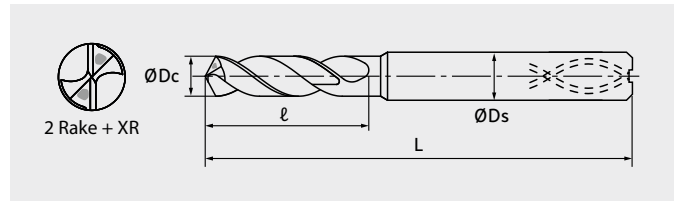


AQRVDOH5D

AquaREVO Drills

Oil-Hole (5D)



VHM CARBIDE
REVO D
h7
140°
26°-30°
h6
3.0 16.0

TOOL MATERIAL
POINT ANGLE
HELIX ANGLE

0.1 2 6 20 45 100

List: 9874

Article number	Dc	ℓ	L	Ds	Stock
9198740300	3.0	28	66	6	●
9198740310	3.1	28	66	6	●
9198740320	3.2	28	66	6	●
9198740330	3.3	28	66	6	●
9198740340	3.4	28	66	6	●
9198740350	3.5	28	66	6	●
9198740360	3.6	28	66	6	●
9198740370	3.7	28	66	6	●
9198740380	3.8	36	74	6	●
9198740390	3.9	36	74	6	●
9198740400	4.0	36	74	6	●
9198740410	4.1	36	74	6	●
9198740420	4.2	36	74	6	●
9198740430	4.3	36	74	6	●
9198740440	4.4	36	74	6	●
9198740450	4.5	36	74	6	●
9198740460	4.6	36	74	6	●
9198740470	4.7	36	74	6	●
9198740480	4.8	44	82	6	●
9198740490	4.9	44	82	6	●
9198740500	5.0	44	82	6	●
9198740510	5.1	44	82	6	●
9198740520	5.2	44	82	6	●
9198740530	5.3	44	82	6	●
9198740540	5.4	44	82	6	●
9198740550	5.5	44	82	6	●
9198740560	5.6	44	82	6	●
9198740570	5.7	44	82	6	●
9198740580	5.8	44	82	6	●
9198740590	5.9	44	82	6	●
9198740600	6.0	44	82	6	●
9198740610	6.1	53	91	8	●
9198740620	6.2	53	91	8	●

unit: mm

Article number	Dc	ℓ	L	Ds	Stock
9198740630	6.3	53	91	8	●
9198740640	6.4	53	91	8	●
9198740650	6.5	53	91	8	●
9198740660	6.6	53	91	8	●
9198740670	6.7	53	91	8	●
9198740680	6.8	53	91	8	●
9198740690	6.9	53	91	8	●
9198740700	7.0	53	91	8	●
9198740710	7.1	53	91	8	●
9198740720	7.2	53	91	8	●
9198740730	7.3	53	91	8	●
9198740740	7.4	53	91	8	●
9198740750	7.5	53	91	8	●
9198740760	7.6	53	91	8	●
9198740770	7.7	53	91	8	●
9198740780	7.8	53	91	8	●
9198740790	7.9	53	91	8	●
9198740800	8.0	53	91	8	●
9198740810	8.1	61	103	10	●
9198740820	8.2	61	103	10	●
9198740830	8.3	61	103	10	●
9198740840	8.4	61	103	10	●
9198740850	8.5	61	103	10	●
9198740860	8.6	61	103	10	●
9198740870	8.7	61	103	10	●
9198740880	8.8	61	103	10	●
9198740890	8.9	61	103	10	●
9198740900	9.0	61	103	10	●
9198740910	9.1	61	103	10	●
9198740920	9.2	61	103	10	●
9198740930	9.3	61	103	10	●
9198740940	9.4	61	103	10	●
9198740950	9.5	61	103	10	●

unit: mm

List: 9874

Article number	Dc	ℓ	L	Ds	Stock
9198740960	9.6	61	103	10	●
9198740970	9.7	61	103	10	●
9198740980	9.8	61	103	10	●
9198740990	9.9	61	103	10	●
9198741000	10.0	61	103	10	●
9198741010	10.1	71	118	12	●
9198741020	10.2	71	118	12	●
9198741030	10.3	71	118	12	●
9198741040	10.4	71	118	12	●
9198741050	10.5	71	118	12	●
9198741060	10.6	71	118	12	●
9198741070	10.7	71	118	12	●
9198741080	10.8	71	118	12	●
9198741090	10.9	71	118	12	●
9198741100	11.0	71	118	12	●
9198741110	11.1	71	118	12	●
9198741120	11.2	71	118	12	●
9198741130	11.3	71	118	12	●
9198741140	11.4	71	118	12	●
9198741150	11.5	71	118	12	●
9198741160	11.6	71	118	12	●
9198741170	11.7	71	118	12	●
9198741180	11.8	71	118	12	●
9198741190	11.9	71	118	12	●
9198741200	12.0	71	118	12	●
9198741210	12.1	77	124	14	●
9198741220	12.2	77	124	14	●
9198741230	12.3	77	124	14	●
9198741240	12.4	77	124	14	●
9198741250	12.5	77	124	14	●
9198741260	12.6	77	124	14	●
9198741270	12.7	77	124	14	●
9198741280	12.8	77	124	14	●
9198741290	12.9	77	124	14	●
9198741300	13.0	77	124	14	●
9198741310	13.1	77	124	14	●
9198741320	13.2	77	124	14	●
9198741330	13.3	77	124	14	●
9198741340	13.4	77	124	14	●
9198741350	13.5	77	124	14	●

Article number	Dc	ℓ	L	Ds	Stock
9198741360	13.6	77	124	14	●
9198741370	13.7	77	124	14	●
9198741380	13.8	77	124	14	●
9198741390	13.9	77	124	14	●
9198741400	14.0	77	124	14	●
9198741410	14.1	83	133	16	●
9198741420	14.2	83	133	16	●
9198741430	14.3	83	133	16	●
9198741440	14.4	83	133	16	●
9198741450	14.5	83	133	16	●
9198741460	14.6	83	133	16	●
9198741470	14.7	83	133	16	●
9198741480	14.8	83	133	16	●
9198741490	14.9	83	133	16	●
9198741500	15.0	83	133	16	●
9198741510	15.1	83	133	16	●
9198741520	15.2	83	133	16	●
9198741530	15.3	83	133	16	●
9198741540	15.4	83	133	16	●
9198741550	15.5	83	133	16	●
9198741560	15.6	83	133	16	●
9198741570	15.7	83	133	16	●
9198741580	15.8	83	133	16	●
9198741590	15.9	83	133	16	●
9198741600	16.0	83	133	16	●

●: German Stock

AQRVDOH3D/5D AquaREVO Drills Oil-Hole (3D/5D)

STANDARD CUTTING WET CONDITIONS																		
Work Material	Structural Steels, Carbon Steels, Cast Irons St37-2, C50E		Alloy Steels, Heat-treated Steels 42CrMo4		Mold Steels, Hardened Steels 1.2344		Hardened Steels		Ductile Cast Irons GG/GGG	Stainless Steels 1.4301 1.4000 1.4016		Stainless Steels 1.4542		Titanium Alloys TI-6Al-4V		Nickel Alloys Inconel 718		
	~200HB		20~30HRC		30~40HRC		40~50HRC			Rota- tion min ⁻¹ Feed mm/min		Rota- tion min ⁻¹ Feed mm/min		Rota- tion min ⁻¹ Feed mm/min		Rota- tion min ⁻¹ Feed mm/min		Rota- tion min ⁻¹ Feed mm/min
Drill Dia. mm	Rota- tion min ⁻¹	Feed mm/min	Rota- tion min ⁻¹	Feed mm/min	Rota- tion min ⁻¹	Feed mm/min	Rota- tion min ⁻¹	Feed mm/min	Rota- tion min ⁻¹	Feed mm/min	Rota- tion min ⁻¹	Feed mm/min	Rota- tion min ⁻¹	Feed mm/min	Rota- tion min ⁻¹	Feed mm/min	Rota- tion min ⁻¹	Feed mm/min
3.0	12700	1220	10600	1020	8500	760	4250	260	10600	950	8500	680	5300	400	4200	320	4200	190
4.0	9600	1220	8000	1020	6400	760	3200	260	8000	950	6400	680	4000	400	3200	320	3200	190
6.0	6400	1220	5300	1020	4200	710	2100	240	5300	950	4200	660	2600	400	2100	320	2100	190
8.0	4800	1220	4000	1020	3200	710	1600	240	4000	880	3200	640	2000	400	1600	320	1600	190
10.0	3800	1140	3200	960	2500	640	1300	230	3200	790	2500	590	1600	370	1300	300	1300	180
12.0	3200	1070	2700	920	2100	540	1050	220	2700	670	2100	560	1300	350	1050	280	1050	180
16.0	2400	960	2000	890	1600	480	800	210	2000	620	1600	510	1000	320	800	260	800	150

STANDARD MQL CONDITIONS										
Work Material	Structural Steels, Carbon Steels, Cast Irons St37-2, C50E		Alloy Steels, Heat-treated Steels 42CrMo4		Mold Steels, Hardened Steels 1.2344		Hardened Steels		Ductile Cast Irons GG/GGG	
	~200HB		20~30HRC		30~40HRC		40~50HRC		Rota- tion min ⁻¹ Feed mm/min	
Drill Dia. mm	Rota- tion min ⁻¹	Feed mm/min	Rota- tion min ⁻¹	Feed mm/min	Rota- tion min ⁻¹	Feed mm/min	Rota- tion min ⁻¹	Feed mm/min	Rota- tion min ⁻¹	Feed mm/min
3.0	8500	770	7400	570	6400	540	2550	140	7400	620
4.0	6400	770	5600	570	4800	540	1900	140	5600	620
6.0	4200	770	3700	570	3200	540	1300	130	3700	620
8.0	3200	770	2800	570	2400	500	1000	130	2800	580
10.0	2500	720	2200	540	1900	440	800	120	2200	500
12.0	2100	670	1900	500	1600	380	650	120	1900	460
16.0	1600	600	1400	500	1200	340	480	100	1400	400

Attention on using the cutting condition tables

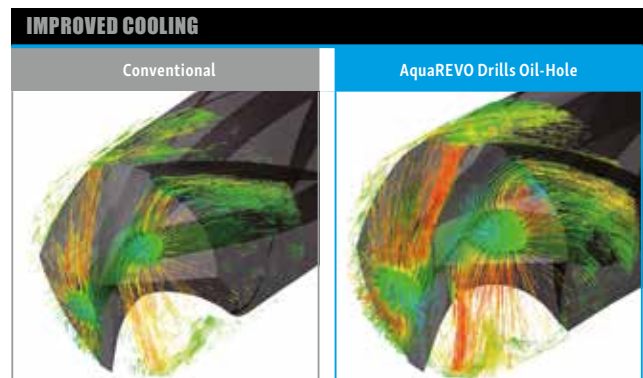
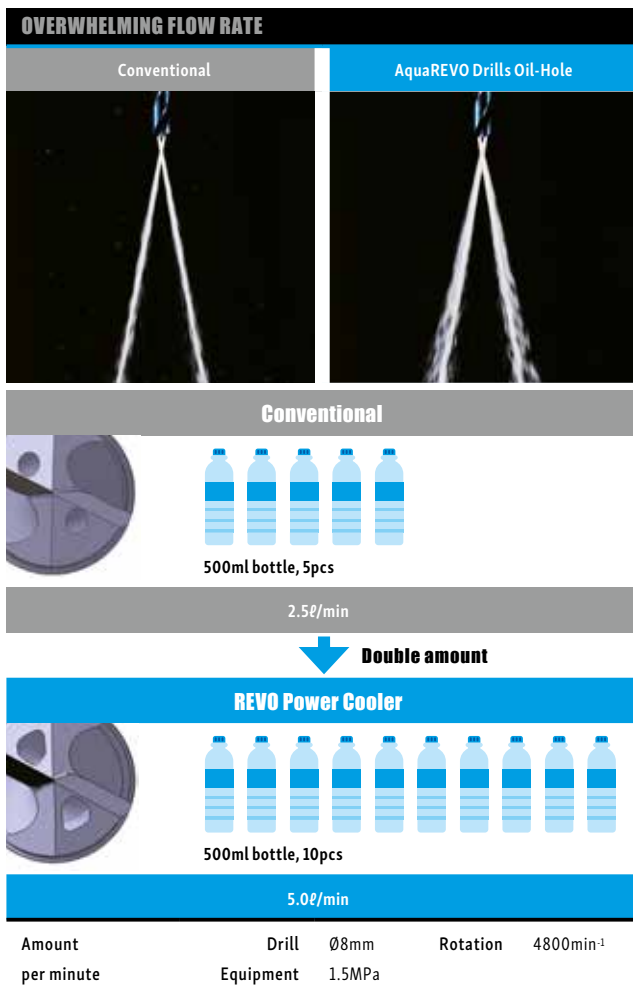
- Adjust cutting condition according to the rigidity of machine or work clamp state.
- If the machine you are using has restrictions on the number of rotation, reduce the rotation and feed rate by the same ratio.
- Wet Condition are for drilling with water soluble cutting fluid.
- In non-water soluble cutting fluid, reduce the rotation and feed rate by 20%.
- Please step feed regardless of the hole depth.
- Retraction of the step feed is to be returned to the top of the hole.
- Step feed is recommended to 0.2-0.5 x DC.
- Please use the fixture to control the amplitude of the drill bit below 0.005mm.
- Do not pour the cutting fluid directly to the drill, but pour it along the work material.

AquaREVO Drills Oil-Hole

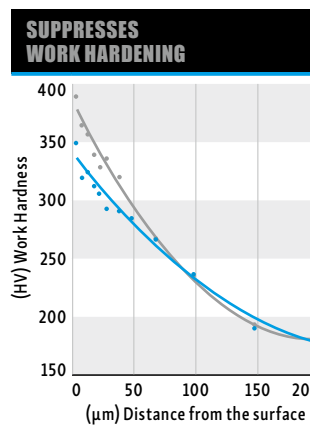
- ▶ The new Oil-Hole concept was born within the AquaREVO series, where material, design and coating have been completely renewed.
- ▶ In addition to REVO-D coat and super smooth surface treatment, the use of fluid analysis further improves cooling, lubrication and smooth chip evacuation.

REVO Power Cooler

New Oil-Hole design with overwhelming flow rate. Cross-sectional area and coolant amount of the oil hole are more than twice that of conventional.



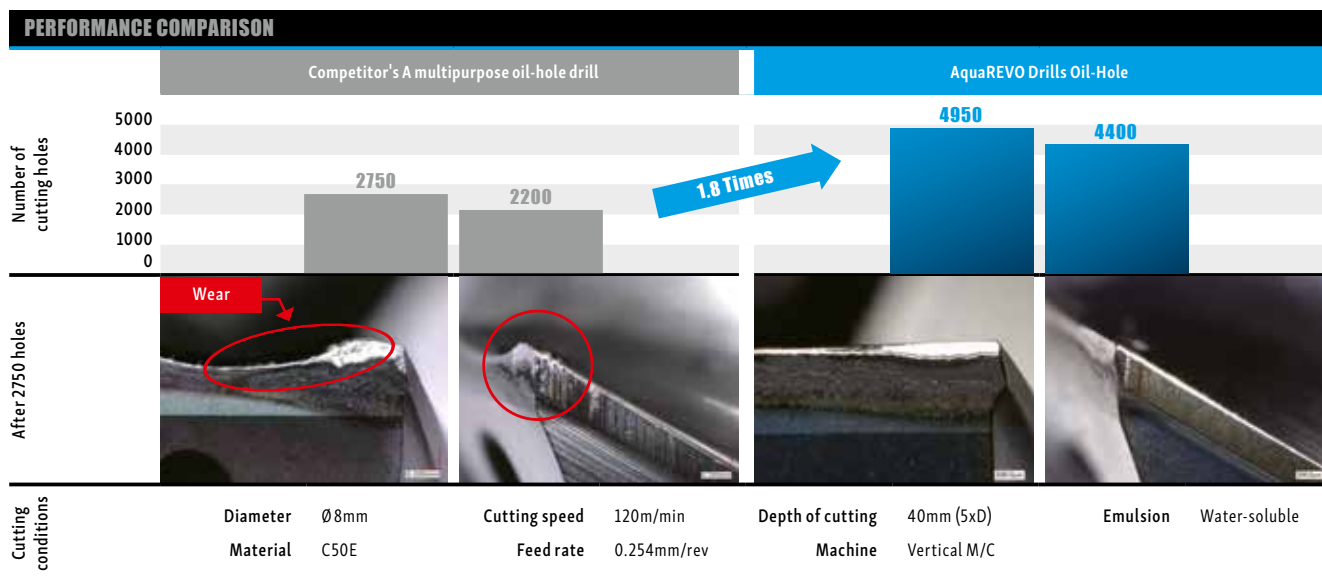
Increased flow rate and flow velocity of corners and thinning.



Tool life and accuracy will improve after drilling process. Comparison of work hardening and internal hardness. Work material: 1.4301

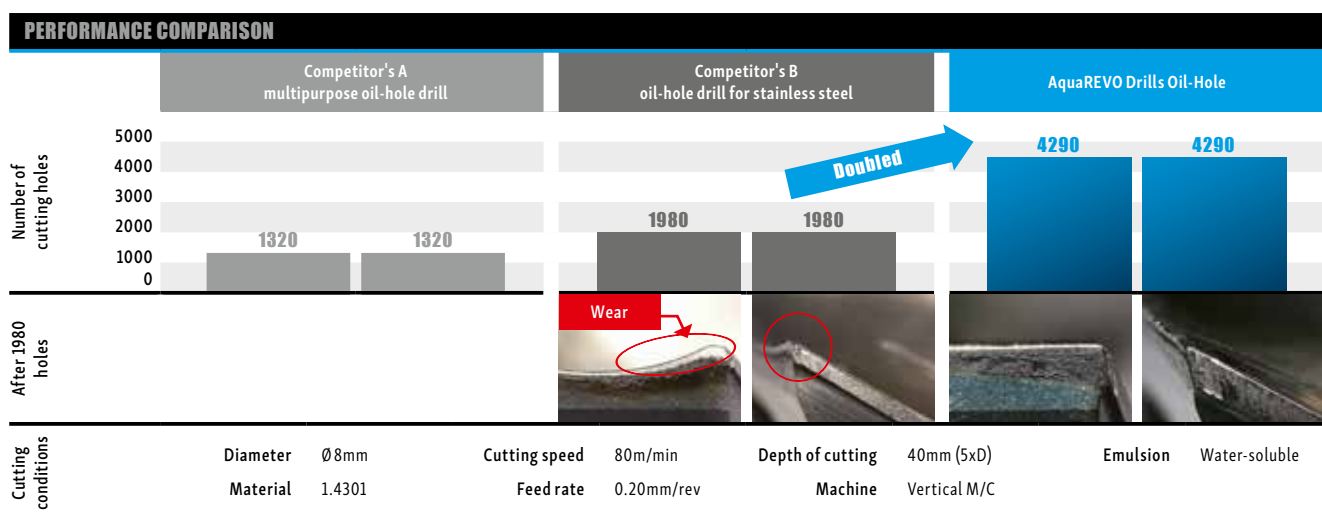
Excellent service life due to wear suppression

Durability and stability surpass other drills.



Incredible tool life even in stainless steel drilling

Although it is a multi-purpose drill, even compared to the drill for Stainless steel, more than twice as much drilling.



Compatible with a wide range of materials

APPLICABLE WORK MATERIALS

Tool	Structural Steels	Carbon Steels	Alloy Steels, Heat-treated Steels	Mold Steels, Hardened Steels	Hardened Steels			Stainless Steels			Titanium Alloys	Nickel Alloys	Cast Irons	Aluminium Alloys
	St37-2	C45E/C50E	42CrMo4	30-40 HRC	40-50 HRC	50-57 HRC	58-65 HRC	1.4301/1.4401	1.4021	1.4542	Ti-6Al-4V		GG/GGG	AC/ADC
AquaREVO Drills Oil-Hole (3D)	●	●	●	●	●	○		●	●	●	○	○	●	○
AquaREVO Drills Oil-Hole (5D)	●	●	●	●	●	○		●	●	●	○	○	●	○
AquaREVO Drills Oil-Hole (8D)	●	●	●	●	●	○		●	●	●	○	○	●	○

● Excellent | ○ Good