AVALON

CONTACT US

For technical queries, on-site demonstrations or a detailed ROI model, reach out to our experts any time.

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RELIABILITY
Swiss engineering quality

BOLDNESS
Pushing boundaries underground

RESPONSIBILITY
Upholding safety & environmental standards

AVALON
COMPANY BROCHURE

AVALON

COMPANY PROFILE

Who We Are

Avalon is a Swiss company founded in 2015 by a team of engineers committed to modernising mine-site tooling. We believe today's operations require more than standalone components. They need an integrated ecosystem of hardware, data and life-cycle services that drive productivity while reducing environmental impact. Our portfolio now spans down-the-hole hammers, ground-support systems and fluid-handling skids - each designed to work seamlessly with the rest.

Swiss Design, Global Presence

Once a new product passes our endurance test, it's produced by certified partners who machine, treat and finish each component to high quality standards. Final checks include laser scanning and performance testing before release. We then supply from hubs in Switzerland, the Democratic Republic of Congo and Peru - ensuring fast delivery of critical parts to key mining regions.

BUILT FOR PERFORMANCE ENGINEERED FOR THE PLANET

Commitment

Our circular approach extends tool life through rebuild programs, reduces packaging waste, and improves air efficiency to lower fuel consumption. We track the full life cycle of every product, while local repair hubs and energy-efficient production help reduce environmental impact.

At Avalon, sustainability is engineered in from day one. Circular-design thinking lengthens tool life via rebuild programmes, removes unnecessary inbound steel through lean packaging, and optimises air circuits to cut compressor diesel burn. We keep a full life-cycle inventory for every product, including Scope-3 transport emissions, so customers can report ESG metrics with confidence. Energy-efficient machining paths and regionally located repair hubs compress the carbon curve without sacrificing metres per shift.

Looking Ahead

Ore bodies are heading deeper, ESG regulations are tightening and cost pressure remains intense. Avalon will continue pairing Swiss precision with data-driven design, expanding our digital analytics, sensor suites and materials science expertise, so mines across the globe can drill faster, safer and cleaner.

TRUSTED BY THE WORLD'S LEADING MINERS

Avalon's equipment has proven its reliability in the field, earning the trust of leading mining companies and drilling contractors across Europe, Africa and South America.

A partnership model that scales

What our clients value	How Avalon delivers
Metres that cost less	The proof of performance speaks for itself. Today, Avalon hammers and bits are trusted by leading mining houses and drilling contractors operating across Europe, Africa and South America.
Global response, local stock	Service hubs in Switzerland, the Democratic Republic of Congo and Peru ensure rapid access to critical spares across major mining regions.
Zero-downtime mindset	Field engineers embed with drilling crews, monitor KPIs in real time and trigger predictive rebuilds before failures surface.
Sustainability commitments	Re-use programmes return > 70 % of the hammer mass to service and cut CO_2 per drilled metre by double digits.

TABLE OF CONTENTS

A FULL RANGE OF SOLUTIONS

Domain	What we deliver
Rock-removal tooling	DTH hammers (4”–12”), top-hammer bits, rotary cutters, reamers and stabilisers—engineered in Switzerland for longer life and lower drilling costs.
Ground-support systems	Self-drilling anchors, resin cartridges, split sets and dynamic mesh kits engineered for rapid installation in hard rock and squeezing ground.
Fluid management	High-pressure pumps, cuttings diverters and dewatering units adapted for deep shafts and horizontal drains.
Lifecycle services	On-site performance tuning, operator training, rebuild support and failure analysis.

DOWN-THE-HOLE RE-IMAGINED

Precision tools for lower cost-per-metre drilling

Conventional DTH drilling has always been about putting percussion energy exactly where it matters: at the rock face. Avalon’s new generation of DTH hammers elevates that principle with Swiss-engineered tolerances, integrated data channels and a service model built for modern mine sites. The result: faster metres, fewer change-outs and a measurable step change in total cost of ownership (TCO).

Why Down-the-Hole?

Direct energy transfer
The hammer sits at the bottom of the hole, eliminating impact losses common to top-hammer systems.

Clean holes, clear decisions
High-pressure air exhausts through the bit, instantly clearing cuttings and allowing real-time geodata acquisition.

Predictable penetration
Constant thrust and rotation from the rig translate into straight, true holes that simplify subsequent charging and blasting.

Avalon Conventional DTH Hammer Core architecture

Component	How Avalon delivers	Avalon upgrade
Piston & Internal Cylinder	Converts compressed air into high-frequency impact energy.	Advanced surface finishing cuts internal friction by up to 30 %, boosting blows per minute without extra air demand.
Air Distributor & Check Valve	Directs flow and blocks debris when air is off.	CFD-optimised ports balance airflow; a hardened, quick-swap valve seals instantly to keep fines out.
Drive Chuck & Splines	Transfers rotation and feed force to the bit.	Swiss-machined spline geometry minimises play, maintaining perfect bit alignment during high-torque startups.
Stop Ring	Controls axial movement of the bit.	One-piece tungsten-carbide insert resists groove wear, extending service intervals.

Business Outcomes for Mine Operators

+18 % average penetration speed in hard formations (customer field data, 2024).
Up to 40 % longer service life per hammer through proprietary metallurgy and rebuild options.
10 % lower compressor fuel burn versus previous-generation tools, driven by smoother air pathways.
Single-source accountability —hardware, rebuild kits and on-site training from one partner.

BIT GEOMETRY & CARBIDE PROFILES

1 | Bit Face Shape Selection

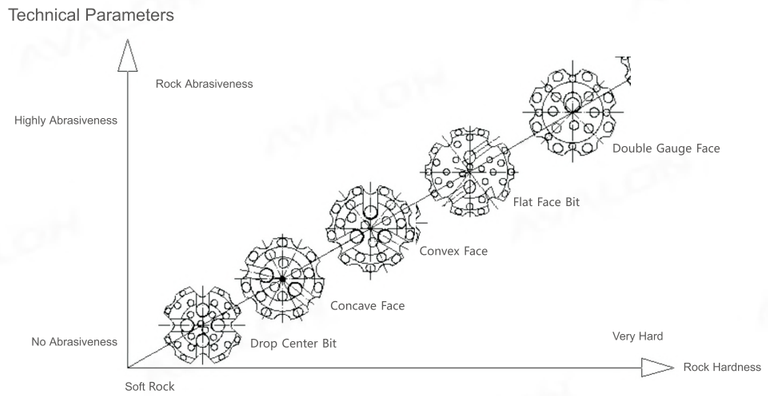
	Face geometry	Ideal ground	Key advantages	Trade-offs
	**Drop Center**	Soft to medium-hard, fractured	Highest penetration; tight hole deviation	Slightly lower flushing than concave
	**Concave**	Medium-hard, homogeneous	Excellent deviation control and cuttings evacuation	Marginally slower than drop center in soft ground
	**Convex**	Soft to medium-hard, low/medium air pressure	Resists steel wash; very high penetration	Reduced deviation control in broken ground
	**Flat**	Very hard, abrasive, high air pressure	Strong body integrity; steady penetration	Higher rig energy demand
	**Double Gauge**	Medium to hard, high air pressure	High penetration with extra steel protection	Heavier bit mass

2 | Carbide Button Shape Options

	Button profile	Typical position	Best suited for	Benefits
	**Domed / Spherical**	Gauge row	Very hard, highly abrasive	Maximum wear resistance; holds gauge diameter
	**Parabolic / Semi-Ballistic**	Gauge & front	Medium abrasive, hard	Balanced wear vs. speed
	**Ballistic**	Front row (and gauge in soft ground)	Medium abrasive, medium-hard	Rapid penetration; self-sharpening action
	**Sharp Ballistic**	Front row	Soft formations	Fastest penetration; low break risk
	**Flat (Protection)**	Relief / sacrificial	Any, especially abrasive	Shields steel matrix; prolongs bit life

Engineering Insight

Selecting the optimal combination of face geometry + carbide profile tailors your hammer to ground conditions, air pressure and penetration targets—delivering measurable reductions in cost per metre. Avalon's application specialists use formation data and rig parameters to specify the exact layout that maximises metres drilled before first rebuild.

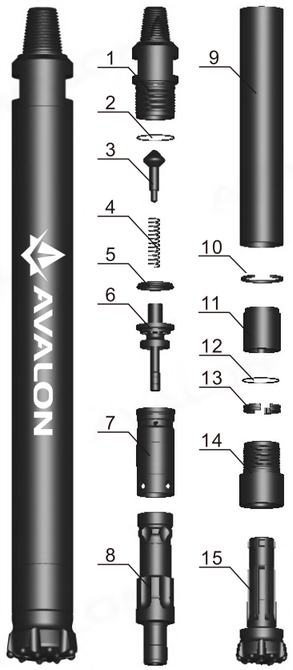


SPEED CHANGES EVERYTHING

Built for the new productivity benchmark

Avalon’s DTH hammer meets the mine site’s three key demands: more metres per hour, fewer unplanned stops, and a smaller carbon foot-print—all without compromise. With precision-built tolerances and a fully redesigned shank, it harnesses the full power of modern high-output compressors, delivering clean, straight, high-speed penetration.

DTK-4

Product Structure	Part Description	Weight (Kg)	Part Number
	1 Top Sub	6.55	DTK-4-01
	2 "O" Ring of Top Sub	0.005	DTK-4-02
	3 Check Valve	0.20	DTK-4-03
	4 Spring	0.10	DTK-4-04
	5 Compression Buffer	0.20	DTK-4-05
	6 Air Distributor	1.40	DTK-4-06
	7 Internal Cylinder	1.35	DTK-4-07
	8 Piston	7.85	DTK-4-08
	9 External Cylinder	13.25	DTK-4-09
	10 Retainer Ring	0.20	DTK-4-10
	11 Guided Sleeve	1.85	DTK-4-11
	12 "O"Ring of Stop Ring	0.005	DTK-4-12
	13 Stop Ring	0.25	DTK-4-13
	14 Drive Chuck	3.95	DTK-4-14
	15 Drill Bit		DTK-4-15

Products features: High impaction frequency, fast drilling speed, low air consumption.

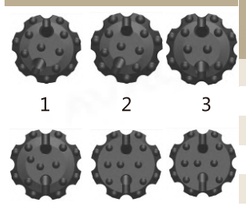
Rang of application: Available for all working conditions specialize in blast hole drilling of mine.

Technical Parameters

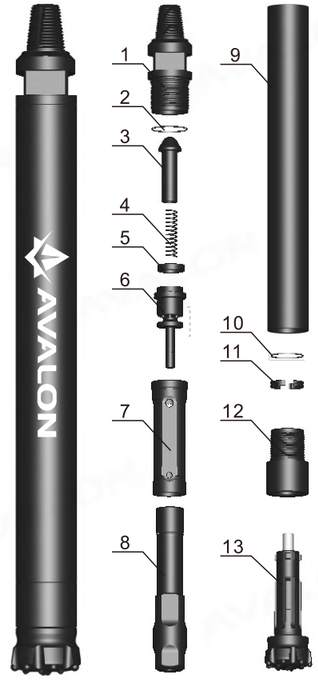
Length(Without bit)	Weigth(Without bit)	External diameter	Bit Shank	Hole range	Connection Thread (top sub-drill pipe)
927mm	37.4kg	Φ100mm	HD45A DHD340A(No Tube)	Φ110mm-Φ130mm	API 2 3/8" Reg

Working Pressure	Impact rate at 17bar (reference)	Speed recommended	Pull force recommended	Reference Air consumption(m³/min)			
				14Bar	17.2Bar	20.7Bar	24Bar
10-25Bar	35Hz	30-70rpm	7.0kN	6.5	8.8	11.0	13.5

Technical Parameters Of Bits Assorted

Head Shape	Number of head shape	Head Diameter (mm)	Part No.	No. × Button diameter (mm)				Button angle	No. of Flushing holes Dia. (mm)	Weight (Kg)
				Gauge Buttons	Front Buttons					
					Flat Face	Convex Face	Concave Face			
 1 2 3 4 5 6	1	Φ115	DTK-4-115CV7	7×Φ14	2×Φ14	4×Φ14	/	38°	2×Φ18	8.2
	2	Φ115	DTK-4-115CV7-1	7×Φ16	2×Φ14	4×Φ14	/	38°	2×Φ18	8.2
	3	Φ115	DTK-4-115CV8	8×Φ14	2×Φ14	4×Φ14	/	38°	2×Φ18	8.2
	4	Φ125	DTK-4-125CV8	8×Φ14	3×Φ13	4×Φ14	/	38°	2×Φ18	8.8
	5	Φ127	DTK-4-127FF8	8×Φ14	7×Φ13	/	/	38°	2×Φ18	8.9
	6	Φ130	DTK-4-130FF8	8×Φ14	7×Φ14	/	/	38°	2×Φ18	9.1

DTX-45

Product Structure	Part Description	Weight (Kg)	Part Number
	1 Top Sub	7.00	DTX-45-01
	2 "O" Ring of Top Sub	0.005	DTX-45-02
	3 Check Valve	0.42	DTX-45-03
	4 Spring	0.04	DTX-45-04
	5 Compression Buffer	0.04	DTX-45-05
	6 Air Distributor	2.20	DTX-45-06
	7 Internal Cylinder	2.30	DTX-45-07
	8 Piston	9.00	DTX-45-08
	9 External Cylinder	16.0	DTX-45-09
	10 "O"Ring of Stop Ring	0.005	DTX-45-10
	11 Stop Ring	0.20	DTX-45-11
	12 Drive Chuck	3.60	DTX-45-12
	13 Drill Bit		DTX-45-13

Products features: Valveless air distribution hammer, more reliable. Good sealability, no water and cuttings entering into hammer in water exists drilling.

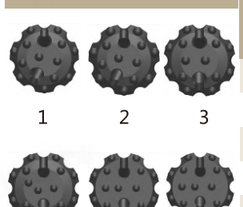
Rang of application: Available for all working conditions, high performance in overburden and water well drilling project.

Technical Parameters

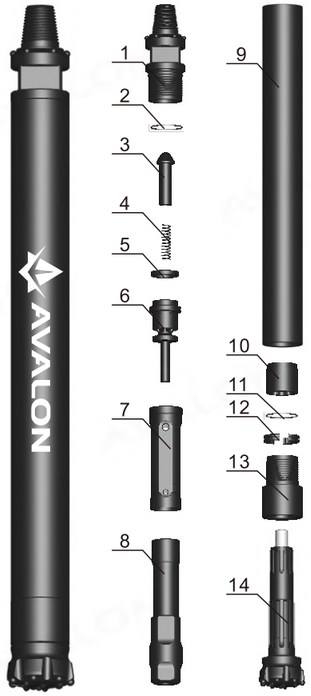
Length(Without bit)	Weigth(Without bit)	External diameter	Bit Shank	Hole range	Connection Thread (top sub-drill pipe)
1032mm	40.7kg	Φ99mm	HD45 COP44 DHD340	Φ110mm-Φ130mm	API 2 3/8" Reg

Working Pressure	Impact rate at 17bar (reference)	Speed recommended	Pull force recommended	Reference Air consumption(m³/min)			
				14Bar	17.2Bar	20.7Bar	24Bar
10-25Bar	28Hz	30-70rpm	8.0kN	7.4	9.8	12.3	15.0

Technical Parameters Of Bits Assorted

Head Shape	Number of head shape	Head Diameter (mm)	Part No.	No. × Button diameter (mm)				Button angle	No. of Flushing holes Dia. (mm)	Weight (Kg)
				Gauge Buttons	Front Buttons					
					Flat Face	Convex Face	Concave Face			
 1 2 3 4 5 6	1	Φ115	DTX-45-115CV7	7×Φ14	2×Φ14	4×Φ14	/	38°	2×Φ18	8.2
	2	Φ115	DTX-45-115CV7-1	7×Φ16	2×Φ14	4×Φ14	/	38°	2×Φ18	8.2
	3	Φ115	DTX-45-115CV8	8×Φ14	2×Φ14	4×Φ14	/	38°	2×Φ18	8.2
	4	Φ125	DTX-45-125CV8	8×Φ14	3×Φ13	4×Φ14	/	38°	2×Φ18	8.8
	5	Φ127	DTX-45-127FF8	8×Φ14	7×Φ13	/	/	38°	2×Φ18	8.9
	6	Φ130	DTX-45-130FF8	8×Φ14	7×Φ14	/	/	38°	2×Φ18	9.1

DHQ-40

Product Structure	Part Description	Weight (Kg)	Part Number
	1 Top Sub	7.00	DHQ-40-01
	2 “O” Ring of Top Sub	0.005	DHQ-40-02
	3 Check Valve	0.42	DHQ-40-03
	4 Spring	0.04	DHQ-40-04
	5 Compression Buffer	0.04	DHQ-40-05
	6 Air Distributor	2.20	DHQ-40-06
	7 Internal Cylinder	2.30	DHQ-40-07
	8 Piston	8.80	DHQ-40-08
	9 External Cylinder	17.5	DHQ-40-09
	10 Guided Sleeve	0.80	DHQ-40-10
	11 "O"Ring of Stop Ring	0.005	DHQ-40-11
	12 Stop Ring	0.30	DHQ-40-12
	13 Drive Chuck	3.30	DHQ-40-13
	14 Drill Bit		DHQ-40-14

Products features: Valveless air distribution hammer, more reliable. Good sealability, no water and cuttings entering into hammer in water exists drilling.

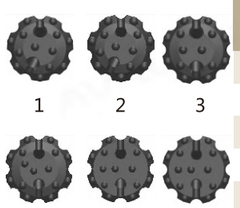
Rang of application: Available for all working conditions, high performance in overburden and water well drilling project.

Technical Parameters

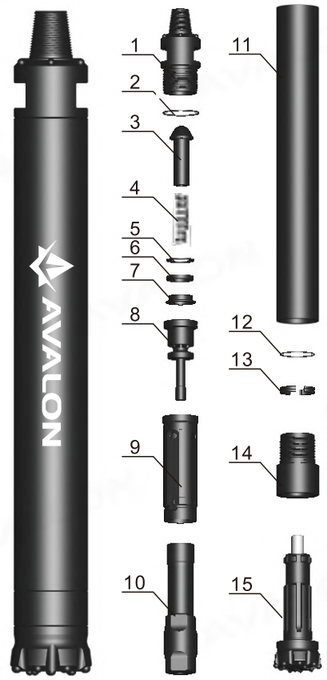
Length(Without bit)	Weigth(Without bit)	External diameter	Bit Shank	Hole range	Connection Thread (top sub-drill pipe)
1103mm	42.6kg	Φ99mm	QL40	Φ110mm-Φ130mm	API 2 3/8" Reg

Working Pressure	Impact rate at 17bar (reference)	Speed recommended	Pull force recommended	Reference Air consumption(m³/min)			
				14Bar	17.2Bar	20.7Bar	24Bar
10-25Bar	28Hz	30-70rpm	8.0kN	7.4	9.8	12.3	15.0

Technical Parameters Of Bits Assorted

Head Shape	Number of head shape	Head Diameter (mm)	Part No.	No. × Button diameter (mm)				Button angle	No. of Flushing holes Dia. (mm)	Weight (Kg)
				Gauge Buttons	Front Buttons					
					Flat Face	Convex Face	Concave Face			
 1 2 3 4 5 6	1	Φ115	DHQ-40-115CV7	7×Φ14	2×Φ14	4×Φ14	/	38°	2×Φ18	9.6
	2	Φ115	DHQ-40-115CV7-1	7×Φ16	2×Φ14	4×Φ14	/	38°	2×Φ18	9.6
	3	Φ115	DHQ-40-115CV8	8×Φ14	2×Φ14	4×Φ14	/	38°	2×Φ18	9.6
	4	Φ125	DHQ-40-125CV8	8×Φ14	3×Φ13	4×Φ14	/	38°	2×Φ18	10.2
	5	Φ127	DHQ-40-127FF8	8×Φ14	7×Φ13	/	/	38°	2×Φ18	10.3
	6	Φ130	DHQ-40-130FF8	8×Φ14	7×Φ14	/	/	38°	2×Φ18	10.5

DTX-55

Product Structure	Part Description	Weight (Kg)	Part Number
	1 Top Sub	14.7	DTX-55-01
	2 “O” Ring of Top Sub	0.01	DTX-55-02
	3 Check Valve	1.00	DTX-55-03
	4 Spring	0.04	DTX-55-04
	5 Breakout Ring	0.10	DTX-55-05
	6 Compression Buffer	0.06	DTX-55-06
	7 Base Of Compression Buffer	0.40	DTX-55-07
	8 Air Distributor	3.70	DTX-55-08
	9 Internal Cylinder	4.50	DTX-55-09
	10 Piston	15.5	DTX-55-10
	11 External Cylinder	29.96	DTX-55-11
	12 "O"Ring of Stop Ring	0.01	DTX-55-12
	13 Stop Ring	0.30	DTX-55-13
	14 Drive Chuck	6.40	DTX-55-14
	15 Drill Bit		DTX-55-15

Products features: Valveless air distribution hammer, more reliable. Good sealability, no water and cuttings entering into hammer in water exists drilling.

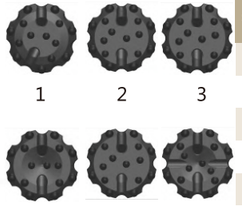
Rang of application: Available for all working conditions, high performance in overburden and water well drilling project.

Technical Parameters

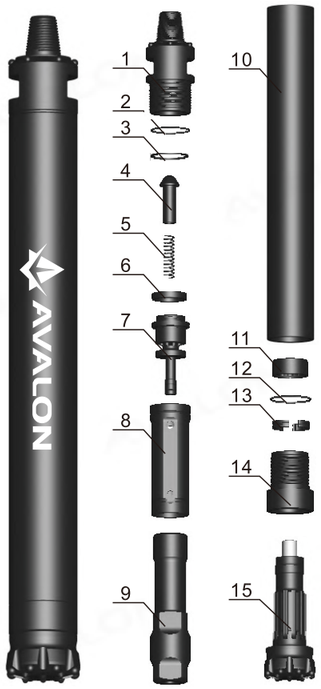
Length(Without bit)	Weigth(Without bit)	External diameter	Bit Shank	Hole range	Connection Thread (top sub-drill pipe)
1214mm	76.98kg	Φ125mm	HD55 COP54 DHD350R	Φ135mm-Φ152mm	API 2 3/8" Reg API 3 1/2" Reg

Working Pressure	Impact rate at 17bar (reference)	Speed recommended	Pull force recommended	Reference Air consumption(m³/min)			
				14Bar	17.2Bar	20.7Bar	24Bar
10-25Bar	26Hz	30-60rpm	9.5kN	12.0	15.4	18.7	22.3

Technical Parameters Of Bits Assorted

Head Shape	Number of head shape	Head Diameter (mm)	Part No.	No. × Button diameter (mm)				Button angle	No. of Flushing holes Dia. (mm)	Weight (Kg)
				Gauge Buttons	Front Buttons					
					Flat Face	Convex Face	Concave Face			
 1 2 3 4 5 6	1	Φ140	DTX-55-140CV7	7×Φ18	3×Φ14	4×Φ15	/	38°	2×Φ20	15.3
	2	Φ140	DTX-55-140FF8	8×Φ16	8×Φ14	/	/	38°	2×Φ20	15.5
	3	Φ146	DTX-55-146FF8	8×Φ18	8×Φ15	/	/	38°	2×Φ20	16.1
	4	Φ146	DTX-55-146CC8	8×Φ18	4×Φ15	/	3×Φ14	38°	2×Φ20	16.0
	5	Φ152	DTX-55-152FF8	8×Φ18	8×Φ15	/	/	38°	2×Φ20	16.6
	6	Φ152	DTX-55-152CC8	8×Φ18	4×Φ16	/	4×Φ14	38°	2×Φ20	16.4

DHQ-50

Product Structure	Part Description	Weight (Kg)	Part Number
	1 Top Sub	13.7	DHQ-50-01
	2 "O" Ring of Top Sub	0.015	DHQ-50-02
	3 Breakout Ring	0.15	DHQ-50-03
	4 Check Valve	1.00	DHQ-50-04
	5 Spring	0.10	DHQ-50-05
	6 Compression Buffer	0.10	DHQ-50-06
	7 Air Distributor	3.50	DHQ-50-07
	8 Internal Cylinder	4.20	DHQ-50-08
	9 Piston	19.0	DHQ-50-09
	10 External Cylinder	24.6	DHQ-50-10
	11 Guided Sleeve	0.90	DHQ-50-11
	12 "O"Ring of Stop Ring	0.01	DHQ-50-12
	13 Stop Ring	0.40	DHQ-50-13
	14 Drive Chuck	4.60	DHQ-50-14
	15 Drill Bit		DHQ-50-15

Products features: Valveless air distribution hammer, more reliable. Good sealability, no water and cuttings entering into hammer in water exists drilling.

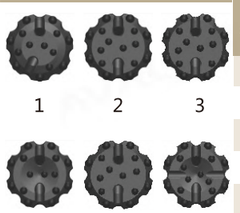
Rang of application: Available for all working conditions, high performance in overburden and water well drilling project.

Technical Parameters

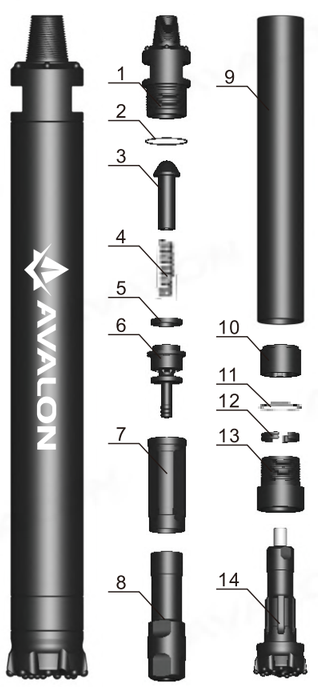
Length(Without bit)	Weigth(Without bit)	External diameter	Bit Shank	Hole range	Connection Thread (top sub-drill pipe)
1156mm	73.0kg	Φ125mm	COP54 QL50	Φ135mm-Φ152mm	API 2 3/8" Reg API 3 1/2" Reg

Working Pressure	Impact rate at 17bar (reference)	Speed recommended	Pull force recommended	Reference Air consumption(m³/min)			
				14Bar	17.2Bar	20.7Bar	24Bar
10-25Bar	26Hz	30-60rpm	9.5kN	12.0	15.4	18.7	22.3

Technical Parameters Of Bits Assorted

Head Shape	Number of head shape	Head Diameter (mm)	Part No.	No. × Button diameter (mm)				Button angle	No. of Flushing holes Dia. (mm)	Weight (Kg)
				Gauge Buttons	Front Buttons					
					Flat Face	Convex Face	Concave Face			
 1 2 3 4 5 6	1	Φ140	DHQ-50-140CV7	7×Φ18	3×Φ14	4×Φ15	/	38°	2×Φ20	15.1
	2	Φ140	DHQ-50-140FF8	8×Φ16	8×Φ14	/	/	38°	2×Φ20	15.3
	3	Φ146	DHQ-50-146FF8	8×Φ18	8×Φ15	/	/	38°	2×Φ20	15.9
	4	Φ146	DHQ-50-146CC8	8×Φ18	4×Φ15	/	3×Φ14	38°	2×Φ20	15.8
	5	Φ152	DHQ-50-152FF8	8×Φ18	8×Φ15	/	/	38°	2×Φ20	16.4
	6	Φ152	DHQ-50-152CC8	8×Φ18	4×Φ16	/	4×Φ14	38°	2×Φ20	16.2

DTX-65

Product Structure	Part Description	Weight (Kg)	Part Number
	1 Top Sub	21.1	DTX-65-01
	2 "O" Ring of Top Sub	0.02	DTX-65-02
	3 Check Valve	1.00	DTX-65-03
	4 Spring	0.04	DTX-65-04
	5 Compression Buffer	0.08	DTX-65-05
	6 Air Distributor	5.15	DTX-65-06
	7 Internal Cylinder	5.10	DTX-65-07
	8 Piston	23.35	DTX-65-08
	9 External Cylinder	44.7	DTX-65-09
	10 Guided Sleeve	2.80	DTX-65-10
	11 "O" Ring of Stop Ring	0.02	DTX-65-11
	12 Stop Ring	0.85	DTX-65-12
	13 Drive Chuck	8.15	DTX-65-13
	14 Drill Bit		DTX-65-14

Products features: Valveless air distribution hammer, more reliable. Good sealability, no water and cuttings entering into hammer in water exists drilling.

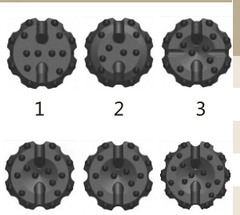
Rang of application: Available for all working conditions, high performance in overburden and water well drilling project.

Technical Parameters

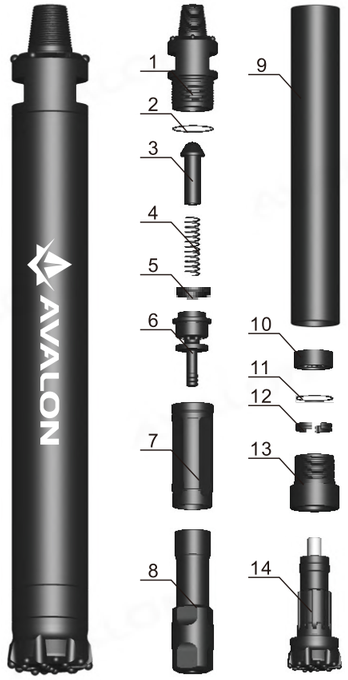
Length(Without bit)	Weigth(Without bit)	External diameter	Bit Shank	Hole range	Connection Thread (top sub-drill pipe)
1263.5mm	112.36kg	Φ148mm	HD65 COP64 DHD360	Φ165mm-Φ190mm	API 3 1/2" Reg

Working Pressure	Impact rate at 17bar (reference)	Speed recommended	Pull force recommended	Reference Air consumption(m³/min)			
				14Bar	17.2Bar	20.7Bar	24Bar
10-25Bar	25Hz	25-50rpm	11kN	15.8	19.6	23.5	27.5

Technical Parameters Of Bits Assorted

Head Shape	Number of head shape	Head Diameter (mm)	Part No.	No. × Button diameter (mm)				Button angle	No. of Flushing holes Dia. (mm)	Weight (Kg)
				Gauge Buttons	Front Buttons					
					Flat Face	Convex Face	Concave Face			
 1 2 3 4 5 6	1	Φ165	DTX-65-165FF8	8×Φ18	8×Φ16	/	/	38°	2×Φ26	24.6
	2	Φ165	DTX-65-165CV8	8×Φ18	4×Φ16	4×Φ16	/	38°	2×Φ26	24.4
	3	Φ165	DTX-65-165CC8	8×Φ18	4×Φ16	/	4×Φ15	38°	2×Φ26	24.1
	4	Φ171	DTX-65-171CC8	8×Φ18	6×Φ16	/	4×Φ16	38°	2×Φ26	24.8
	5	Φ178	DTX-65-178CC8	8×Φ18	6×Φ16	/	4×Φ16	38°	2×Φ26	25.4
	6	Φ190	DTX-65-190CC10	10×Φ18	8×Φ16	/	5×Φ16	38°	2×Φ26	26.9

DHQ-60

Product Structure	Part Description	Weight (Kg)	Part Number
	1 Top Sub	21.1	DHQ-60-01
	2 "O" Ring of Top Sub	0.02	DHQ-60-02
	3 Check Valve	1.00	DHQ-60-03
	4 Spring	0.10	DHQ-60-04
	5 Compression Buffer	0.10	DHQ-60-05
	6 Air Distributor	6.00	DHQ-60-06
	7 Internal Cylinder	5.00	DHQ-60-07
	8 Piston	23.5	DHQ-60-08
	9 External Cylinder	31.0	DHQ-60-09
	10 Guided Sleeve	1.00	DHQ-60-10
	11 "O" Ring of Stop Ring	0.02	DHQ-60-11
	12 Stop Ring	0.60	DHQ-60-12
	13 Drive Chuck	5.40	DHQ-60-13
	14 Drill Bit		DHQ-60-14

Products features: Valveless air distribution hammer, more reliable. Good sealability, no water and cuttings entering into hammer in water exists drilling.

Rang of application: Available for all working conditions, high performance in overburden and water well drilling project.

Technical Parameters

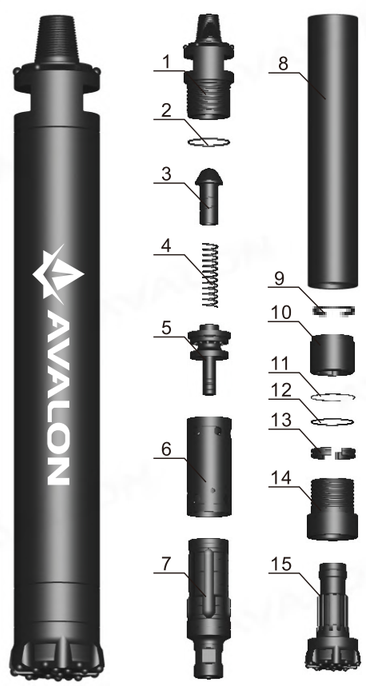
Length(Without bit)	Weigth(Without bit)	External diameter	Bit Shank	Hole range	Connection Thread (top sub-drill pipe)
1212mm	95.0kg	Φ148mm	Cop64(NoTube) QL60(NoTube)	Φ165mm-Φ190mm	API 3 1/2" Reg

Working Pressure	Impact rate at 17bar (reference)	Speed recommended	Pull force recommended	Reference Air consumption(m³/min)			
				14Bar	17.2Bar	20.7Bar	24Bar
10-25Bar	25Hz	25-50rpm	11kN	15.80	19.60	23.50	27.50

Technical Parameters Of Bits Assorted

Head Shape	Number of head shape	Head Diameter (mm)	Part No.	No. × Button diameter (mm)				Button angle	No. of Flushing holes Dia. (mm)	Weight (Kg)
				Gauge Buttons	Front Buttons					
					Flat Face	Convex Face	Concave Face			
 1 2 3	1	Φ165	DHQ-60-165FF8	8×Φ18	8×Φ16	/	/	38°	2×Φ26	23.8
	2	Φ165	DHQ-60-165CV8	8×Φ18	4×Φ16	4×Φ16	/	38°	2×Φ26	23.6
	3	Φ165	DHQ-60-165CC8	8×Φ18	4×Φ16	/	4×Φ15	38°	2×Φ26	23.3
 4 5 6	4	Φ171	DHQ-60-171CC8	8×Φ18	6×Φ16	/	4×Φ16	38°	2×Φ26	24.0
	5	Φ178	DHQ-60-178CC8	8×Φ18	6×Φ16	/	4×Φ16	38°	2×Φ26	24.6
	6	Φ190	DHQ-60-190CC10	10×Φ18	8×Φ16	/	5×Φ16	38°	2×Φ26	26.1

DTK-7

Product Structure	Part Description	Weight (Kg)	Part Number
	1 Top Sub	28.8	DTK-7-01
	2 "O" Ring of Top Sub	0.02	DTK-7-02
	3 Check Valve	0.60	DTK-7-03
	4 Spring	0.10	DTK-7-04
	5 Air Distributor	4.70	DTK-7-05
	6 Internal Cylinder	4.30	DTK-7-06
	7 Piston	32.4	DTK-7-07
	8 External Cylinder	41.9	DTK-7-08
	9 Retaining Ring	0.20	DTK-7-09
	10 Guided Sleeve	5.60	DTK-7-10
	11 Retaining Ring	0.10	DTK-7-11
	12 "O"Ring of Stop Ring	0.02	DTK-7-12
	13 Stop Ring	1.30	DTK-7-13
	14 Drive Chuck	12.5	DTK-7-14
	15 Drill Bit		DTK-7-15

Products features: High impaction frequency, fast drilling speed, low air consumption.

Rang of application: Available for all working conditions specialize in blast hole drilling of mine.

Technical Parameters

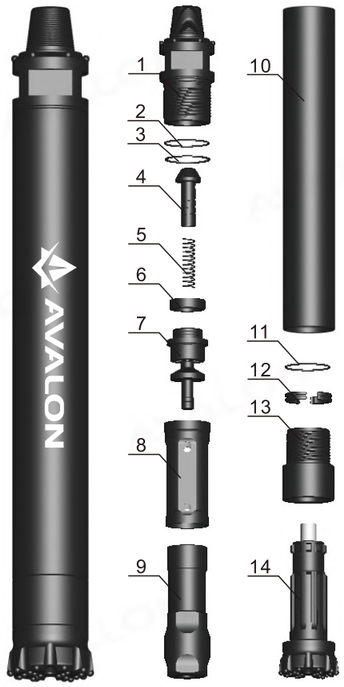
Length(Without bit)	Weigth(Without bit)	External diameter	Bit Shank	Hole range	Connection Thread (top sub-drill pipe)
1191mm	131kg	Φ165mm	HQL60A QL60(No Tube)	Φ178mm-Φ203mm	API 3 1/2" Reg

Working Pressure	Impact rate at 17bar (reference)	Speed recommended	Pull force recommended	Reference Air consumption(m³/min)			
				14Bar	17.2Bar	20.7Bar	24Bar
10-25Bar	25Hz	20-45rpm	14kN	14.6	18.2	23.4	29.5

Technical Parameters Of Bits Assorted

Head Shape	Number of head shape	Head Diameter (mm)	Part No.	No. × Button diameter (mm)				Button angle	No. of Flushing holes Dia. (mm)	Weight (Kg)
				Gauge Buttons	Front Buttons					
					Flat Face	Convex Face	Concave Face			
 1 2 3	1	Φ178	DTK-7-178CC8	8×Φ18	6×Φ16	/	4×Φ16	38°	2×Φ26	25.4
	2	Φ185	DTK-7-185CC9	9×Φ18	6×Φ16	/	4×Φ16	38°	3×Φ22	26.0
	3	Φ190	DTK-7-190CC10	10×Φ18	8×Φ16	/	5×Φ16	38°	2×Φ26	26.9
 4 5 6	4	Φ195	DTK-7-195CC10	10×Φ18	8×Φ16	/	5×Φ16	38°	2×Φ26	27.5
	5	Φ200	DTK-7-200CC10	10×Φ18	8×Φ16	/	5×Φ16	38°	2×Φ26	28.2
	6	Φ203	DTK-7-203CC10	10×Φ18	8×Φ16	/	5×Φ16	38°	2×Φ26	28.7

DTX-80

Product Structure	Part Description	Weight (Kg)	Part Number
	1 Top Sub	41.4	DTX-80-01
	2 "O" Ring of Top Sub	0.01	DTX-80-02
	3 Breakout Ring of Top Sub	0.30	DTX-80-03
	4 Check Valve	1.30	DTX-80-04
	5 Spring	0.20	DTX-80-05
	6 Compression Buffer	0.46	DTX-80-06
	7 Air Distributor	13.2	DTX-80-07
	8 Internal Cylinder	8.40	DTX-80-08
	9 Piston	41.7	DTX-80-09
	10 External Cylinder	61.4	DTX-80-10
	11 "O"Ring of Stop Ring	0.01	DTX-80-11
	12 Stop Ring	1.20	DTX-80-12
	13 Drive Chuck	17.6	DTX-80-13
	14 Drill Bit		DTX-80-14

Products features: Valveless air distribution hammer, more reliable. Good sealability, no water and cuttings entering into hammer in water exists drilling.

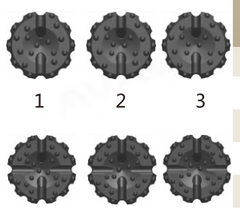
Rang of application: Available for all working conditions, high performance in overburden and water well drilling project.

Technical Parameters

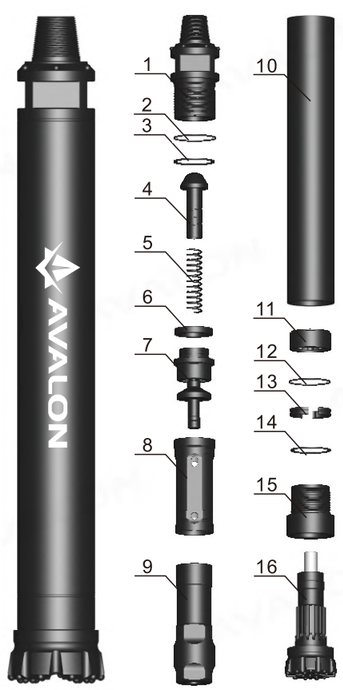
Length(Without bit)	Weigth(Without bit)	External diameter	Bit Shank	Hole range	Connection Thread (top sub-drill pipe)
1492mm	188kg	Φ180mm	HD85 DHD380 COP84	Φ195mm-Φ254mm	API 4 1/2" Reg

Working Pressure	Impact rate at 17bar (reference)	Speed recommended	Pull force recommended	Reference Air consumption(m³/min)			
				14Bar	17.2Bar	20.7Bar	24Bar
10-25Bar	20Hz	20-45rpm	19kN	20.75	27.25	34.30	43.60

Technical Parameters Of Bits Assorted

Head Shape	Number of head shape	Head Diameter (mm)	Part No.	No. × Button diameter (mm)				Button angle	No. of Flushing holes Dia. (mm)	Weight (Kg)
				Gauge Buttons	Front Buttons					
					Flat Face	Convex Face	Concave Face			
 1 2 3 4 5 6	1	Φ203	DTX-80-203CC10	10×Φ18	8×Φ18	/	5×Φ16	38°	2×Φ30	47.0
	2	Φ216	DTX-80-216CC10	10×Φ18	8×Φ18	/	6×Φ16	38°	2×Φ30	51.2
	3	Φ219	DTX-80-219CC10	10×Φ18	8×Φ18	/	6×Φ16	38°	2×Φ30	51.7
	4	Φ229	DTX-80-229CC12	12×Φ18	12×Φ16	/	7×Φ16	38°	2×Φ30	53.3
	5	Φ235	DTX-80-235CC12	12×Φ18	12×Φ16	/	7×Φ16	38°	2×Φ30	54.3
	6	Φ245	DTX-80-245CC12	12×Φ19	12×Φ16	/	8×Φ16	38°	2×Φ30	58.4

DHQ-80

Product Structure	Part Description	Weight (Kg)	Part Number
	1 Top Sub	44.6	DHQ-80-01
	2 "O" Ring of Top Sub	0.01	DHQ-80-02
	3 Breakout Ring of Top Sub	0.30	DHQ-80-03
	4 Check Valve	1.30	DHQ-80-04
	5 Spring	0.20	DHQ-80-05
	6 Compression Buffer	0.46	DHQ-80-06
	7 Air Distributor	13.2	DHQ-80-07
	8 Internal Cylinder	8.40	DHQ-80-08
	9 Piston	41.5	DHQ-80-09
	10 External Cylinder	74.1	DHQ-80-10
	11 Guided Sleeve	3.70	DHQ-80-11
	12 "O"Ring of Stop Ring	0.01	DHQ-80-12
	13 Stop Ring	1.20	DHQ-80-13
	14 Breakout Ring of Drive Chuck	0.35	DHQ-80-14
	15 Drive Chuck	13.6	DHQ-80-15
	16 Drill Bit		DHQ-80-16

Products features: Valveless air distribution hammer, more reliable. Good sealability, no water and cuttings entering into hammer in water exists drilling.

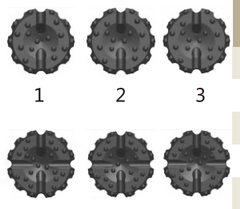
Rang of application: Available for all working conditions, high performance in overburden and water well drilling project.

Technical Parameters

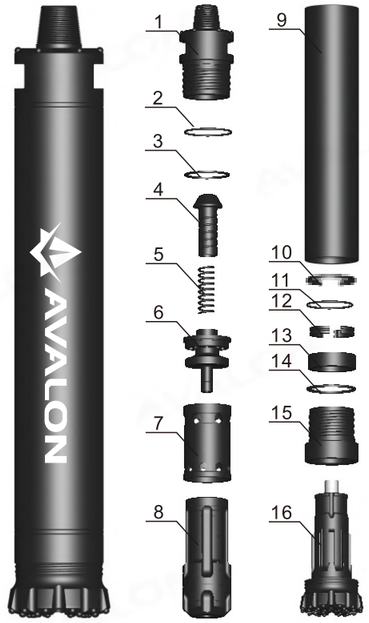
Length(Without bit)	Weigth(Without bit)	External diameter	Bit Shank	Hole range	Connection Thread (top sub-drill pipe)
1471mm	203kg	Φ185mm	QL80	Φ195mm-Φ254mm	API 4 1/2" Reg

Working Pressure	Impact rate at 17bar (reference)	Speed recommended	Pull force recommended	Reference Air consumption(m³/min)			
				14Bar	17.2Bar	20.7Bar	24Bar
10-25Bar	20Hz	20-45rpm	19kN	20.75	27.25	34.30	43.60

Technical Parameters Of Bits Assorted

Head Shape	Number of head shape	Head Diameter (mm)	Part No.	No. × Button diameter (mm)				Button angle	No. of Flushing holes Dia. (mm)	Weight (Kg)
				Gauge Buttons	Front Buttons					
					Flat Face	Convex Face	Concave Face			
 1 2 3 4 5 6	1	Φ203	DHQ-80-203CC10	10×Φ18	8×Φ18	/	5×Φ16	38°	2×Φ30	50.1
	2	Φ216	DHQ-80-216CC10	10×Φ18	8×Φ18	/	6×Φ16	38°	2×Φ30	54.3
	3	Φ219	DHQ-80-219CC10	10×Φ18	8×Φ18	/	6×Φ16	38°	2×Φ30	54.8
	4	Φ229	DHQ-80-229CC12	12×Φ18	12×Φ16	/	7×Φ16	38°	2×Φ30	56.4
	5	Φ235	DHQ-80-235CC12	12×Φ18	12×Φ16	/	7×Φ16	38°	2×Φ30	57.4
	6	Φ245	DHQ-80-245CC12	12×Φ19	12×Φ16	/	8×Φ16	38°	2×Φ30	61.5

DHK-10

Product Structure	Part Description	Weight (Kg)	Part Number
	1 Top Sub	63.0	DHK-10-01
	2 "O" Ring of Top Sub	0.05	DHK-10-02
	3 Breakout Ring of Top Sub	1.20	DHK-10-03
	4 Check Valve	1.50	DHK-10-04
	5 Spring	0.20	DHK-10-05
	6 Air Distributor	13.0	DHK-10-06
	7 Internal Cylinder	13.6	DHK-10-07
	8 Piston	68.0	DHK-10-08
	9 External Cylinder	92.5	DHK-10-09
	10 Retaining Ring	0.60	DHK-10-10
	11 "O" Ring of Stop Ring	0.05	DHK-10-11
	12 Stop Ring	2.80	DHK-10-12
	13 Guided Sleeve	5.00	DHK-10-13
	14 Breakout Ring of Stop Ring	1.20	DHK-10-14
	15 Drive Chuck	23.5	DHK-10-15
	16 Drill Bit		DHK-10-16

Products features: Valveless air distribution hammer, more reliable,. Good sealability, no water and cuttings entering into hammer in water exists drilling.

Rang of application: Available for all working conditions, high performance in overburden and water well drilling project.

Technical Parameters

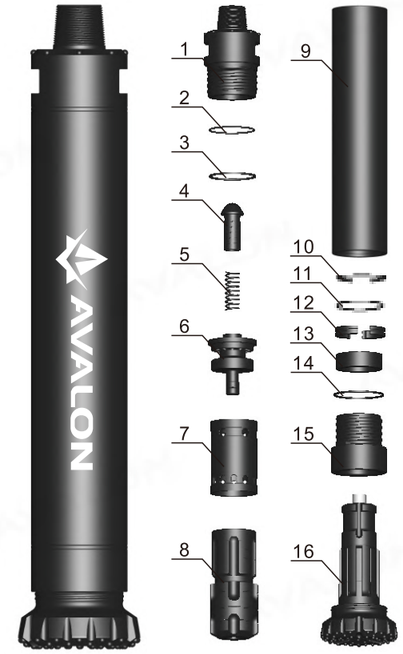
Length(Without bit)	Weigth(Without bit)	External diameter	Bit Shank	Hole range	Connection Thread (top sub-drill pipe)
1413mm	303kg	Φ225mm	SD10	Φ254mm-Φ305mm	API 4 1/2" Reg API 5 1/2" Reg

Working Pressure	Impact rate at 17bar (reference)	Speed recommended	Pull force recommended	Reference Air consumption(m³/min)			
				10Bar	18Bar	21Bar	24Bar
10-25Bar	20Hz	15-35rpm	21kN	22.0	40.0	48.0	55.0

Technical Parameters Of Bits Assorted

Head Shape	Number of head shape	Head Diameter (mm)	Part No.	No. × Button diameter (mm)				Button angle	No. of Flushing holes Dia. (mm)	Weight (Kg)
				Gauge Buttons	Front Buttons					
					Flat Face	Convex Face	Concave Face			
 1 2 3	1	Φ254	DHK-10-254CC12	12×Φ19	12×Φ16	8×Φ18	6×Φ16	38°	2×Φ30	82.1
	2	Φ275	DHK-10-275CC12	12×Φ19	12×Φ16	8×Φ18	8×Φ16	38°	2×Φ30	86.2
	3	Φ305	DHK-10-305CC15	15×Φ19	15×Φ18	12×Φ18	9×Φ16	38°	3×Φ26	98.7

DHK-12

Product Structure	Part Description	Weight (Kg)	Part Number
	1 Top Sub	121.7	DHK-12-01
	2 "O" Ring of Top Sub	0.02	DHK-12-02
	3 Breakout Ring of Top Sub	2.10	DHK-12-03
	4 Check Valve	2.10	DHK-12-04
	5 Spring	0.20	DHK-12-05
	6 Air Distributor	20.2	DHK-12-06
	7 Internal Cylinder	31.3	DHK-12-07
	8 Piston	110	DHK-12-08
	9 External Cylinder	168.7	DHK-12-09
	10 Retaining Ring	1.20	DHK-12-10
	11 "O" Ring of Stop Ring	0.02	DHK-12-11
	12 Stop Ring	5.20	DHK-12-12
	13 Guided Sleeve	9.90	DHK-12-13
	14 Breakout Ring of Stop Ring	2.10	DHK-12-14
	15 Drive Chuck	50.9	DHK-12-15
	16 Drill Bit		DHK-12-16

Products features: Valveless air distribution hammer, more reliable. Good sealability, no water and cuttings entering into hammer in water exists drilling.

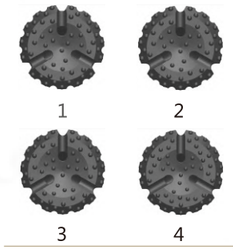
Rang of application: Available for all working conditions, high performance in overburden and water well drilling project.

Technical Parameters

Length(Without bit)	Weigth(Without bit)	External diameter	Bit Shank	Hole range	Connection Thread (top sub-drill pipe)
1680mm	526kg	Φ275mm	SD12	Φ305mm-Φ445mm	API 6 5/8" Reg

Working Pressure	Impact rate at 17bar (reference)	Speed recommended	Pull force recommended	Reference Air consumption(m³/min)			
				14Bar	17.2Bar	20.7Bar	24Bar
10-25Bar	18Hz	15-35rpm	28kN	36.60	50.70	55.67	60.60

Technical Parameters Of Bits Assorted

Head Shape	Number of head shape	Head Diameter (mm)	Part No.	No. × Button diameter (mm)				Button angle	No. of Flushing holes Dia. (mm)	Weight (Kg)
				Gauge Buttons	Front Buttons					
					Flat Face	Convex Face	Concave Face			
 1 2 3 4	1	Φ305	DHK-12-305CC15	27×Φ18	15×Φ18	/	11×Φ16	38°	3×Φ35	105
	2	Φ315	DHK-12-315CC15	27×Φ18	15×Φ18	/	12×Φ16	38°	3×Φ35	129
	3	Φ325	DHK-12-325CC15	27×Φ18	15×Φ18	/	15×Φ16	38°	3×Φ35	132
	4	Φ350	DHK-12-350CC15	27×Φ18	24×Φ18	/	12×Φ16	38°	3×Φ35	151

BREAKOUT BENCHES

Fast, controlled disassembly for every Avalon DTH hammer

Keeping hammers in spec is non-negotiable—yet every minute spent in the workshop is a minute the rig isn't turning. Avalon breakout benches pair Swiss-grade hydraulics with operator-centric ergonomics, cutting dismantle time to a fraction while protecting critical threads from damage.

Manual Hydraulic Bench – Model 107

Best for low-throughput sites or
remote field service trucks

Workflow

1. **Load & align** Rest the hammer on the V-bed; align the K-base, jack and wrench with the top-sub flats.
2. **Clamp** Tighten the base nuts, then lock the wrench against the top sub.
3. **Break** Pump the jack steadily until the top sub separates.
4. **Flip** Release pressure, loosen the nuts, rotate the hammer (avoid clamping on external-cylinder threads).
5. **Drive-chuck release** Realign the wrench on the drive chuck, re-secure the K-base and repeat the hydraulic break.

Value to you

·**Portable** , fits on a pickup-bed service skid.
·**No power umbilical** —pure hand-pump hydraulics.
·**Zero thread galling** thanks to purpose-machined jaw inserts.

Automatic Hydraulic Bench

For high-volume rebuild shops and
central maintenance hubs

Workflow

1. **Position** Place hammer on the bench; adjust the vertical unloading cylinder to height.
2. **Lock left chain** Secure the top sub and insert the safety pin.
3. **Lock right chain** Secure the external cylinder near the top sub; insert pin.
4. **Break top sub** Engage both chain-hydraulic circuits; the bench applies uniform torque until release.
5. **Rotate hammer** Return cylinders, remove pins, loosen chains, and flip the hammer.
6. **Lock & break drive chuck** Repeat the dual-chain sequence on the drive-chuck end.

Value to you

· **One-person, push-button operation** —cuts strip time by up to 70 %.
· **Synchronized dual chains** deliver even, shock-free torque, safeguarding internal fits.
· **Height-adjust cylinder** adapts instantly from 3″ to 8″ hammer bodies without spacers.
· **Integrated safety interlocks** prevent actuation unless both pins are seated.

AVALON ROCK-DRILL PERFORMANCE FLUIDS

Engineered lubrication that keeps impact energy high and maintenance costs low

Keeping hammers in good condition is essential—but time spent in the workshop is time lost on the rig. Avalon breakout benches make maintenance faster and easier, while protecting key components from damage.

Purpose-built for DTH and top-hammer systems

Made for both DTH and top-hammer tools, Avalon Rock-Drill Fluids are specially blended to keep high-speed pneumatic hammers running smoothly. They reduce wear and heat, even under tough drilling conditions.

Why switch to Avalon fluids?

Benefit	What it means on your rig
Ultra-stable viscosity	Consistent oil mist distribution from -20 °C mountain starts to +50 °C desert shifts.
Low carbon, ash-free additivation	Zero sticky deposits on air distributors; seal life extends by up to 30 %.
Biodegradable base stocks	Rapid hydrolytic breakdown minimises environmental footprint at remote sites.
Enhanced anti-wear package	Up to 15 % reduction in liner and piston scuffing vs. generic compressor oils.
Water-shedding chemistry	Maintains full lubricity even in high-humidity or water-intrusion holes.

Notes

Notes