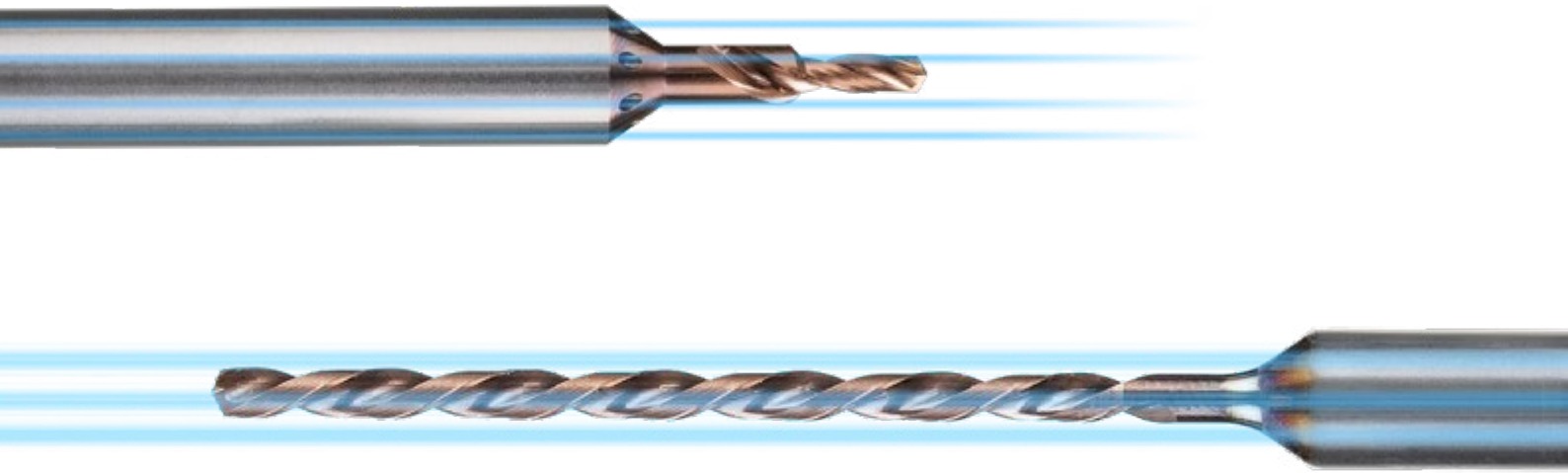
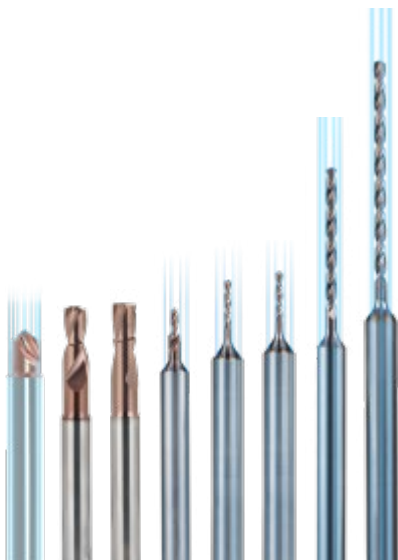
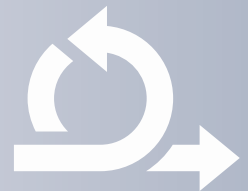


ACTIONDRILL INOX cooled

HBmicrotec[®]
ACTIONTOOLS & ENGINEERING



ACTIONDRILL[®]
by HB microtec
INOX cooled



3xD pilot drill & 6xD drill from Ø 0.3 k6 to Ø 2.9 k6	8xD to 18xD drills from Ø 0.3 k5 up to Ø 2.381 k5
INOX Pilot from Ø 0.3 k6 to Ø 7.2 k6	INOX 170° Pilot from Ø 0.75 k6 to Ø 7.2 k6
Centering drill from Ø 0.3 to Ø 7.2	

140° $\pm 2^\circ$ α -INOX
High-performance point geometry, self-centering.

140° $\pm 2^\circ$ α -INOX
High-performance point geometry

The high-performance α -INOX coating guarantees a long tool life and prevents the cutting edges from sticking.

Integrated cooling channels protect the tool from overheating and flush away all chips.

The reinforced shank in h5 quality combined with an optimized effective length makes the tool robust and vibration-free.

High feed and cutting speeds are made possible by the use of ultra-fine grain solid carbide with high fracture toughness.



ACTIONDRILL®
by HB microtec Double-Center cooled

ACTIONDRILL®
by HB microtec INOX-170Pilot

ACTIONDRILL®
by HB microtec INOX-Pilot

ACTIONDRILL®
by HB microtec INOX-6xD cooled

ACTIONDRILL®
by HB microtec INOX-3xD-Pilot cooled

ACTIONDRILL®
by HB microtec INOX-12xD cooled

ACTIONDRILL®
by HB microtec INOX-8xD cooled

ACTIONDRILL®
by HB microtec INOX-18xD cooled

Centering drill with integrated cooling and double angle

145°+4° drill centering angle and centering drill with double angle

Chamfer angle 60° or 90°

The high-performance α -INOX coating guarantees a long tool life and prevents the cutting edges from sticking

from $\varnothing 0.3$ to $\varnothing 7.2$

Suitable for drills with a tip angle of up to 142°

The reinforced shank in h5 quality combined with an optimized working length makes the tool robust and vibration-free.

High feed and cutting speeds are made possible by the use of ultra-fine-grained solid carbide with high fracture toughness.

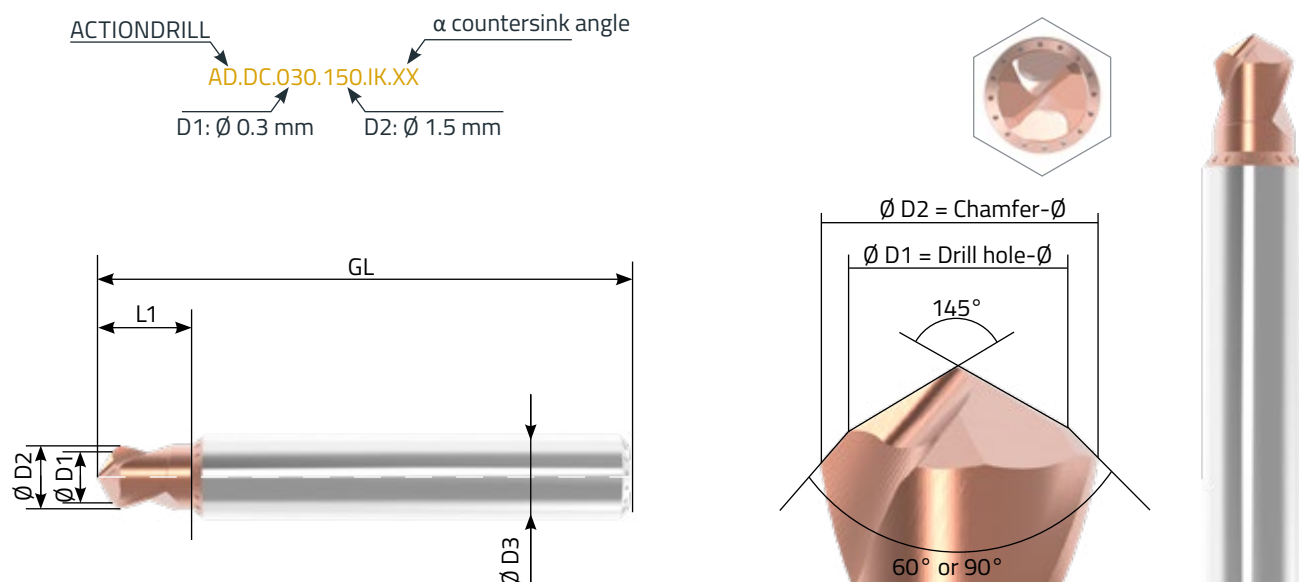
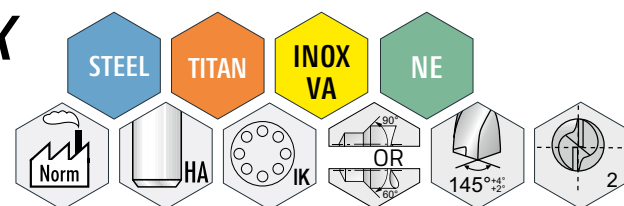


☐ Order Order number: _____ ☐ Inquiry

Dimensions: D ₁ : _____ GL: _____ α : _____ D ₂ : _____ L ₁ : _____ β : _____ D ₃ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ No ☐ Yes Cutting direction: ☐ Right ☐ Left
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

Centering drill with ITK with double angle



■ α-INOX coated



5 PRO's of the ACTIONDRILL:

- Combination tool Centering with 145° + chamfering (60° or 90°)
- Centering is tailored to the drill diameter
- The drill corners are protected
- Integrated cooling prevents chip build-up and leaves
a clean centering for the following drill
- Short process times and high process reliability

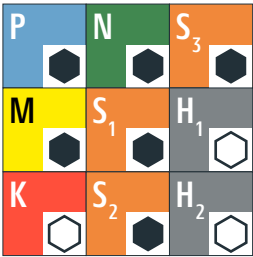
Article number	D1 [mm]	D1 [inch]	D2	L1	D3	GL	α (XX°)
AD.DC.030.150.IK.XX	Ø0.30	-	Ø1.50	7.00	4.00	40	60°/90°
AD.DC.035.160.IK.XX	Ø0.35	-	Ø1.60	7.00	4.00	40	60°/90°
AD.DC.040.160.IK.XX	Ø0.40	-	Ø1.60	7.00	4.00	40	60°/90°
AD.DC.045.170.IK.XX	Ø0.45	-	Ø1.70	7.00	4.00	40	60°/90°
AD.DC.050.170.IK.XX	Ø0.50	-	Ø1.70	7.00	4.00	40	60°/90°
AD.DC.055.180.IK.XX	Ø0.55	-	Ø1.80	7.00	4.00	40	60°/90°
AD.DC.060.180.IK.XX	Ø0.60	-	Ø1.80	7.00	4.00	40	60°/90°
AD.DC.065.190.IK.XX	Ø0.65	-	Ø1.90	7.00	4.00	40	60°/90°
AD.DC.070.190.IK.XX	Ø0.70	-	Ø1.90	7.00	4.00	40	60°/90°
AD.DC.075.200.IK.XX	Ø0.75	-	Ø2.00	7.00	4.00	40	60°/90°
AD.DC.080.200.IK.XX	Ø0.80	-	Ø2.00	7.00	4.00	40	60°/90°
AD.DC.085.210.IK.XX	Ø0.85	-	Ø2.10	7.00	4.00	40	60°/90°
AD.DC.090.210.IK.XX	Ø0.90	-	Ø2.10	7.00	4.00	40	60°/90°
AD.DC.095.220.IK.XX	Ø0.95	-	Ø2.20	7.00	4.00	40	60°/90°
AD.DC.100.220.IK.XX	Ø1.00	-	Ø2.20	7.00	4.00	40	60°/90°
AD.DC.105.230.IK.XX	Ø1.05	-	Ø2.30	7.00	4.00	40	60°/90°
AD.DC.110.230.IK.XX	Ø1.10	-	Ø2.30	7.00	4.00	40	60°/90°
AD.DC.115.240.IK.XX	Ø1.15	-	Ø2.40	7.00	4.00	40	60°/90°
AD.DC.120.240.IK.XX	Ø1.20	-	Ø2.40	7.00	4.00	40	60°/90°
AD.DC.125.250.IK.XX	Ø1.25	-	Ø2.50	7.00	4.00	40	60°/90°
AD.DC.130.250.IK.XX	Ø1.30	-	Ø2.50	7.00	4.00	40	60°/90°
AD.DC.135.260.IK.XX	Ø1.35	-	Ø2.60	9.00	6.00	50	60°/90°
AD.DC.140.260.IK.XX	Ø1.40	-	Ø2.60	9.00	6.00	50	60°/90°
AD.DC.145.270.IK.XX	Ø1.45	-	Ø2.70	9.00	6.00	50	60°/90°
AD.DC.150.270.IK.XX	Ø1.50	-	Ø2.70	9.00	6.00	50	60°/90°
AD.DC.155.280.IK.XX	Ø1.55	-	Ø2.80	9.00	6.00	50	60°/90°
AD.DC.1587.280.IK.XX	Ø1.587	1 / 16"	Ø2.80	9.00	6.00	50	60°/90°
AD.DC.160.280IK.XX	Ø1.60	-	Ø2.80	9.00	6.00	50	60°/90°
AD.DC.165.290.IK.XX	Ø1.65	-	Ø2.90	9.00	6.00	50	60°/90°
AD.DC.170.290.IK.XX	Ø1.70	-	Ø2.90	9.00	6.00	50	60°/90°
AD.DC.175.300.IK.XX	Ø1.75	-	Ø3.00	9.00	6.00	50	60°/90°
AD.DC.180.300.IK.XX	Ø1.80	-	Ø3.00	9.00	6.00	50	60°/90°
AD.DC.185.310.IK.XX	Ø1.85	-	Ø3.10	9.00	6.00	50	60°/90°
AD.DC.190.310.IK.XX	Ø1.90	-	Ø3.10	9.00	6.00	50	60°/90°
AD.DC.195.320.IK.XX	Ø1.95	-	Ø3.20	9.00	6.00	50	60°/90°
AD.DC.200.320.IK.XX	Ø2.00	-	Ø3.20	9.00	6.00	50	60°/90°
AD.DC.203.330.IK.XX	Ø2.03	-	Ø3.30	9.00	6.00	50	60°/90°

Article number	D1 [mm]	D1 [inch]	D2	L1	D3	GL	α (XX°)
AD.DC.205.330.IK.XX	Ø2.05	-	Ø3.30	9.00	6.00	50	60°/90°
AD.DC.210.330.IK.XX	Ø2.10	-	Ø3.30	9.00	6.00	50	60°/90°
AD.DC.215.340.IK.XX	Ø2.15	-	Ø3.40	9.00	6.00	50	60°/90°
AD.DC.220.340.IK.XX	Ø2.20	-	Ø3.40	9.00	6.00	50	60°/90°
AD.DC.225.350.IK.XX	Ø2.25	-	Ø3.50	9.00	6.00	50	60°/90°
AD.DC.230.350.IK.XX	Ø2.30	-	Ø3.50	9.00	6.00	50	60°/90°
AD.DC.233.360.IK.XX	Ø2.33	-	Ø3.60	9.00	6.00	50	60°/90°
AD.DC.235.360.IK.XX	Ø2.35	-	Ø3.60	9.00	6.00	50	60°/90°
AD.DC.2381.360.IK.XX	Ø2.381	3/32"	Ø3.60	9.00	6.00	50	60°/90°
AD.DC.240.360.IK.XX	Ø2.40	-	Ø3.60	9.00	6.00	50	60°/90°
AD.DC.245.370.IK.XX	Ø2.45	-	Ø3.70	9.00	6.00	50	60°/90°
AD.DC.250.370.IK.XX	Ø2.50	-	Ø3.70	9.00	6.00	50	60°/90°
AD.DC.255.380.IK.XX	Ø2.55	-	Ø3.80	9.00	6.00	50	60°/90°
AD.DC.260.380.IK.XX	Ø2.60	-	Ø3.80	9.00	6.00	50	60°/90°
AD.DC.265.390.IK.XX	Ø2.65	-	Ø3.90	9.00	6.00	50	60°/90°
AD.DC.270.390.IK.XX	Ø2.70	-	Ø3.90	9.00	6.00	50	60°/90°
AD.DC.275.400.IK.XX	Ø2.75	-	Ø4.00	9.00	6.00	50	60°/90°
AD.DC.280.400.IK.XX	Ø2.80	-	Ø4.00	9.00	6.00	50	60°/90°
AD.DC.285.410.IK.XX	Ø2.85	-	Ø4.10	10.00	8.00	60	60°/90°
AD.DC.290.410.IK.XX	Ø2.90	-	Ø4.10	10.00	8.00	60	60°/90°
AD.DC.295.420.IK.XX	Ø2.95	-	Ø4.20	10.00	8.00	60	60°/90°
AD.DC.300.420.IK.XX	Ø3.00	-	Ø4.20	10.00	8.00	60	60°/90°
AD.DC.310.430.IK.XX	Ø3.10	-	Ø4.30	10.00	8.00	60	60°/90°
AD.DC.315.440.IK.XX	Ø3.15	-	Ø4.40	10.00	8.00	60	60°/90°
AD.DC.3175.440.IK.XX	Ø3.175	1 / 8"	Ø4.40	10.00	8.00	60	60°/90°
AD.DC.320.440.IK.XX	Ø3.20	-	Ø4.40	10.00	8.00	60	60°/90°
AD.DC.325.450.IK.XX	Ø3.25	-	Ø4.50	10.00	8.00	60	60°/90°
AD.DC.330.450.IK.XX	Ø3.30	-	Ø4.50	10.00	8.00	60	60°/90°
AD.DC.340.460.IK.XX	Ø3.40	-	Ø4.60	10.00	8.00	60	60°/90°
AD.DC.350.470.IK.XX	Ø3.50	-	Ø4.70	10.00	8.00	60	60°/90°
AD.DC.360.480.IK.XX	Ø3.60	-	Ø4.80	10.00	8.00	60	60°/90°
AD.DC.365.490.IK.XX	Ø3.65	-	Ø4.90	10.00	8.00	60	60°/90°
AD.DC.370.490.IK.XX	Ø3.70	-	Ø4.90	10.00	8.00	60	60°/90°
AD.DC.380.500.IK.XX	Ø3.80	-	Ø5.00	10.00	8.00	60	60°/90°
AD.DC.390.510.IK.XX	Ø3.90	-	Ø5.10	10.00	8.00	60	60°/90°
AD.DC.3986.520.IK.XX	Ø3.986	5 / 32"	Ø5.20	10.00	8.00	60	60°/90°
AD.DC.400.520.IK.XX	Ø4.00	-	Ø5.20	10.00	8.00	60	60°/90°

Article number	D1 [mm]	D1 [inch]	D2	L1	D3	GL	α (XX°)
AD.DC.410.530.IK.XX	Ø4.10	-	Ø5.30	10.00	8.00	60	60°/90°
AD.DC.420.540.IK.XX	Ø4.20	-	Ø5.40	10.00	8.00	60	60°/90°
AD.DC.430.550.IK.XX	Ø4.30	-	Ø5.50	10.00	8.00	60	60°/90°
AD.DC.440.560.IK.XX	Ø4.40	-	Ø5.60	10.00	8.00	60	60°/90°
AD.DC.450.570.IK.XX	Ø4.50	-	Ø5.70	10.00	8.00	60	60°/90°
AD.DC.460.580.IK.XX	Ø4.60	-	Ø5.80	10.00	8.00	60	60°/90°
AD.DC.465.590.IK.XX	Ø4.65	-	Ø5.90	10.00	8.00	60	60°/90°
AD.DC.470.590.IK.XX	Ø4.70	-	Ø5.90	10.00	8.00	60	60°/90°
AD.DC.4762.600.IK.XX	Ø4.762	3 / 16"	Ø6.00	10.00	8.00	60	60°/90°
AD.DC.480.600.IK.XX	Ø4.80	-	Ø6.00	12.00	10.00	67	60°/90°
AD.DC.490.610.IK.XX	Ø4.90	-	Ø6.10	12.00	10.00	67	60°/90°
AD.DC.500.620.IK.XX	Ø5.00	-	Ø6.20	12.00	10.00	67	60°/90°
AD.DC.510.630.IK.XX	Ø5.10	-	Ø6.30	12.00	10.00	67	60°/90°
AD.DC.520.640.IK.XX	Ø5.20	-	Ø6.40	12.00	10.00	67	60°/90°
AD.DC.530.650.IK.XX	Ø5.30	-	Ø6.50	12.00	10.00	67	60°/90°
AD.DC.540.660.IK.XX	Ø5.40	-	Ø6.60	12.00	10.00	67	60°/90°
AD.DC.550.670.IK.XX	Ø5.50	-	Ø6.70	12.00	10.00	67	60°/90°
AD.DC.5556.680.IK.XX	Ø5.556	7 / 32"	Ø6.80	12.00	10.00	67	60°/90°
AD.DC.560.680.IK.XX	Ø5.60	-	Ø6.80	12.00	10.00	67	60°/90°
AD.DC.570.690.IK.XX	Ø5.70	-	Ø6.90	12.00	10.00	67	60°/90°
AD.DC.580.700.IK.XX	Ø5.80	-	Ø7.00	12.00	10.00	67	60°/90°
AD.DC.590.710.IK.XX	Ø5.90	-	Ø7.10	12.00	10.00	67	60°/90°
AD.DC.600.720.IK.XX	Ø6.00	-	Ø7.20	12.00	10.00	67	60°/90°
AD.DC.620.760.IK.XX	Ø6.20	-	Ø7.60	12.00	10.00	67	60°/90°
AD.DC.6350.760.IK.XX	Ø6.35	1 / 4"	Ø7.60	12.00	10.00	67	60°/90°
AD.DC.660.780.IK.XX	Ø6.60	-	Ø7.80	12.00	10.00	67	60°/90°
AD.DC.670.800.IK.XX	Ø6.70	-	Ø8.00	12.00	10.00	67	60°/90°
AD.DC.680.800.IK.XX	Ø6.80	-	Ø8.00	12.00	10.00	67	60°/90°
AD.DC.690.800.IK.XX	Ø6.90	-	Ø8.00	12.00	10.00	67	60°/90°
AD.DC.700.800.IK.XX	Ø7.00	-	Ø8.00	12.00	10.00	67	60°/90°
AD.DC.720.800.IK.XX	Ø7.20	-	Ø8.00	12.00	10.00	67	60°/90°

Delivery time: 3-4 weeks

Example for Ø2.05 drill and 90° chamfer: AD.DC.205.330.IK.90



Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm ²	1.0044	S275JR	AISI 1020
		1.0715	11Mn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
H	Hardened steels ≥ 55 HRC		CrCoMo28	ASTM F1537
		1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

Ø 0.3 - 1.0 mm		Ø 1.0 - 2.5 mm		Ø 2.5 - 4.5 mm		Ø 4.5 - 7.2 mm	
vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]
60-120	0.008 - 0.03	60-120	0.022- 0.046	60-130	0.042- 0.066	60-130	0.090 - 0.182
60-100	0.08 - 0.03	60-100	0.018- 0.026	60-120	0.042- 0.056	60-130	0.090 - 0.182
50-100	0.08 - 0.03	50-100	0.009 - 0.016	50-120	0.025 - 0.04	50-120	0.060 - 0.080
50-80	0.08 - 0.03	50-80	0.008 - 0.020	50-80	0.02 - 0.038	50-90	0.050 - 0.070
80-140	0.010 - 0.034	80-140	0.030 - 0.042	80-140	0.030 - 0.042	80-160	0.096 - 0.135
80-160	0.012 - 0.036	80-160	0.032 - 0.046	80-160	0.042 - 0.066	80-160	0.132 - 0.18
80-140	0.012 - 0.036	80-140	0.036 - 0.068	80-140	0.046 - 0.088	80-160	0.132 - 0.210
80-120	0.012 - 0.034	80-120	0.030 - 0.048	80-120	0.032 - 0.088	80-140	0.085 - 0.120
15 - 50	0.08 - 0.03	15 - 50	0.025 - 0.045	15 - 50	0.025 - 0.045	15 - 60	0.060 - 0.092
15 - 50	0.08 - 0.03	15 - 50	0.025 - 0.045	15 - 50	0.025 - 0.045	15 - 60	0.060 - 0.120
15 - 50	0.08 - 0.03	15 - 50	0.020 - 0.024	15 - 50	0.020 - 0.024	15 - 50	0.055 - 0.092
15-32	0.006 - 0.009	15-32	0.006 - 0.009	15-32	0.006 - 0.009	15-32	0.006 - 0.012
15-32	0.006 - 0.009	15-32	0.006 - 0.009	15-32	0.006 - 0.009	15-32	0.006 - 0.012

INOX-170Pilot

170° α-INOX
high-performance point
geometry, 2x faster drilling
on inclined surfaces
compared to 180° flat
drills.

from Ø 0.3 k6
to Ø 7.2 k6

The high-performance α-INOX
coating guarantees a long tool
life and prevents the
cutting edges from
sticking.

2xD drilling depth with 90°
countersink cutting edge for
chamfering.

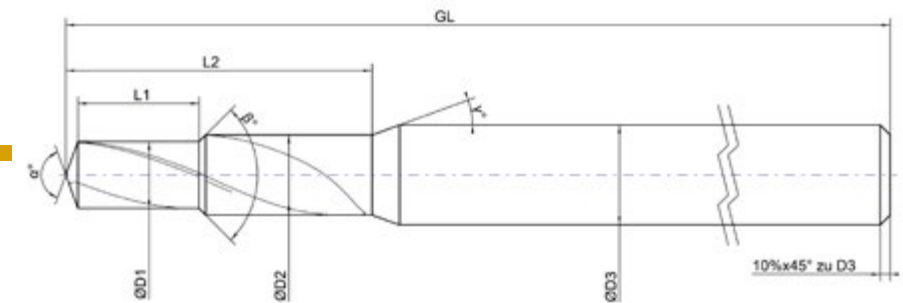
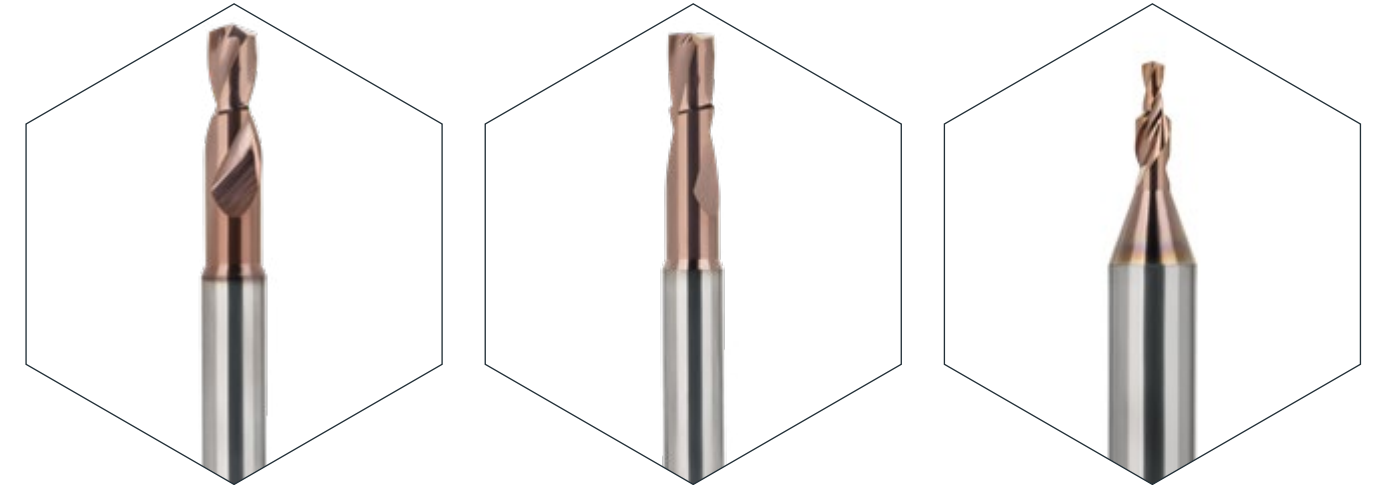
The reinforced shank in h6
quality combined with an op-
timized usable length makes
the tool robust and vibration-
free.

High feed and cutting speeds
are made possible by the use
of ultra-fine grain solid
carbide with high fracture
toughness.

INOX-Pilot

140°^{+4°/-2°} α-INOX
High-performance point
geometry, self-centering.

from Ø 0.75 k6
to Ø 7.2 k6



☐ Inquiry

☐ Order

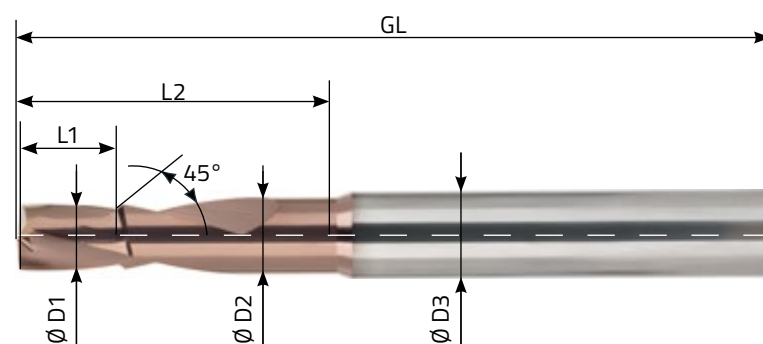
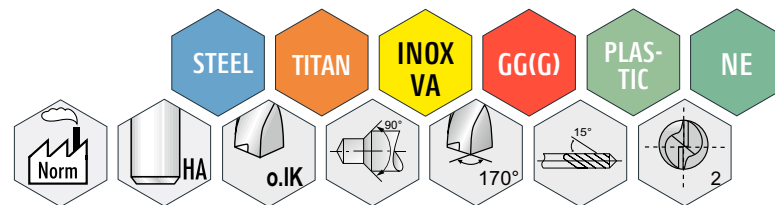
Order number: _____

Other: _____

Dimensions: D ₁ : _____ GL: _____ α: _____ D ₂ : _____ L ₁ : _____ β: _____ D ₃ : _____ L ₂ : _____ γ: _____ Z: _____		Coating: ☐ Coated*: _____ ☐ Uncoated	With cooling channels? ☐ No ☐ Yes
Material to be machined: 		Shank shape: 	Cutting direction: ☐ Right ☐ Left
Date, signature & company stamp: 		Quantity: 	
		Contact person: 	

* Without further information, the most suitable coating will be used.

INOX-170Pilot



5 PRO's of the ACTIONDRILL:

- Direct drilling on inclined surfaces
- For surfaces with an inclination angle up to 61°
- Combination tool: drilling + chamfering
- Perfect positional accuracy
- Shorter process times and high process reliability

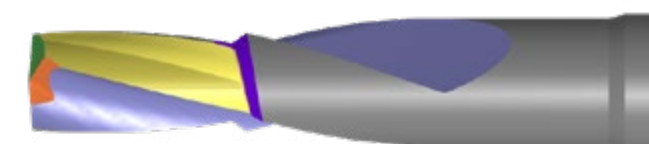
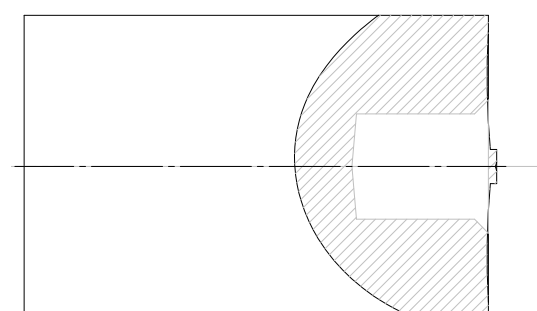
Article number	D1 k6 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	GL (mm)
AD.90.030.170	Ø 0.30	-	Ø 0.70	Ø 4.00	0.60	2.30	55.00
AD.90.035.170	Ø 0.35	-	Ø 0.75	Ø 4.00	0.70	2.55	55.00
AD.90.040.170	Ø 0.40	-	Ø 0.80	Ø 4.00	0.80	2.80	55.00
AD.90.045.170	Ø 0.45	-	Ø 0.85	Ø 4.00	0.90	3.05	55.00
AD.90.050.170	Ø 0.50	-	Ø 0.90	Ø 4.00	1.00	3.30	55.00
AD.90.055.170	Ø 0.55	-	Ø 0.95	Ø 4.00	1.10	3.55	55.00
AD.90.060.170	Ø 0.60	-	Ø 1.00	Ø 4.00	1.20	3.80	55.00
AD.90.065.170	Ø 0.65	-	Ø 1.05	Ø 4.00	1.30	4.05	55.00
AD.90.070.170	Ø 0.70	-	Ø 1.10	Ø 4.00	1.40	4.30	55.00
AD.90.075.170	Ø 0.75	-	Ø 1.15	Ø 4.00	1.50	4.55	55.00
AD.90.080.170	Ø 0.80	-	Ø 1.20	Ø 4.00	1.60	4.80	55.00
AD.90.085.170	Ø 0.85	-	Ø 1.25	Ø 4.00	1.70	5.05	55.00
AD.90.090.170	Ø 0.90	-	Ø 1.30	Ø 4.00	1.80	5.30	55.00
AD.90.095.170	Ø 0.95	-	Ø 1.35	Ø 4.00	1.90	5.55	55.00
AD.90.100.170	Ø 1.00	-	Ø 1.60	Ø 4.00	2.00	6.70	55.00
AD.90.105.170	Ø 1.05	-	Ø 1.65	Ø 4.00	2.10	6.80	55.00
AD.90.110.170	Ø 1.10	-	Ø 1.70	Ø 4.00	2.20	7.00	55.00
AD.90.115.170	Ø 1.15	-	Ø 1.75	Ø 4.00	2.30	7.10	55.00
AD.90.120.170	Ø 1.20	-	Ø 1.80	Ø 4.00	2.40	7.20	55.00
AD.90.125.170	Ø 1.25	-	Ø 1.85	Ø 4.00	2.50	8.20	55.00
AD.90.130.170	Ø 1.30	-	Ø 1.90	Ø 4.00	2.60	8.30	55.00
AD.90.135.170	Ø 1.35	-	Ø 1.95	Ø 4.00	2.70	8.40	55.00
AD.90.140.170	Ø 1.40	-	Ø 2.00	Ø 4.00	2.80	8.50	55.00
AD.90.145.170	Ø 1.45	-	Ø 2.05	Ø 4.00	2.90	8.60	55.00
AD.90.150.170	Ø 1.50	-	Ø 2.10	Ø 4.00	3.00	9.60	55.00
AD.90.155.170	Ø 1.55	-	Ø 2.15	Ø 4.00	3.10	9.70	55.00
AD.90.1587.170	Ø1.587	1/16"	Ø 2.20	Ø 4.00	3.17	9.80	55.00
AD.90.160.170	Ø 1.60	-	Ø 2.20	Ø 4.00	3.20	9.80	55.00
AD.90.165.170	Ø 1.65	-	Ø 2.25	Ø 4.00	3.30	9.90	55.00
AD.90.170.170	Ø 1.70	-	Ø 2.30	Ø 4.00	3.40	10.10	55.00
AD.90.175.170	Ø 1.75	-	Ø 2.35	Ø 4.00	3.50	10.20	55.00
AD.90.180.170	Ø 1.80	-	Ø 2.40	Ø 4.00	3.60	11.10	55.00
AD.90.185.170	Ø 1.85	-	Ø 2.45	Ø 4.00	3.70	11.30	55.00
AD.90.190.170	Ø 1.90	-	Ø 2.50	Ø 4.00	3.80	11.40	55.00
AD.90.195.170	Ø 1.95	-	Ø 2.55	Ø 4.00	3.90	11.50	55.00
AD.90.200.170	Ø 2.00	-	Ø 2.60	Ø 4.00	4.00	11.60	60.00
AD.90.203.170	Ø 2.03	-	Ø 2.85	Ø 4.00	4.06	11.70	60.00
AD.90.205.170	Ø 2.05	-	Ø 2.85	Ø 4.00	4.10	11.70	60.00
AD.90.210.170	Ø 2.10	-	Ø 2.90	Ø 4.00	4.20	11.80	60.00
AD.90.215.170	Ø 2.15	-	Ø 2.95	Ø 4.00	4.30	11.90	60.00
AD.90.220.170	Ø 2.20	-	Ø 3.00	Ø 4.00	4.40	13.80	60.00
AD.90.225.170	Ø 2.25	-	Ø 3.05	Ø 4.00	4.50	13.90	60.00
AD.90.230.170	Ø 2.30	-	Ø 3.10	Ø 4.00	4.60	14.00	60.00
AD.90.233.170	Ø 2.33	-	Ø 3.15	Ø 4.00	4.66	14.10	60.00
AD.90.235.170	Ø 2.35	-	Ø 3.15	Ø 4.00	4.70	14.10	60.00
AD.90.2381.170	Ø2.381	3/32"	Ø 3.20	Ø 4.00	4.76	14.20	60.00
AD.90.240.170	Ø 2.40	-	Ø 3.20	Ø 4.00	4.80	14.20	60.00
AD.90.245.170	Ø 2.45	-	Ø 3.25	Ø 4.00	4.90	14.40	60.00
AD.90.250.170	Ø 2.50	-	Ø 3.30	Ø 4.00	5.00	14.50	60.00

Article number	D1 k6 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	GL (mm)
AD.90.255.170	Ø 2.55	-	Ø 3.35	Ø 4.00	5.10	14.60	60.00
AD.90.260.170	Ø 2.60	-	Ø 3.40	Ø 4.00	5.20	14.70	60.00
AD.90.265.170	Ø 2.65	-	Ø 3.45	Ø 4.00	5.30	15.70	60.00
AD.90.270.170	Ø 2.70	-	Ø 3.50	Ø 4.00	5.40	15.80	60.00
AD.90.275.170	Ø 2.75	-	Ø 3.55	Ø 4.00	5.50	15.90	60.00
AD.90.280.170	Ø 2.80	-	Ø 3.60	Ø 4.00	5.60	16.00	60.00
AD.90.285.170	Ø 2.85	-	Ø 3.65	Ø 4.00	5.70	16.10	60.00
AD.90.290.170	Ø 2.90	-	Ø 3.70	Ø 4.00	5.80	16.20	60.00
AD.90.295.170	Ø 2.95	-	Ø 3.75	Ø 4.00	5.90	16.40	60.00
AD.90.300.170	Ø 3.00	-	Ø 3.80	Ø 4.00	6.00	17.20	65.00
AD.90.310.170	Ø 3.10	-	Ø 3.90	Ø 4.00	6.20	17.40	65.00
AD.90.310.170	Ø 3.15	-	Ø 4.00	Ø 4.00	6.30	17.70	65.00
AD.90.3175.170	Ø 3.175	1/8"	Ø 4.00	Ø 4.00	6.35	17.70	65.00
AD.90.320.170	Ø 3.20	-	Ø 4.00	Ø 4.00	6.40	17.70	65.00
AD.90.325.170	Ø 3.25	-	Ø 4.10	Ø 6.00	6.50	17.90	65.00
AD.90.330.170	Ø 3.30	-	Ø 4.10	Ø 6.00	6.60	17.90	65.00
AD.90.340.170	Ø 3.40	-	Ø 4.20	Ø 6.00	6.80	18.10	65.00
AD.90.350.170	Ø 3.50	-	Ø 4.30	Ø 6.00	7.00	18.30	65.00
AD.90.360.170	Ø 3.60	-	Ø 4.40	Ø 6.00	7.20	18.60	65.00
AD.90.365.170	Ø 3.65	-	Ø 4.50	Ø 6.00	7.30	18.80	65.00
AD.90.370.170	Ø 3.70	-	Ø 4.50	Ø 6.00	7.40	18.80	65.00
AD.90.380.170	Ø 3.80	-	Ø 4.60	Ø 6.00	7.60	19.00	65.00
AD.90.390.170	Ø 3.90	-	Ø 4.70	Ø 6.00	7.80	19.20	65.00
AD.90.3968.170	Ø 3.968	5/32"	Ø 4.80	Ø 6.00	7.94	19.50	65.00
AD.90.400.170	Ø 4.00	-	Ø 4.80	Ø 6.00	8.00	19.50	65.00
AD.90.410.170	Ø 4.10	-	Ø 5.10	Ø 6.00	8.20	21.30	65.00
AD.90.420.170	Ø 4.20	-	Ø 5.20	Ø 6.00	8.40	21.00	65.00
AD.90.430.170	Ø 4.30	-	Ø 5.30	Ø 6.00	8.60	21.60	65.00
AD.90.440.170	Ø 4.40	-	Ø 5.40	Ø 6.00	8.80	21.70	65.00
AD.90.450.170	Ø 4.50	-	Ø 5.50	Ø 6.00	9.00	27.00	70.00
AD.90.460.170	Ø 4.60	-	Ø 5.60	Ø 6.00	9.20	27.10	70.00
AD.90.465.170	Ø 4.65	-	Ø 5.70	Ø 6.00	9.40	27.30	70.00
AD.90.470.170	Ø 4.70	-	Ø 5.70	Ø 6.00	9.40	27.30	70.00
AD.90.4762.170	Ø 4.762	3/16"	Ø 5.80	Ø 6.00	9.52	27.40	70.00
AD.90.480.170	Ø 4.80	-	Ø 5.80	Ø 6.00	9.60	27.40	70.00
AD.90.490.170	Ø 4.90	-	Ø 5.90	Ø 6.00	9.80	27.60	70.00
AD.90.500.170	Ø 5.00	-	Ø 6.00	Ø 6.00	10.00	27.70	70.00
AD.90.510.170	Ø 5.10	-	Ø 6.10	Ø 8.00	10.20	27.90	70.00
AD.90.520.170	Ø 5.20	-	Ø 6.20	Ø 8.00	10.40	28.00	70.00
AD.90.530.170	Ø 5.30	-	Ø 6.30	Ø 8.00	10.60	28.10	70.00
AD.90.540.170	Ø 5.40	-	Ø 6.40	Ø 8.00	10.80	28.30	70.00
AD.90.550.170	Ø 5.50	-	Ø 6.50	Ø 8.00	11.00	28.40	70.00
AD.90.5556.170	Ø 5.556	7/32"	Ø 6.60	Ø 8.00	11.12	28.60	70.00
AD.90.560.170	Ø 5.60	-	Ø 6.60	Ø 8.00	11.20	28.60	70.00
AD.90.570.170	Ø 5.70	-	Ø 6.70	Ø 8.00	11.40	28.70	70.00
AD.90.580.170	Ø 5.80	-	Ø 6.80	Ø 8.00	11.60	28.90	70.00
AD.90.590.170	Ø 5.90	-	Ø 6.90	Ø 8.00	11.80	29.00	70.00
AD.90.600.170	Ø 6.00	-	Ø 7.00	Ø 8.00	12.00	29.10	70.00
AD.90.6350.170	Ø 6.350	1/4"	Ø 7.40	Ø 8.00	12.70	30.00	70.00

Article number	D1 k6 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	GL (mm)
AD.90.660.170	Ø 6.60	-	Ø 8.00	Ø 8.00	13.20	-	70.00
AD.90.670.170	Ø 6.70	-	Ø 8.00	Ø 8.00	13.40	-	70.00
AD.90.680.170	Ø 6.80	-	Ø 8.00	Ø 8.00	13.60	-	70.00
AD.90.690.170	Ø 6.90	-	Ø 8.00	Ø 8.00	13.80	-	70.00
AD.90.700.170	Ø 7.00	-	Ø 8.00	Ø 8.00	14.00	-	70.00
AD.90.720.170	Ø 7.20	-	Ø 8.00	Ø 8.00	14.00	-	70.00

Available from stock

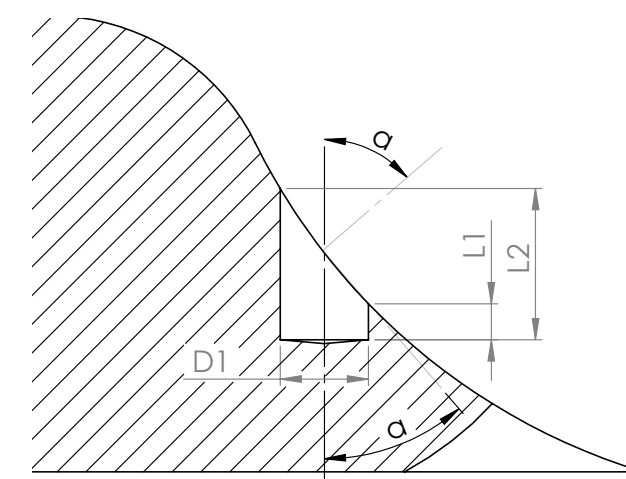
Positional accurate piloting / drilling despite "burrs" or uneven surfaces



This ensures that the drilling no longer deviates.



Piloting/pre-drilling on the incline
without having to "spot face" with a mill



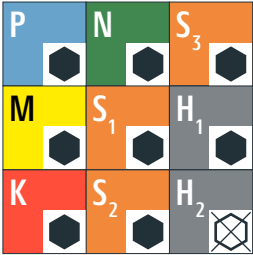
Calculation of the "short web width":

Formula: $L1 = 2 \times D - D \times \tan(\alpha)$

Calculation example:

Incline of 45°; drill Ø 1.85

$L1 = 2 \times 1.85 \text{ mm} - 1.85 \text{ mm} \times \tan(45^\circ) = 1.85 \text{ mm}$

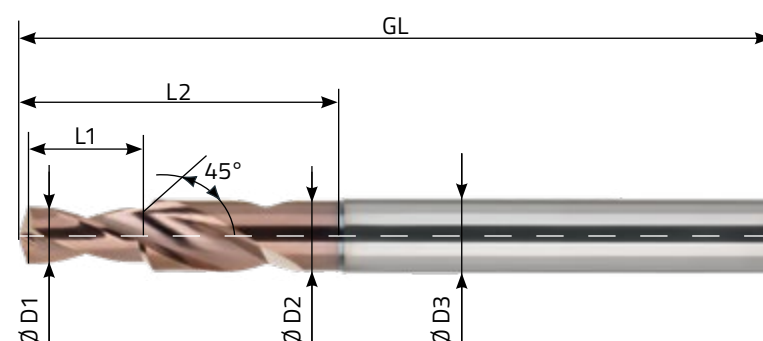
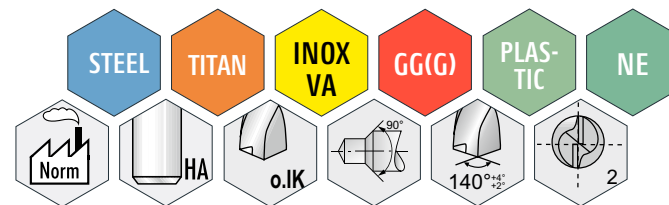


Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm ²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
H	Hardened steels ≥ 55 HRC		CrCoMo28	ASTM F1537
		1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

Ø 0.3 - 0.4 mm		Ø 0.4 - 0.8 mm		Ø 0.8 - 1.2 mm		Ø 1.2 - 1.8 mm		Ø 1.8 - 2.5 mm		Ø 2.5 - 3.0 mm		Ø 3.0 - 7.2 mm	
vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]
80	0.004 - 0.006	80	0.008 - 0.012	80	0.013 - 0.015	80	0.022 - 0.028	80	0.030 - 0.032	100	0.028 - 0.032	100	0.040 - 0.08
60	0.003 - 0.005	60	0.008 - 0.012	60	0.012 - 0.014	60	0.020 - 0.022	70	0.028 - 0.030	70	0.028 - 0.042	70	0.03 - 0.040
50	0.003 - 0.005	50	0.007 - 0.010	50	0.013 - 0.015	50	0.013 - 0.015	60	0.010 - 0.020	60	0.014 - 0.018	60	0.035 - 0.045
50	0.003 - 0.005	50	0.004 - 0.006	50	0.010 - 0.012	50	0.010 - 0.012	50	0.010 - 0.020	50	0.012 - 0.014	50	0.035 - 0.045
80	0.004 - 0.008	80	0.007 - 0.01	80	0.01 - 0.015	80	0.01 - 0.015	80	0.026 - 0.030	80	0.03 - 0.045	80	0.045 - 0.06
120	0.008 - 0.01	120	0.010 - 0.018	120	0.015 - 0.02	120	0.016 - 0.022	140	0.032 - 0.04	140	0.036 - 0.042	140	0.036 - 0.05
80	0.008 - 0.01	80	0.012 - 0.018	80	0.018 - 0.020	80	0.018 - 0.022	80	0.032 - 0.04	80	0.034 - 0.044	80	0.036 - 0.05
80	0.008 - 0.01	80	0.010 - 0.016	80	0.016 - 0.02	80	0.016 - 0.022	80	0.032 - 0.04	80	0.032 - 0.042	80	0.036 - 0.05
40	0.002 - 0.003	40	0.006 - 0.008	40	0.007 - 0.01	40	0.009 - 0.010	40	0.010 - 0.012	40	0.012 - 0.016	40	0.014 - 0.018
40	0.003 - 0.005	40	0.006 - 0.008	40	0.007 - 0.01	40	0.018 - 0.020	40	0.010 - 0.012	40	0.012 - 0.018	40	0.014 - 0.018
20	0.002 - 0.003	20	0.002 - 0.004	20	0.007 - 0.01	20	0.009 - 0.010	20	0.010 - 0.012	25	0.012 - 0.018	25	0.014 - 0.018
20	0.003 - 0.005	20	0.002 - 0.004	20	0.003 - 0.004	20	0.003 - 0.005	20	0.003 - 0.007	20	0.009 - 0.014	20	0.004 - 0.018
no data available													

INOX-Pilot



■ α-INOX coated



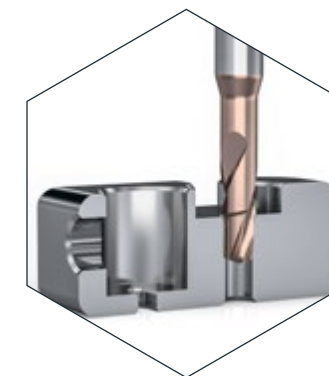
5 PRO's of the ACTIONDRILL:

- Combination tool: centering + drilling + chamfering
- Perfect positional accuracy
- 2xD drilling + chamfering
- Pilot drill (tolerance Øk6) for deep-hole drilling
- Shorter process times and high process reliability

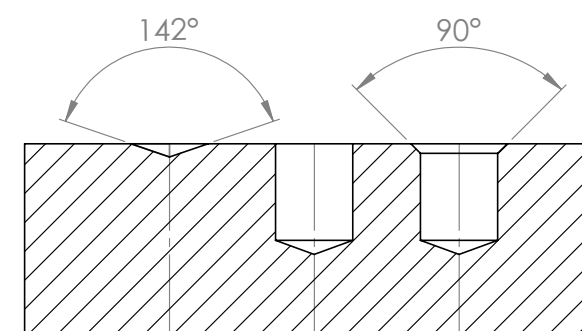
Article number	D1 k6 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	GL (mm)
AD.90.075.140	Ø 0.75	-	Ø 1.60	Ø 3.00	1.50	6.70	50.00
AD.90.080.140	Ø 0.80	-	Ø 1.60	Ø 3.00	1.60	6.70	50.00
AD.90.085.140	Ø 0.85	-	Ø 1.60	Ø 3.00	1.70	6.70	50.00
AD.90.090.140	Ø 0.90	-	Ø 1.60	Ø 3.00	1.80	6.70	50.00
AD.90.095.140	Ø 0.95	-	Ø 1.60	Ø 3.00	1.90	6.70	50.00
AD.90.100.140	Ø 1.00	-	Ø 1.60	Ø 4.00	2.00	6.70	55.00
AD.90.105.140	Ø 1.05	-	Ø 1.65	Ø 4.00	2.10	6.80	55.00
AD.90.110.140	Ø 1.10	-	Ø 1.70	Ø 4.00	2.20	7.00	55.00
AD.90.115.140	Ø 1.15	-	Ø 1.75	Ø 4.00	2.30	7.10	55.00
AD.90.120.140	Ø 1.20	-	Ø 1.80	Ø 4.00	2.40	7.20	55.00
AD.90.125.140	Ø 1.25	-	Ø 1.85	Ø 4.00	2.50	8.20	55.00
AD.90.130.140	Ø 1.30	-	Ø 1.90	Ø 4.00	2.60	8.30	55.00
AD.90.135.140	Ø 1.35	-	Ø 1.95	Ø 4.00	2.70	8.40	55.00
AD.90.140.140	Ø 1.40	-	Ø 2.00	Ø 4.00	2.80	8.50	55.00
AD.90.145.140	Ø 1.45	-	Ø 2.05	Ø 4.00	2.90	8.60	55.00
AD.90.150.140	Ø 1.50	-	Ø 2.10	Ø 4.00	3.00	9.60	55.00
AD.90.155.140	Ø 1.55	-	Ø 2.15	Ø 4.00	3.10	9.70	55.00
AD.90.1587.140	Ø 1.587	1/16"	Ø 2.20	Ø 4.00	3.17	9.80	55.00
AD.90.160.140	Ø 1.60	-	Ø 2.20	Ø 4.00	3.20	9.80	55.00
AD.90.165.140	Ø 1.65	-	Ø 2.25	Ø 4.00	3.30	9.90	55.00
AD.90.170.140	Ø 1.70	-	Ø 2.30	Ø 4.00	3.40	10.10	55.00
AD.90.175.140	Ø 1.75	-	Ø 2.35	Ø 4.00	3.50	10.20	55.00
AD.90.180.140	Ø 1.80	-	Ø 2.40	Ø 4.00	3.60	11.10	55.00
AD.90.185.140	Ø 1.85	-	Ø 2.45	Ø 4.00	3.70	11.30	55.00
AD.90.190.140	Ø 1.90	-	Ø 2.50	Ø 4.00	3.80	11.40	55.00
AD.90.195.140	Ø 1.95	-	Ø 2.55	Ø 4.00	3.90	11.50	55.00
AD.90.200.140	Ø 2.00	-	Ø 2.60	Ø 4.00	4.00	11.60	60.00
AD.90.203.140	Ø 2.03	-	Ø 2.85	Ø 4.00	4.06	11.70	60.00
AD.90.205.140	Ø 2.05	-	Ø 2.85	Ø 4.00	4.10	11.70	60.00
AD.90.210.140	Ø 2.10	-	Ø 2.90	Ø 4.00	4.20	11.80	60.00
AD.90.215.140	Ø 2.15	-	Ø 2.95	Ø 4.00	4.30	11.90	60.00
AD.90.220.140	Ø 2.20	-	Ø 3.00	Ø 4.00	4.40	13.80	60.00
AD.90.225.140	Ø 2.25	-	Ø 3.05	Ø 4.00	4.50	13.90	60.00
AD.90.230.140	Ø 2.30	-	Ø 3.10	Ø 4.00	4.60	14.00	60.00
AD.90.233.140	Ø 2.33	-	Ø 3.15	Ø 4.00	4.66	14.10	60.00
AD.90.235.140	Ø 2.35	-	Ø 3.15	Ø 4.00	4.70	14.10	60.00
AD.90.2381.140	Ø 2.381	3/32"	Ø 3.20	Ø 4.00	4.76	14.20	60.00
AD.90.240.140	Ø 2.40	-	Ø 3.20	Ø 4.00	4.80	14.20	60.00
AD.90.245.140	Ø 2.45	-	Ø 3.25	Ø 4.00	4.90	14.40	60.00
AD.90.250.140	Ø 2.50	-	Ø 3.30	Ø 4.00	5.00	14.50	60.00
AD.90.255.140	Ø 2.55	-	Ø 3.35	Ø 4.00	5.10	14.60	60.00
AD.90.260.140	Ø 2.60	-	Ø 3.40	Ø 4.00	5.20	14.70	60.00
AD.90.265.140	Ø 2.65	-	Ø 3.45	Ø 4.00	5.30	15.70	60.00
AD.90.270.140	Ø 2.70	-	Ø 3.50	Ø 4.00	5.40	15.80	60.00
AD.90.275.140	Ø 2.75	-	Ø 3.55	Ø 4.00	5.50	15.90	60.00
AD.90.280.140	Ø 2.80	-	Ø 3.60	Ø 4.00	5.60	16.00	60.00
AD.90.285.140	Ø 2.85	-	Ø 3.65	Ø 4.00	5.70	16.10	60.00
AD.90.290.140	Ø 2.90	-	Ø 3.70	Ø 4.00	5.80	16.20	60.00
AD.90.295.140	Ø 2.95	-	Ø 3.75	Ø 4.00	5.90	16.40	60.00
AD.90.300.140	Ø 3.00	-	Ø 3.80	Ø 4.00	6.00	17.20	65.00

Article number	D1 k6 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	GL (mm)
AD.90.310.140	Ø 3.10	-	Ø 3.90	Ø 4.00	6.20	17.40	65.00
AD.90.315.140	Ø 3.15	-	Ø 4.00	Ø 4.00	6.30	17.70	65.00
AD.90.3175.140	Ø 3.175	1/8"	Ø 4.00	Ø 4.00	6.35	17.70	65.00
AD.90.320.140	Ø 3.20	-	Ø 4.00	Ø 4.00	6.40	17.70	65.00
AD.90.325.140	Ø 3.25	-	Ø 4.10	Ø 4.00	6.50	17.90	65.00
AD.90.330.140	Ø 3.30	-	Ø 4.10	Ø 6.00	6.60	17.90	65.00
AD.90.340.140	Ø 3.40	-	Ø 4.20	Ø 6.00	6.80	18.10	65.00
AD.90.350.140	Ø 3.50	-	Ø 4.30	Ø 6.00	7.00	18.30	65.00
AD.90.360.140	Ø 3.60	-	Ø 4.40	Ø 6.00	7.20	18.60	65.00
AD.90.365.140	Ø 3.65	-	Ø 4.50	Ø 6.00	7.30	18.80	65.00
AD.90.370.140	Ø 3.70	-	Ø 4.50	Ø 6.00	7.40	18.80	65.00
AD.90.380.140	Ø 3.80	-	Ø 4.60	Ø 6.00	7.60	19.00	65.00
AD.90.390.140	Ø 3.90	-	Ø 4.70	Ø 6.00	7.80	19.20	65.00
AD.90.3968.140	Ø 3.968	5/32"	Ø 4.80	Ø 6.00	7.94	19.50	65.00
AD.90.400.140	Ø 4.00	-	Ø 4.80	Ø 6.00	8.00	19.50	65.00
AD.90.410.140	Ø 4.10	-	Ø 5.10	Ø 6.00	8.20	21.30	65.00
AD.90.420.140	Ø 4.20	-	Ø 5.20	Ø 6.00	8.40	21.00	65.00
AD.90.430.140	Ø 4.30	-	Ø 5.30	Ø 6.00	8.60	21.60	65.00
AD.90.440.140	Ø 4.40	-	Ø 5.40	Ø 6.00	8.80	21.70	65.00
AD.90.450.140	Ø 4.50	-	Ø 5.50	Ø 6.00	9.00	27.00	70.00
AD.90.460.140	Ø 4.60	-	Ø 5.60	Ø 6.00	9.20	27.10	70.00
AD.90.465.140	Ø 4.65	-	Ø 5.70	Ø 6.00	9.40	27.30	70.00
AD.90.470.140	Ø 4.70	-	Ø 5.70	Ø 6.00	9.40	27.30	70.00
AD.90.4762.140	Ø 4.762	3/16"	Ø 5.80	Ø 6.00	9.52	27.40	70.00
AD.90.480.140	Ø 4.80	-	Ø 5.80	Ø 6.00	9.60	27.40	70.00
AD.90.490.140	Ø 4.90	-	Ø 5.90	Ø 6.00	9.80	27.60	70.00
AD.90.500.140	Ø 5.00	-	Ø 6.00	Ø 6.00	10.00	27.70	70.00
AD.90.510.140	Ø 5.10	-	Ø 6.10	Ø 8.00	10.20	27.90	70.00
AD.90.520.140	Ø 5.20	-	Ø 6.20	Ø 8.00	10.40	28.00	70.00
AD.90.530.140	Ø 5.30	-	Ø 6.30	Ø 8.00	10.60	28.10	70.00
AD.90.540.140	Ø 5.40	-	Ø 6.40	Ø 8.00	10.80	28.30	70.00
AD.90.550.140	Ø 5.50	-	Ø 6.50	Ø 8.00	11.00	28.40	70.00
AD.90.5556.140	Ø 5.556	7/32"	Ø 6.60	Ø 8.00	11.12	28.60	70.00
AD.90.560.140	Ø 5.60	-	Ø 6.60	Ø 8.00	11.20	28.60	70.00
AD.90.570.140	Ø 5.70	-	Ø 6.70	Ø 8.00	11.40	28.70	70.00
AD.90.580.140	Ø 5.80	-	Ø 6.80	Ø 8.00	11.60	28.90	70.00
AD.90.590.140	Ø 5.90	-	Ø 6.90	Ø 8.00	11.80	29.00	70.00
AD.90.600.140	Ø 6.00	-	Ø 7.00	Ø 8.00	12.00	29.10	70.00
AD.90.620.140	Ø 6.20	-	Ø 7.40	Ø 8.00	12.70	30.00	70.00
AD.90.6350.140	Ø 6.350	1/4"	Ø 7.40	Ø 8.00	12.70	30.00	70.00
AD.90.660.140	Ø 6.60	-	Ø 7.80	Ø 8.00	13.20	30.00	70.00
AD.90.670.140	Ø 6.70	-	Ø 8.00	Ø 8.00	13.40	30.00	70.00
AD.90.680.140	Ø 6.80	-	Ø 8.00	Ø 8.00	13.60	30.00	70.00
AD.90.690.140	Ø 6.90	-	Ø 8.00	Ø 8.00	13.80	30.00	70.00
AD.90.700.140	Ø 7.00	-	Ø 8.00	Ø 8.00	14.00	30.00	70.00
AD.90.720.140	Ø 7.20	-	Ø 8.00	Ø 8.00	14.40	30.00	70.00

Available from stock



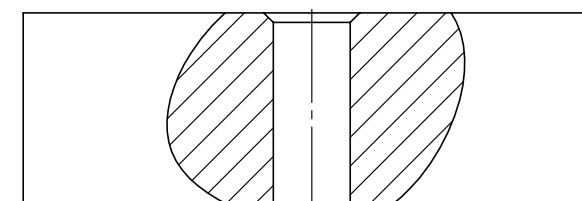
Conventional machining with 3 tools



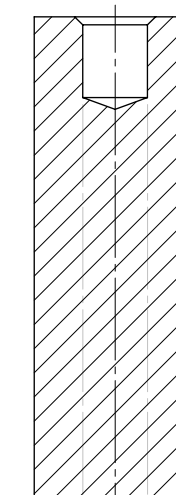
- 1. Centering
- 2. Drilling
- 3. Chamfering

Now with just one tool

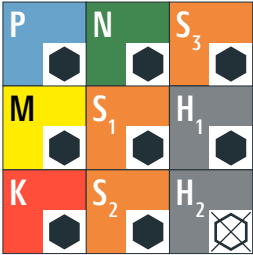
Centering, drilling + chamfering!



- Short drilling 2xD + chamfer



- Pilot drilling (k6)
- 2xD + chamfer
- For deep-hole drilling

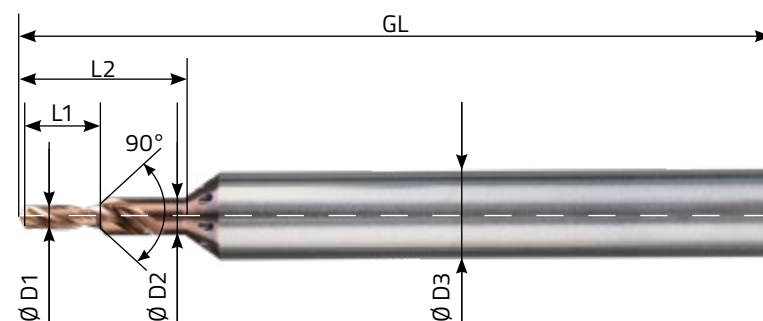
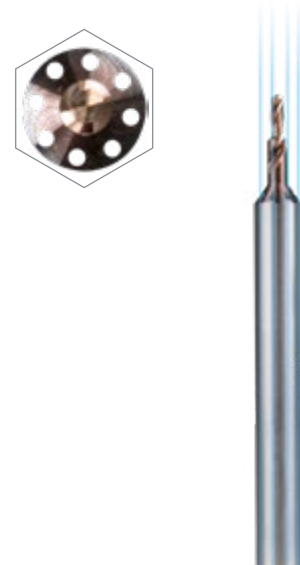
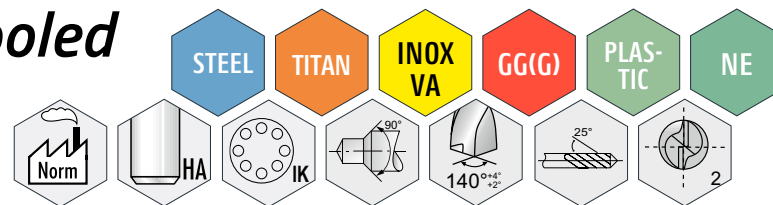


Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm ²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
H	Hardened steels ≥ 55 HRC		CrCoMo28	ASTM F1537
		1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

Ø 1.0 - 1.2 mm		Ø 1.2 - 1.8 mm		Ø 1.8 - 2.5 mm		Ø 2.5 - 3.0 mm		Ø 3.0 - 7.2 mm	
vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]
60-130	0.042 - 0.066	60-130	0.122 - 0.128	60-130	0.130 - 0.182	60-140	0.128 - 0.232	60-160	0.220 - 0.280
60-120	0.042 - 0.056	60-120	0.120 - 0.122	60-130	0.130 - 0.182	60-120	0.128 - 0.202	60-150	0.200 - 0.260
50-120	0.025 - 0.04	50-120	0.043 - 0.055	50-120	0.060 - 0.080	50-100	0.074 - 0.098	50-120	0.115 - 0.185
50-80	0.02 - 0.038	50-80	0.040 - 0.068	50-90	0.050 - 0.070	50-90	0.072 - 0.084	50-100	0.115 - 0.175
80-140	0.030 - 0.042	80-140	0.06 - 0.115	80-160	0.126 - 0.135	80-160	0.100 - 0.145	80-180	0.145 - 0.210
80-160	0.042 - 0.066	80-160	0.096 - 0.122	80-160	0.132 - 0.18	80-160	0.136 - 0.172	80-180	0.200 - 0.250
80-140	0.046 - 0.088	80-140	0.098 - 0.122	80-160	0.132 - 0.210	80-160	0.134 - 0.164	80-180	0.200 - 0.252
80-120	0.032 - 0.088	80-120	0.066 - 0.122	80-140	0.085 - 0.120	80-120	0.132 - 0.162	80-160	0.195 - 0.242
15 - 50	0.025 - 0.045	15 - 50	0.049 - 0.060	15 - 60	0.060 - 0.072	15 - 70	0.062 - 0.076	15 - 80	0.080 - 0.098
15 - 50	0.025 - 0.045	15 - 50	0.048 - 0.060	15 - 60	0.060 - 0.072	15 - 70	0.062 - 0.078	15 - 80	0.080 - 0.098
15 - 50	0.020 - 0.024	15 - 50	0.05 - 0.060	15 - 50	0.055 - 0.072	15 - 60	0.052 - 0.08	15 - 75	0.076 - 0.098
15-32	0.006 - 0.009	15-32	0.006 - 0.010	15-32	0.006 - 0.012	15-35	0.009 - 0.014	15-40	0.009 - 0.018
no data available									

INOX-3xD-Pilot cooled



■ α-INOX coated



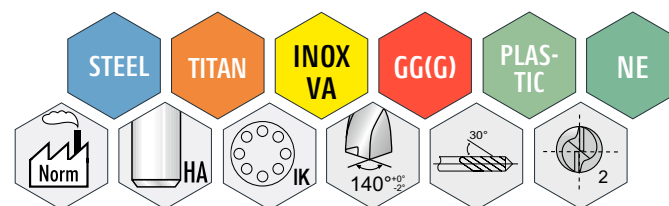
5 PRO's of the ACTIONDRILL:

- Combination tool: centering + drilling + chamfering
- High performance & positioning accuracy
- Cooled "micro" step drill
- 3xD pilot drill for your deep-hole application
- Winding chips are efficiently flushed away

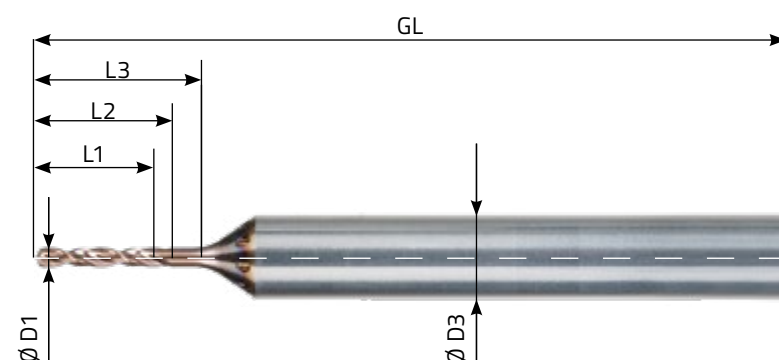
Article number	D1 k6 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	GL (mm)
AD.90.030.140.IK	Ø 0.30	-	Ø 0.70	Ø 4.00	0.90	3.30	40.00
AD.90.035.140.IK	Ø 0.35	-	Ø 0.75	Ø 4.00	1.05	3.40	40.00
AD.90.040.140.IK	Ø 0.40	-	Ø 0.80	Ø 4.00	1.20	3.60	40.00
AD.90.045.140.IK	Ø 0.45	-	Ø 0.85	Ø 4.00	1.35	3.80	40.00
AD.90.050.140.IK	Ø 0.50	-	Ø 0.90	Ø 4.00	1.50	4.00	40.00
AD.90.055.140.IK	Ø 0.55	-	Ø 0.95	Ø 4.00	1.65	4.20	40.00
AD.90.060.140.IK	Ø 0.60	-	Ø 1.00	Ø 4.00	1.80	4.40	40.00
AD.90.065.140.IK	Ø 0.65	-	Ø 1.05	Ø 4.00	1.95	4.70	40.00
AD.90.070.140.IK	Ø 0.70	-	Ø 1.10	Ø 4.00	2.10	5.00	40.00
AD.90.075.140.IK	Ø 0.75	-	Ø 1.15	Ø 4.00	2.25	5.30	40.00
AD.90.080.140.IK	Ø 0.80	-	Ø 1.20	Ø 4.00	2.40	5.60	40.00
AD.90.085.140.IK	Ø 0.85	-	Ø 1.25	Ø 4.00	2.55	6.00	40.00
AD.90.090.140.IK	Ø 0.90	-	Ø 1.30	Ø 4.00	2.70	6.30	40.00
AD.90.095.140.IK	Ø 0.95	-	Ø 1.35	Ø 4.00	2.85	6.70	40.00
AD.90.100.140.IK	Ø 1.00	-	Ø 1.60	Ø 4.00	3.00	7.10	50.00
AD.90.105.140.IK	Ø 1.05	-	Ø 1.65	Ø 4.00	3.15	7.40	50.00
AD.90.110.140.IK	Ø 1.10	-	Ø 1.70	Ø 4.00	3.30	7.60	50.00
AD.90.115.140.IK	Ø 1.15	-	Ø 1.75	Ø 4.00	3.45	8.00	50.00
AD.90.120.140.IK	Ø 1.20	-	Ø 1.80	Ø 4.00	3.60	8.40	50.00
AD.90.125.140.IK	Ø 1.25	-	Ø 1.85	Ø 4.00	3.75	8.80	50.00
AD.90.130.140.IK	Ø 1.30	-	Ø 1.90	Ø 4.00	3.90	9.10	50.00
AD.90.135.140.IK	Ø 1.35	-	Ø 1.95	Ø 4.00	4.05	9.30	50.00
AD.90.140.140.IK	Ø 1.40	-	Ø 2.00	Ø 4.00	4.20	9.40	50.00
AD.90.145.140.IK	Ø 1.45	-	Ø 2.05	Ø 4.00	4.35	9.60	50.00
AD.90.150.140.IK	Ø 1.50	-	Ø 2.10	Ø 4.00	4.50	9.70	50.00
AD.90.155.140.IK	Ø 1.55	-	Ø 2.15	Ø 4.00	4.65	10.00	50.00
AD.90.1587.140.IK	Ø 1.587	1/16"	Ø 2.20	Ø 4.00	4.76	10.20	50.00
AD.90.160.140.IK	Ø 1.60	-	Ø 2.20	Ø 4.00	4.80	10.20	50.00
AD.90.165.140.IK	Ø 1.65	-	Ø 2.25	Ø 4.00	4.95	10.50	50.00
AD.90.170.140.IK	Ø 1.70	-	Ø 2.30	Ø 4.00	5.10	10.80	50.00
AD.90.175.140.IK	Ø 1.75	-	Ø 2.35	Ø 4.00	5.25	11.10	50.00
AD.90.180.140.IK	Ø 1.80	-	Ø 2.40	Ø 4.00	5.40	11.40	50.00
AD.90.185.140.IK	Ø 1.85	-	Ø 2.45	Ø 4.00	5.55	11.70	50.00
AD.90.190.140.IK	Ø 1.90	-	Ø 2.50	Ø 4.00	5.70	12.00	50.00
AD.90.195.140.IK	Ø 1.95	-	Ø 2.55	Ø 4.00	5.85	12.30	50.00
AD.90.200.140.IK	Ø 2.00	-	Ø 2.60	Ø 4.00	6.00	12.60	50.00
AD.90.203.140.IK	Ø 2.03	-	Ø 3.30	Ø 6.00	6.09	12.60	50.00
AD.90.205.140.IK	Ø 2.05	-	Ø 3.30	Ø 6.00	4.10	12.60	50.00
AD.90.210.140.IK	Ø 2.10	-	Ø 3.30	Ø 6.00	4.20	12.60	50.00
AD.90.215.140.IK	Ø 2.15	-	Ø 3.30	Ø 6.00	4.30	12.60	50.00
AD.90.225.140.IK	Ø 2.25	-	Ø 3.50	Ø 6.00	4.50	12.60	50.00
AD.90.230.140.IK	Ø 2.30	-	Ø 3.50	Ø 6.00	4.60	12.60	50.00
AD.90.233.140.IK	Ø 2.33	-	Ø 3.50	Ø 6.00	4.66	12.60	50.00
AD.90.235.140.IK	Ø 2.35	-	Ø 3.50	Ø 6.00	4.70	12.60	50.00
AD.90.2381.140.IK	Ø 2.381	3/32"	Ø 3.20	Ø 4.00	7.14	15.00	60.00
AD.90.240.140.IK	Ø 2.40	-	Ø 3.60	Ø 6.00	4.80	12.60	50.00
AD.90.250.140.IK	Ø 2.50	-	Ø 3.70	Ø 6.00	5.00	12.60	50.00
AD.90.255.140.IK	Ø 2.55	-	Ø 3.80	Ø 6.00	5.10	12.60	50.00
AD.90.260.140.IK	Ø 2.60	-	Ø 3.80	Ø 6.00	5.20	12.60	50.00
AD.90.265.140.IK	Ø 2.65	-	Ø 3.90	Ø 6.00	5.30	12.60	50.00
AD.90.270.140.IK	Ø 2.70	-	Ø 4.00	Ø 6.00	5.40	12.60	50.00
AD.90.275.140.IK	Ø 2.75	-	Ø 4.00	Ø 6.00	5.50	12.60	50.00
AD.90.280.140.IK	Ø 2.80	-	Ø 4.00	Ø 6.00	5.60	12.60	50.00
AD.90.285.140.IK	Ø 2.85	-	Ø 4.10	Ø 6.00	5.70	12.60	50.00
AD.90.290.140.IK	Ø 2.90	-	Ø 4.10	Ø 6.00	5.80	12.60	50.00

Available from stock

INOX-6xD cooled



ACTIONDRILL
AD.030.140.IK.6D
D1: Ø 0.3 mm
Integrated cooling
6xD drilling depth
140° Point angle



■ α-INOX coated

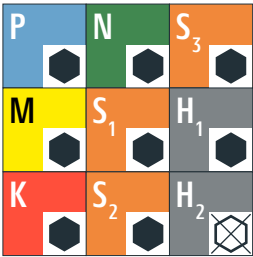


5 PRO's of the ACTIONDRILL:

- 6xD "micro" drill with integrated cooling from Ø 0.3
- Matched to our INOX-3xD Pilot cooled
- Perfect positional accuracy
- Shorter process times and high process reliability
- Long chips are flushed out through the integrated cooling channels without retracting

Article number	D1 k5 (mm)	D1 (inch)	D3 h5 (mm)	L1 (6xD1 / mm)	L2 (7xD1 / mm)	L3 (9xD1 / mm)	GL (mm)
AD.030.140.IK.6D	Ø 0.300	-	Ø 4.00	1.80	2.10	2.70	40.00
AD.035.140.IK.6D	Ø 0.350	-	Ø 4.00	2.10	2.45	3.15	40.00
AD.040.140.IK.6D	Ø 0.400	-	Ø 4.00	2.40	2.80	3.60	40.00
AD.045.140.IK.6D	Ø 0.450	-	Ø 4.00	2.70	3.15	4.05	40.00
AD.050.140.IK.6D	Ø 0.500	-	Ø 4.00	3.00	3.50	4.50	40.00
AD.055.140.IK.6D	Ø 0.550	-	Ø 4.00	3.30	3.85	4.95	40.00
AD.060.140.IK.6D	Ø 0.600	-	Ø 4.00	3.60	4.20	5.40	40.00
AD.065.140.IK.6D	Ø 0.650	-	Ø 4.00	3.90	4.55	5.85	40.00
AD.070.140.IK.6D	Ø 0.700	-	Ø 4.00	4.20	4.90	6.30	40.00
AD.075.140.IK.6D	Ø 0.750	-	Ø 4.00	4.50	5.25	6.75	40.00
AD.080.140.IK.6D	Ø 0.800	-	Ø 4.00	4.80	5.60	7.20	40.00
AD.085.140.IK.6D	Ø 0.850	-	Ø 4.00	5.10	5.95	7.65	40.00
AD.090.140.IK.6D	Ø 0.900	-	Ø 4.00	5.40	6.30	8.10	40.00
AD.095.140.IK.6D	Ø 0.950	-	Ø 4.00	5.70	6.65	8.55	40.00
AD.100.140.IK.6D	Ø 1.000	-	Ø 4.00	6.00	7.00	9.00	50.00
AD.105.140.IK.6D	Ø 1.050	-	Ø 4.00	6.30	7.35	9.45	50.00
AD.110.140.IK.6D	Ø 1.100	-	Ø 4.00	6.60	7.70	9.90	50.00
AD.115.140.IK.6D	Ø 1.150	-	Ø 4.00	6.90	8.05	10.35	50.00
AD.120.140.IK.6D	Ø 1.200	-	Ø 4.00	7.20	8.40	10.80	50.00
AD.125.140.IK.6D	Ø 1.250	-	Ø 4.00	7.50	8.75	11.25	50.00
AD.130.140.IK.6D	Ø 1.300	-	Ø 4.00	7.80	9.10	11.70	50.00
AD.135.140.IK.6D	Ø 1.350	-	Ø 4.00	8.10	9.45	12.15	50.00
AD.140.140.IK.6D	Ø 1.400	-	Ø 4.00	8.40	9.80	12.60	50.00
AD.145.140.IK.6D	Ø 1.450	-	Ø 4.00	8.70	10.15	13.05	50.00
AD.150.140.IK.6D	Ø 1.500	-	Ø 4.00	9.00	10.50	13.50	50.00
AD.155.140.IK.6D	Ø 1.550	-	Ø 4.00	9.30	10.85	13.95	50.00
AD.1587.140.IK.6D	Ø 1.587	1/16"	Ø 4.00	9.52	11.11	14.283	50.00
AD.160.140.IK.6D	Ø 1.600	-	Ø 4.00	9.60	11.20	14.40	50.00
AD.165.140.IK.6D	Ø 1.650	-	Ø 4.00	9.90	11.55	14.85	50.00
AD.170.140.IK.6D	Ø 1.700	-	Ø 4.00	10.20	11.90	15.30	50.00
AD.175.140.IK.6D	Ø 1.750	-	Ø 4.00	10.50	12.25	15.75	50.00
AD.180.140.IK.6D	Ø 1.800	-	Ø 4.00	10.80	12.60	16.20	50.00
AD.185.140.IK.6D	Ø 1.850	-	Ø 4.00	11.10	12.95	16.65	50.00
AD.190.140.IK.6D	Ø 1.900	-	Ø 4.00	11.40	13.30	17.10	50.00
AD.195.140.IK.6D	Ø 1.950	-	Ø 4.00	11.70	13.65	17.55	50.00
AD.200.140.IK.6D	Ø 2.000	-	Ø 4.00	12.00	14.00	18.00	50.00
AD.203.140.IK.6D	Ø 2.030	-	Ø 4.00	14.21	16.24	18.27	50.00
AD.205.140.IK.6D	Ø 2.050	-	Ø 4.00	14.35	16.40	18.45	50.00
AD.210.140.IK.6D	Ø 2.100	-	Ø 4.00	14.70	16.80	18.90	50.00
AD.215.140.IK.6D	Ø 2.150	-	Ø 4.00	15.05	17.20	19.35	50.00
AD.225.140.IK.6D	Ø 2.250	-	Ø 4.00	15.75	18.00	20.25	50.00
AD.230.140.IK.6D	Ø 2.30	-	Ø 4.00	16.10	18.40	20.70	50.00
AD.233.140.IK.6D	Ø 2.330	-	Ø 4.00	16.31	18.64	20.97	50.00
AD.235.140.IK.6D	Ø 2.350	-	Ø 4.00	16.45	18.80	21.15	50.00
AD.2381.140.IK.6D	Ø 2.381	3/32"	Ø 4.00	14.30	16.70	21.50	60.00
AD.240.140.IK.6D	Ø 2.400	-	Ø 4.00	16.80	19.20	21.60	50.00
AD.250.140.IK.6D	Ø 2.500	-	Ø 4.00	17.50	20.00	22.50	60.00
AD.255.140.IK.6D	Ø 2.550	-	Ø 4.00	17.85	20.40	22.95	60.00
AD.260.140.IK.6D	Ø 2.600	-	Ø 4.00	18.20	20.80	23.40	60.00
AD.265.140.IK.6D	Ø 2.650	-	Ø 4.00	18.55	21.20	23.85	60.00
AD.270.140.IK.6D	Ø 2.700	-	Ø 4.00	18.90	21.60	24.30	60.00
AD.275.140.IK.6D	Ø 2.750	-	Ø 4.00	19.25	22.00	24.75	60.00
AD.280.140.IK.6D	Ø 2.800	-	Ø 4.00	19.60	22.40	25.20	60.00
AD.285.140.IK.6D	Ø 2.850	-	Ø 4.00	19.95	22.80	25.65	60.00
AD.290.140.IK.6D	Ø 2.900	-	Ø 4.00	20.30	23.20	26.10	60.00

Available from stock

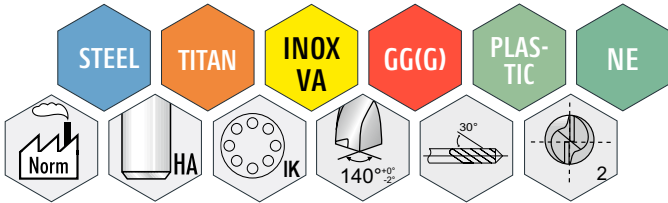


Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm ²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
H	Hardened steels ≥ 55 HRC		CrCoMo28	ASTM F1537
		1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

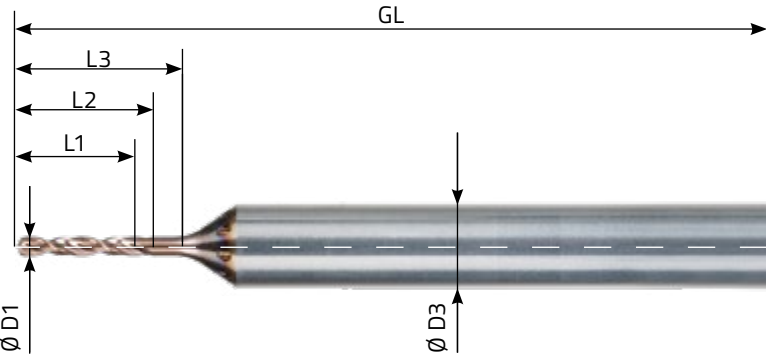
Recommended use Highly suitable Partially suitable Not recommended

Ø 0.3 - 0.4 mm		Ø 0.4 - 0.8 mm		Ø 0.8 - 1.2 mm		Ø 1.2 - 2.9 mm	
vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]
60-120	0.008 - 0.01	60-120	0.022- 0.046	60-130	0.042- 0.066	60-130	0.090 - 0.182
60-100	0.08 - 0.01	60-100	0.018- 0.026	60-120	0.042- 0.056	60-130	0.090 - 0.182
50-100	0.08 - 0.01	50-100	0.009 - 0.016	50-120	0.025 - 0.04	50-120	0.060 - 0.080
50-80	0.08 - 0.01	50-80	0.008 - 0.020	50-80	0.02 - 0.038	50-90	0.050 - 0.070
80-140	0.010 - 0.014	80-140	0.030 - 0.042	80-140	0.030 - 0.042	80-160	0.096 - 0.135
80-160	0.012 - 0.016	80-160	0.032 - 0.046	80-160	0.042 - 0.066	80-160	0.132 - 0.18
80-140	0.012 - 0.016	80-140	0.036 - 0.068	80-140	0.046 - 0.088	80-160	0.132 - 0.210
80-120	0.012 - 0.014	80-120	0.030 - 0.048	80-120	0.032 - 0.088	80-140	0.085 - 0.120
15 - 50	0.08 - 0.01	15 - 50	0.025 - 0.045	15 - 50	0.025 - 0.045	15 - 60	0.060 - 0.092
15 - 50	0.08 - 0.01	15 - 50	0.025 - 0.045	15 - 50	0.025 - 0.045	15 - 60	0.060 - 0.120
15 - 50	0.08 - 0.01	15 - 50	0.020 - 0.024	15 - 50	0.020 - 0.024	15 - 50	0.055 - 0.092
15-32	0.006 - 0.009	15-32	0.006 - 0.009	15-32	0.006 - 0.009	15-32	0.006 - 0.012
no data available							

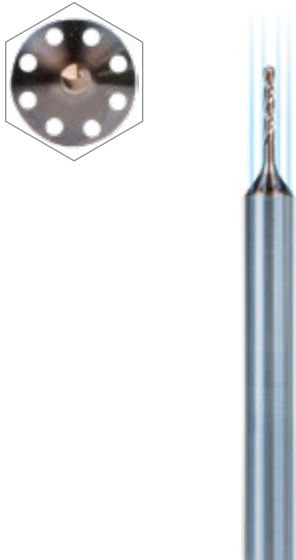
INOX-8xD cooled



ACTIONDRILL
AD.030.140.IK.8D
Integrated cooling
8xD drilling depth
D1: Ø 0.3 mm
140° Point angle



■ α-INOX coated



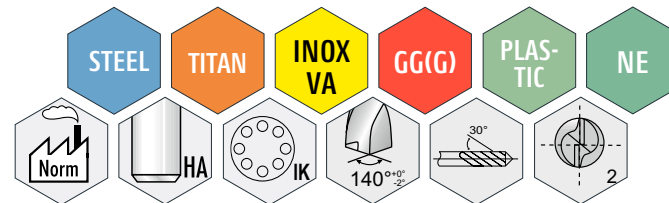
5 PRO's of the ACTIONDRILL:

- 8xD "micro" drill with integrated cooling from Ø 0.3
- Matched to our INOX-3xD Pilot cooled
- Perfect positional accuracy
- Shorter process times and high process reliability
- Long chips are flushed out through the integrated cooling channels without retracting

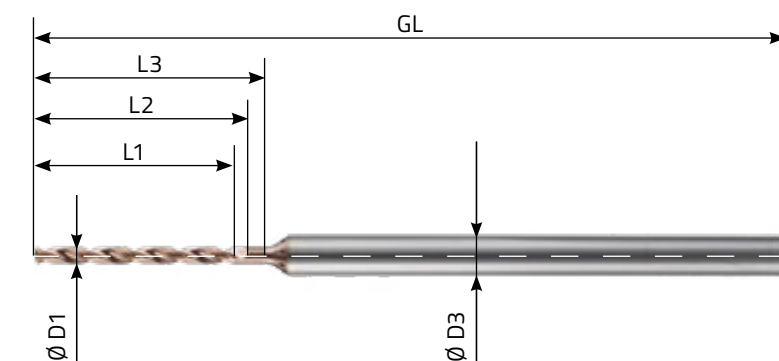
Article number	D1 k5 (mm)	D1 (inch)	D3 h5 (mm)	L1 (8xD1 / mm)	L2 (9xD1 / mm)	L3 (10xD1 / mm)	GL (mm)
AD.030.140.IK.8D	Ø 0.300	-	Ø 4.00	2.40	2.70	3.00	40.00
AD.035.140.IK.8D	Ø 0.350	-	Ø 4.00	2.80	3.15	3.50	40.00
AD.040.140.IK.8D	Ø 0.400	-	Ø 4.00	3.20	3.60	4.00	40.00
AD.045.140.IK.8D	Ø 0.450	-	Ø 4.00	3.60	4.05	4.50	40.00
AD.050.140.IK.8D	Ø 0.500	-	Ø 4.00	4.00	4.50	5.00	40.00
AD.055.140.IK.8D	Ø 0.550	-	Ø 4.00	4.40	4.95	5.50	40.00
AD.060.140.IK.8D	Ø 0.600	-	Ø 4.00	4.80	5.40	6.00	40.00
AD.065.140.IK.8D	Ø 0.650	-	Ø 4.00	5.20	5.85	6.50	40.00
AD.070.140.IK.8D	Ø 0.700	-	Ø 4.00	5.60	6.30	7.00	40.00
AD.075.140.IK.8D	Ø 0.750	-	Ø 4.00	6.00	6.75	7.50	40.00
AD.080.140.IK.8D	Ø 0.800	-	Ø 4.00	6.40	7.20	8.00	40.00
AD.085.140.IK.8D	Ø 0.850	-	Ø 4.00	6.80	7.65	8.50	40.00
AD.090.140.IK.8D	Ø 0.900	-	Ø 4.00	7.20	8.10	9.00	40.00
AD.095.140.IK.8D	Ø 0.950	-	Ø 4.00	7.60	8.55	9.50	40.00
AD.100.140.IK.8D	Ø 1.000	-	Ø 4.00	8.00	9.00	10.00	50.00
AD.105.140.IK.8D	Ø 1.050	-	Ø 4.00	8.40	9.45	10.50	50.00
AD.110.140.IK.8D	Ø 1.100	-	Ø 4.00	8.80	9.90	11.00	50.00
AD.115.140.IK.8D	Ø 1.150	-	Ø 4.00	9.20	10.35	11.50	50.00
AD.120.140.IK.8D	Ø 1.200	-	Ø 4.00	9.60	10.80	12.00	50.00
AD.125.140.IK.8D	Ø 1.250	-	Ø 4.00	10.00	11.25	12.50	50.00
AD.130.140.IK.8D	Ø 1.300	-	Ø 4.00	10.40	11.70	13.00	50.00
AD.135.140.IK.8D	Ø 1.350	-	Ø 4.00	10.80	12.15	13.50	50.00
AD.140.140.IK.8D	Ø 1.400	-	Ø 4.00	11.20	12.60	14.00	50.00
AD.145.140.IK.8D	Ø 1.450	-	Ø 4.00	11.60	13.05	14.50	50.00
AD.150.140.IK.8D	Ø 1.500	-	Ø 4.00	12.00	13.50	15.00	50.00
AD.155.140.IK.8D	Ø 1.550	-	Ø 4.00	12.40	13.95	15.50	50.00
AD.1587.140.IK.8D	Ø 1.587	1/16"	Ø 4.00	12.70	14.28	15.87	50.00
AD.160.140.IK.8D	Ø 1.600	-	Ø 4.00	12.80	14.40	16.00	50.00
AD.165.140.IK.8D	Ø 1.650	-	Ø 4.00	13.20	14.85	16.50	50.00
AD.170.140.IK.8D	Ø 1.700	-	Ø 4.00	13.60	15.30	17.00	50.00
AD.175.140.IK.8D	Ø 1.750	-	Ø 4.00	14.00	15.75	17.50	50.00
AD.180.140.IK.8D	Ø 1.800	-	Ø 4.00	14.40	16.20	18.00	50.00
AD.185.140.IK.8D	Ø 1.850	-	Ø 4.00	14.80	16.65	18.50	50.00
AD.190.140.IK.8D	Ø 1.900	-	Ø 4.00	15.20	17.10	19.00	50.00
AD.195.140.IK.8D	Ø 1.950	-	Ø 4.00	15.60	17.55	19.50	50.00
AD.200.140.IK.8D	Ø 2.000	-	Ø 4.00	16.00	18.00	20.00	60.00
AD.2381.140.IK.8D	Ø 2.381	3/32"	Ø 4.00	19.05	21.50	24.00	60.00

Available from stock

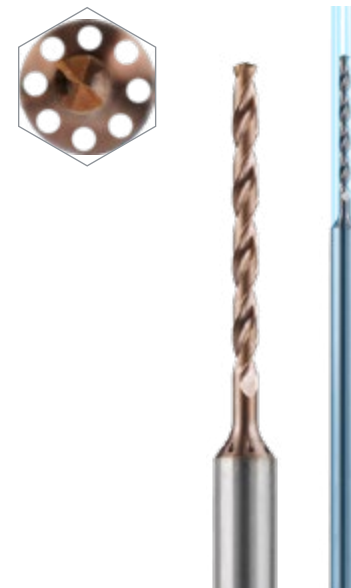
INOX-12xD cooled



ACTIONDRILL
AD.030.140.IK.12D
D1: Ø 0.3 mm
Integrated cooling
12xD drilling depth
140° Point angle



■ α-INOX coated



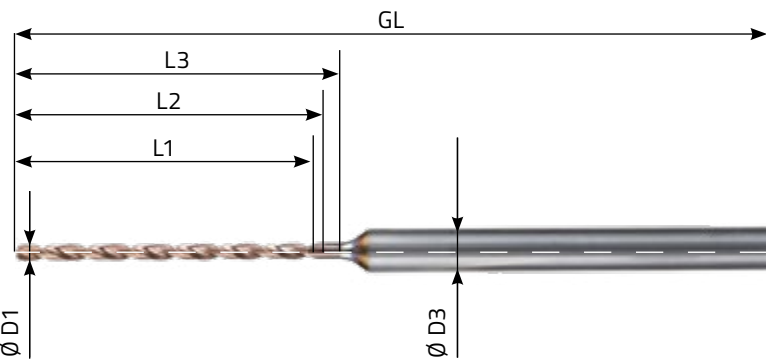
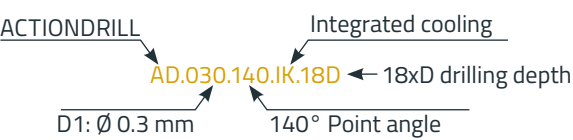
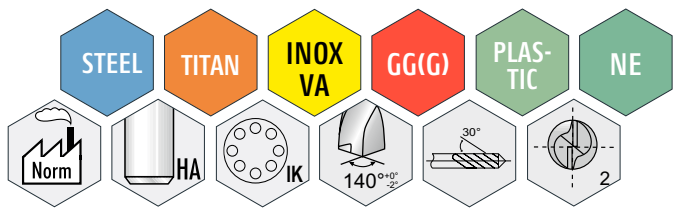
5 PRO's of the ACTIONDRILL:

- 12xD "micro" drill with integrated cooling from Ø 0.3
- Matched to our pilot drill INOX-3xD Pilot cooled
- Perfect positional accuracy
- Shorter process times and high process reliability
- Long chips are flushed out through the integrated cooling channels without retracting

Article number	D1 k5 (mm)	D1 (inch)	D3 h5 (mm)	L1 (12xD1/mm)	L2 (13xD1/mm)	L3 (14xD1/mm)	GL (mm)
AD.030.140.IK.12D	Ø 0.30	-	Ø 4.00	3.60	3.90	4.20	50.00
AD.035.140.IK.12D	Ø 0.35	-	Ø 4.00	4.20	4.55	4.90	50.00
AD.040.140.IK.12D	Ø 0.40	-	Ø 4.00	4.80	5.20	5.60	50.00
AD.045.140.IK.12D	Ø 0.45	-	Ø 4.00	5.40	5.85	6.30	50.00
AD.050.140.IK.12D	Ø 0.50	-	Ø 4.00	6.00	6.50	7.00	50.00
AD.055.140.IK.12D	Ø 0.55	-	Ø 4.00	6.60	7.15	7.70	50.00
AD.060.140.IK.12D	Ø 0.60	-	Ø 4.00	7.20	7.80	8.40	50.00
AD.065.140.IK.12D	Ø 0.65	-	Ø 4.00	7.80	8.45	9.10	50.00
AD.070.140.IK.12D	Ø 0.70	-	Ø 4.00	8.40	9.10	9.80	50.00
AD.075.140.IK.12D	Ø 0.75	-	Ø 4.00	9.00	9.75	10.50	50.00
AD.080.140.IK.12D	Ø 0.80	-	Ø 4.00	9.60	10.40	11.20	50.00
AD.085.140.IK.12D	Ø 0.85	-	Ø 4.00	10.20	11.05	11.90	60.00
AD.090.140.IK.12D	Ø 0.90	-	Ø 4.00	10.80	11.70	12.60	60.00
AD.095.140.IK.12D	Ø 0.95	-	Ø 4.00	11.40	12.35	13.30	60.00
AD.100.140.IK.12D	Ø 1.00	-	Ø 4.00	12.00	13.00	14.00	60.00
AD.105.140.IK.12D	Ø 1.05	-	Ø 4.00	12.60	13.65	14.70	60.00
AD.110.140.IK.12D	Ø 1.10	-	Ø 4.00	13.20	14.30	15.40	60.00
AD.115.140.IK.12D	Ø 1.15	-	Ø 4.00	13.80	14.95	16.10	60.00
AD.120.140.IK.12D	Ø 1.20	-	Ø 4.00	14.40	15.60	16.80	80.00
AD.125.140.IK.12D	Ø 1.25	-	Ø 4.00	15.00	16.25	17.50	80.00
AD.130.140.IK.12D	Ø 1.30	-	Ø 4.00	15.60	16.90	18.20	80.00
AD.135.140.IK.12D	Ø 1.35	-	Ø 4.00	16.20	17.55	18.90	80.00
AD.140.140.IK.12D	Ø 1.40	-	Ø 4.00	16.80	18.20	19.60	80.00
AD.145.140.IK.12D	Ø 1.45	-	Ø 4.00	17.40	18.85	20.30	80.00
AD.150.140.IK.12D	Ø 1.50	-	Ø 4.00	18.00	19.50	21.00	80.00
AD.155.140.IK.12D	Ø 1.55	-	Ø 4.00	18.60	20.15	21.70	80.00
AD.1587.140.IK.12D	Ø 1.587	1/16"	Ø 4.00	19.04	20.63	22.22	80.00
AD.160.140.IK.12D	Ø 1.60	-	Ø 4.00	19.20	20.80	22.40	80.00
AD.165.140.IK.12D	Ø 1.65	-	Ø 4.00	19.80	21.45	23.10	80.00
AD.170.140.IK.12D	Ø 1.70	-	Ø 4.00	20.40	22.10	23.80	80.00
AD.175.140.IK.12D	Ø 1.75	-	Ø 4.00	21.00	22.75	24.50	80.00
AD.180.140.IK.12D	Ø 1.80	-	Ø 4.00	21.60	23.40	25.20	80.00
AD.185.140.IK.12D	Ø 1.85	-	Ø 4.00	22.20	24.05	25.90	80.00
AD.190.140.IK.12D	Ø 1.90	-	Ø 4.00	22.80	24.70	26.60	80.00
AD.195.140.IK.12D	Ø 1.95	-	Ø 4.00	23.40	25.35	27.30	80.00
AD.200.140.IK.12D	Ø 2.00	-	Ø 4.00	24.00	26.00	28.00	80.00
AD.2381.140.IK.12D	Ø 2.381	3/32"	Ø 4.00	28.60	31.00	33.334	80.00

Available from stock

INOX-18xD cooled



■ α-INOX coated



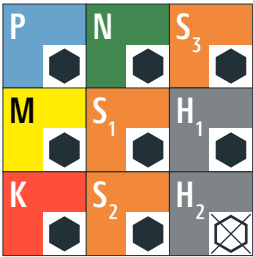
5 PRO's of the ACTIONDRILL:

- 18xD "micro" drill with integrated cooling from Ø 0.3
- Matched to our pilot drill INOX-3xD Pilot cooled
- Perfect positional accuracy
- Shorter process times and high process reliability
- Long chips are flushed out through the integrated cooling channels without retracting

Article number	D1 k5 (mm)	D1 (inch)	D3 h5 (mm)	L1 (18xD/mm)	L2 (19xD/mm)	L3 (20xD/mm)	GL (mm)
AD.030.140.IK.18D	Ø 0.30	-	Ø 4.00	5.40	5.70	6.00	60.00
AD.035.140.IK.18D	Ø 0.35	-	Ø 4.00	6.30	6.65	7.00	60.00
AD.040.140.IK.18D	Ø 0.40	-	Ø 4.00	7.20	7.60	8.00	60.00
AD.045.140.IK.18D	Ø 0.45	-	Ø 4.00	8.10	8.55	9.00	60.00
AD.050.140.IK.18D	Ø 0.50	-	Ø 4.00	9.00	9.50	10.00	60.00
AD.055.140.IK.18D	Ø 0.55	-	Ø 4.00	9.90	10.45	11.00	60.00
AD.060.140.IK.18D	Ø 0.60	-	Ø 4.00	10.80	11.40	12.00	60.00
AD.065.140.IK.18D	Ø 0.65	-	Ø 4.00	11.70	12.35	13.00	60.00
AD.070.140.IK.18D	Ø 0.70	-	Ø 4.00	12.60	13.30	14.00	60.00
AD.075.140.IK.18D	Ø 0.75	-	Ø 4.00	13.50	14.25	15.00	60.00
AD.080.140.IK.18D	Ø 0.80	-	Ø 4.00	14.40	15.20	16.00	60.00
AD.085.140.IK.18D	Ø 0.85	-	Ø 4.00	15.30	16.15	17.00	80.00
AD.090.140.IK.18D	Ø 0.90	-	Ø 4.00	16.20	17.10	18.00	80.00
AD.095.140.IK.18D	Ø 0.95	-	Ø 4.00	17.10	18.05	19.00	80.00
AD.100.140.IK.18D	Ø 1.00	-	Ø 4.00	18.00	19.00	20.00	80.00
AD.105.140.IK.18D	Ø 1.05	-	Ø 4.00	18.90	19.95	21.00	80.00
AD.110.140.IK.18D	Ø 1.10	-	Ø 4.00	19.80	20.90	22.00	80.00
AD.115.140.IK.18D	Ø 1.15	-	Ø 4.00	20.70	21.85	23.00	80.00
AD.120.140.IK.18D	Ø 1.20	-	Ø 4.00	21.60	22.80	24.00	80.00
AD.125.140.IK.18D	Ø 1.25	-	Ø 4.00	22.50	23.75	25.00	80.00
AD.130.140.IK.18D	Ø 1.30	-	Ø 4.00	23.40	24.70	26.00	80.00
AD.135.140.IK.18D	Ø 1.35	-	Ø 4.00	24.30	25.65	27.00	80.00
AD.140.140.IK.18D	Ø 1.40	-	Ø 4.00	25.20	26.60	28.00	80.00
AD.145.140.IK.18D	Ø 1.45	-	Ø 4.00	26.10	27.55	29.00	80.00
AD.150.140.IK.18D	Ø 1.50	-	Ø 4.00	27.00	28.50	30.00	80.00
AD.155.140.IK.18D	Ø 1.55	-	Ø 4.00	27.90	29.45	31.00	80.00
AD.1587.140.IK.18D	Ø 1.587	1/16"	Ø 4.00	28.62	30.21	31.74	80.00
AD.160.140.IK.18D	Ø 1.60	-	Ø 4.00	28.80	30.40	32.00	80.00
AD.165.140.IK.18D	Ø 1.65	-	Ø 4.00	29.70	31.35	33.00	80.00
AD.170.140.IK.18D	Ø 1.70	-	Ø 4.00	30.60	32.30	34.00	80.00
AD.175.140.IK.18D	Ø 1.75	-	Ø 4.00	31.50	33.25	35.00	80.00
AD.180.140.IK.18D	Ø 1.80	-	Ø 4.00	32.40	34.20	36.00	80.00
AD.185.140.IK.18D	Ø 1.85	-	Ø 4.00	33.30	35.15	37.00	80.00
AD.190.140.IK.18D	Ø 1.90	-	Ø 4.00	34.20	36.10	38.00	80.00
AD.195.140.IK.18D	Ø 1.95	-	Ø 4.00	35.10	37.05	39.00	80.00
AD.200.140.IK.18D	Ø 2.00	-	Ø 4.00	36.00	38.00	40.00	80.00
AD.2381.140.IK.18D	Ø 2.381	3/32"	Ø 4.00	42.86	45.3	56.62	80.00

Available from stock

ACTIONDRILL[®]
by HB microtec
INOX-8xD cooled
INOX-12xD cooled
INOX-18xD cooled



Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm ²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
H	Hardened steels ≥ 55 HRC		CrCoMo28	ASTM F1537
		1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

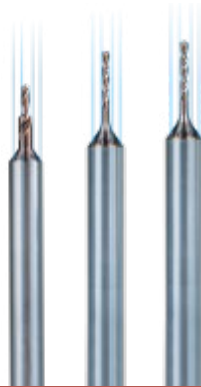
Recommended use Highly suitable Partially suitable Not recommended

Ø 0.3 - 0.4 mm		Ø 0.4 - 0.8 mm		Ø 0.8 - 1.2 mm		Ø 1.2 - 2.9 mm	
vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]	vc [m/min]	f [mm/U]
60-120	0.008 - 0.01	60-120	0.012- 0.046	60-130	0.042- 0.066	60-130	0.040 - 0.12
60-100	0.08 - 0.01	60-100	0.018- 0.026	60-120	0.042- 0.056	60-130	0.040 - 0.12
50-100	0.08 - 0.01	50-100	0.009 - 0.016	50-120	0.025 - 0.04	50-120	0.040 - 0.080
50-80	0.08 - 0.01	50-80	0.008 - 0.020	50-80	0.02 - 0.038	50-90	0.040 - 0.070
80-140	0.010 - 0.014	80-140	0.012 - 0.042	80-140	0.030 - 0.042	80-160	0.08 - 0.135
80-160	0.012 - 0.016	80-160	0.012 - 0.046	80-160	0.042 - 0.066	80-160	0.08 - 0.18
80-140	0.012 - 0.016	80-140	0.026 - 0.068	80-140	0.046 - 0.088	80-160	0.08 - 0.210
80-120	0.012 - 0.014	80-120	0.024 - 0.048	80-120	0.032 - 0.088	80-140	0.085 - 0.120
15 - 50	0.08 - 0.01	15 - 50	0.025 - 0.045	15 - 50	0.025 - 0.045	15 - 60	0.060 - 0.092
15 - 50	0.08 - 0.01	15 - 50	0.025 - 0.045	15 - 50	0.025 - 0.045	15 - 60	0.060 - 0.120
15 - 50	0.08 - 0.01	15 - 50	0.020 - 0.024	15 - 50	0.020 - 0.024	15 - 50	0.055 - 0.092
15-32	0.006 - 0.009	15-32	0.006 - 0.009	15-32	0.006 - 0.009	15-32	0.006 - 0.012
no data available							

ACTIONDRILL®

by HB microtec

INOX cooled



HB microtec®
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