minimum pilot hole diameter would be 66mm-47.75mm = 18.25mm.



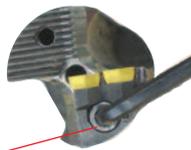
AMEC Core Drill Size	Adjustable O.D Range	Opening Range Diameter
OP1	50.80 - 63.50	47.75
OP2	63.50 - 76.20	47.75
OP3	76.20 - 104.65	47.75
OP4	104.65 - 142.75	68.07



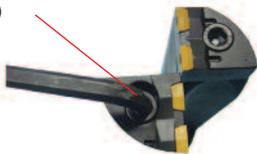
Operation and Setup Procedure

Presetter: In setting the AMEC Core Drill the use of a presetter will allow for the most accurate setting of the tool.

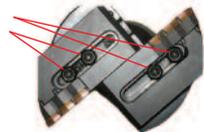
Revolution Drill™ Set up instructions

- 1 Mount fixed cartridge and tighten mounting screw to 15-19 Nm (11-14 ft-lbf)

- 2 Finger tighten mounting screw on adjustable cartridge

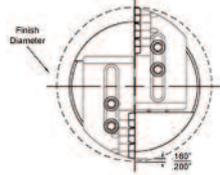
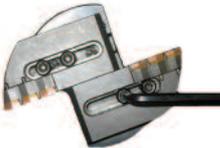
- 3 Set diameter using the adjustment screw against the mounting screw

- 4 Tighten mounting screw to 15-19 Nm (11-14 ft-lbf)


Core Drill™ Set up instructions

- 1 Loosen mounting screws on both cartridges

- 2 Set one cartridge to finish diameter by tightening adjustment screw against adjustment pin

- 3 Tighten mounting screws on cartridge to 15-19 Nm (11-14 ft-lbf)

- 4 Set opposing cartridge with 4.00mm to 5.00mm radial offset inward by tightening adjustment screw against adjustment pin (optimum situation for each insert to remove equal material)

- 5 Tighten mounting screw to 15-19 Nm (11-14 ft-lbf)


Dial Test Indicator (DTI): In the case that a presetter is unavailable the setting of the tool can be set accurately as follows:



Figure 1



Figure 2

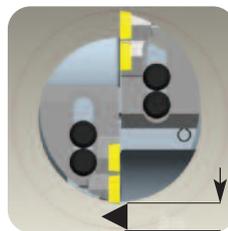


Figure 3

Body Diameter	
OP1	46.7
OP2	56.4
OP3	71.3
OP4	88.9

4.57 mean on radius (Range 4.06mm - 5.08mm)
 9.14mm mean on dia (Range 8.13mm - 10.16mm)

1) Outer Cartridge Setting (Finish diameter)
 $Finish \text{ } \varnothing \text{ Minus Body } \varnothing / 2 =$ Distance indicator will need to travel from tool body (Figure 1) to set outer cartridge at finish diameter (Figure 2) within setting range.

2) Inner Cartridge Setting (Core drill only)
 $Offset \text{ the inner cartridge inwards by } \varnothing 9.14 / 2 =$ Distance indicator will need to travel from outer cartridge to set inner cartridge (Figure 3) ensuring optimum insert overlap.



Guaranteed Application Request

Guidelines on use

Guidelines for use of the Guaranteed Application Request Form

The request for a Guaranteed Application is a method of proving AMEC tooling on demonstration.

The Guaranteed Application form must be completed as fully as possible and sent to the Allied Maxcut Technical Department.



Example – Required Information

Contact Details:

Purchase Order Number
Date
Customer Name
Customer Telephone and Fax Number
Proposed Date of the Demonstration
Customer Contact Name

Application Information:

Hole: Diameter, Depth, Finish and Tolerance
Material: Specification, Hardness and Type (Flat/Rounds etc)

Machine and Set-up Information:

Machine: Model, Type, and Power available
Tool: Shank, Stationery or Revolves
Coolant: Type, Volume, Pressure and Through Tool/Flood

Current Drill Information:

Details of current, or previous tooling used on application, and its performance history

What defines a successful test:

The objective of the demonstration i.e. Decreased Cycle Time, Better Chip Control, Safer Process, Longer Tool Life and Reduced Cost per Hole

Providing the Allied Maxcut Technical Department have enough information to judge the application, and its objectives are feasible, the test will be approved.



Guaranteed Application Request



CONTACT DETAILS

Trial P.O No..... Date..... Proposed Test Date.....
 Distributor..... Distributor Contact.....
 Customer Name..... Contact Name.....

APPLICATION INFORMATION

ATTENTION: The following information is required to enable the best combination of tooling to be recommended. Please complete all that apply.

Material Type..... Specification..... Material Hardness..... BRN RC kg N/mm²
 Material Condition Flat Stock Round Stock Tubular Stock Plate
 Stacked Plate Hot Rolled Cold Rolled Casting Forging
 Hole Diameter..... mm Inch Hole Depth Thru Hole Blind Hole
 Drilled Hole Tolerance Req'd..... Drilled Hole RMS Finish Req'd..... µInch µMetre

MACHINE AND SET-UP INFORMATION

Machine Tool Type Machining Centre Lathe Boring Mill Transfer Line
 Multi-spindle auto Multi spindle drill Radial Arm
 Gantry Machine Dial Index Machine Pedestal Drill
 Gun Drilling Machine Other
 Machine Tool Builder..... Model.....
 Machine Tool Control CNC NC Manual Other.....
 Spindle Orientation Vertical Horizontal Other.....
 Tool Stationery Revolves
 Available Power..... KW HP Available Feed Thrust..... Newtons Lbs
 Available Speed..... Variable Fixed RPM m/min
 Preferred Shank Type Flanged Morse No RCA Lathe Diameter _____ mm Inch
 Coolant Type Cutting Oil Water Soluble Oil Air Mist Air Dry
 Coolant Pressure..... Bar PSI
 Coolant Flow Rate..... L/min GPM Coolant Through Tool External

CURRENT DRILL INFORMATION

Drill Manufacturer..... Part Number.....
 Drill Type..... Twist Brazed Indexable Insert Gun Drill
 Removable Tip Other.....
 Tool Grade HSS Carbide Ceramic Other.....
 Tool Coating Uncoated TiN TiCN TiAlN Other.....
 Current Speed..... RPM M/min Current Feed Rate..... mm/rev mm/min
 Average Number of Holes Drilled New..... After Regrind?.....
 Reason(s) for Tool Change Wear Chipping Fracture Chatter Burr
 Losing Hole Tolerance Losing Chip Control New Application
 Other.....
 What criteria defines a successful test Decreased Cycle Time Better Chip Control Safer Process
 Longer Tool Life Reduced Cost per Hole Other.....
 Potential this application: Current Annual Usage €/£: Tools per Annum?

FOR OFFICE USE ONLY

Application Engineer: Number: Status: