

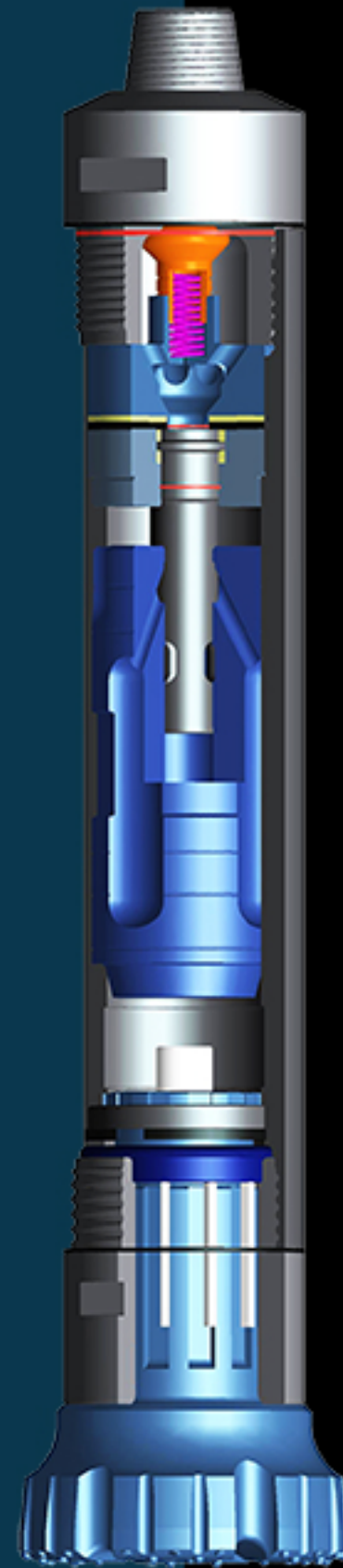


PNEUMEC

THUMPER SERIES

Down-The-Hole Hammers

Rock Drilling is a complex operation, and a powerful tool is required to work with it. The Pneumec Thumper series DTH hammer is precisely what you need. Its simple and robust design makes the Thumper series highly reputable as a reliable, high performance and easy servicing tool. With a hammer range of 3" to 30", and with the supplement of the Pneumec DTH button bits and the various types of Pneumec underreaming systems, you can count on Pneumec to drill any sizes from diameter 90mm up to 1200mm. All Thumper hammers are fitted with standard API REG connections. Hexagon connections or Beco connections can be produced upon request.



THUMPER 'VL' Series

The Thumper 'VL' Series is a superior but versatile Hammer, specifically built for drilling applications where high penetration speeds are vitally important. It's unique design concept provides much greater impact energy and ultimate drilling performance for absolute maximum productivity in almost all ground conditions. The Pneumec 'VL' series works with drill bits without Foot Valves and any problems previously associated with them are completely eliminated.



THUMPER 'C' Series

The Thumper 'C' Series is designed upon field proven hammer technology with superior penetration rates. It incorporates with an inner cylinder and a rigid piston for its long-lasting lifespan. It has proven itself the best Hammer on the market in all kinds of demanding conditions and applications, and especially providing better drilling in soft ground conditions and against large volumes of water. The 'C' Series is available from 4" Hammer to 8" Hammer.



THUMPER HAMMERS CHOICES

MODEL	HOLE SIZE (MM)	AIR PRESSURE (BAR)	AIR CONSUMPTION (CFM)	CONNECTION API REG	SHANK TYPE
THUMPER 30	90 - 105	10 - 24	140 - 440	2-3/8"	MACH 33, DH3.5
THUMPER 40	105 - 127	10 - 24	245 - 535	2-3/8"	SD4, DHD340A, QL40
THUMPER 50	127 - 152	10 - 24	260 - 820	3-1/2"	SD5, DHD350, QL50
THUMPER 60	152 - 216	10 - 24	264 - 840	3-1/2"	SD6, DHD360, QL60
THUMPER 80	203 - 254	10 - 24	425 - 1200	4-1/2"	SD8, DHD380, QL80
THUMPER 100	254 - 305	10 - 17.2	711 - 1422	6-5/8"	SD10
THUMPER 120	302 - 460	6.9 - 17.2	700 - 1980	6-5/8"	SD12, N120, N125
THUMPER 180	460 - 660	6.9 - 15.2	1200 - 3300	8-5/8"	N180
THUMPER 240	610 - 800	6.9 - 15.2	2188 - 7386	8-5/8"	N240
THUMPER 240 S	700 - 1000	6.9 - 15.2	2188 - 7386	8-5/8"	P240S
THUMPER 300	750 - 1200	6.9 - 12	2700 - 6400	HEX 240	P300

PES

Eccentric Underreaming System

The Pneumec PES underreaming system is a two piece eccentric drilling system to drill and simultaneously case a hole through unstable ground conditions that are commonly known as overburden, and is especially effective for casing diameters from 114mm to 273mm. The eccentric pilot bit is retained inside the guide device by mean of a pair of interlocking lugs. When the system is rotated clockwise, the pilot bit opens up to drill a hole large enough to allow the casing to be pulled into the hole. After completing the hole, the eccentric bit is closed by reverse rotation and the drill string can then be retracted from the cased hole.



PES UNDERREAMERS' CHOICES

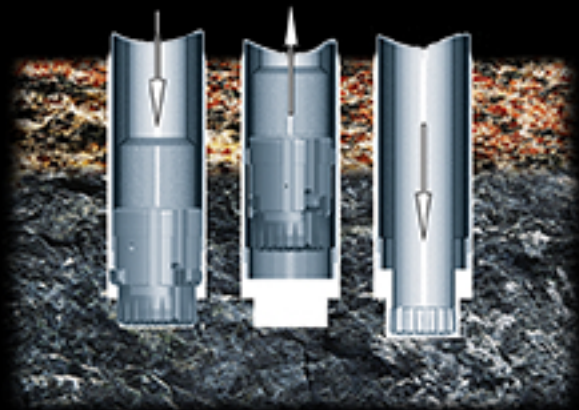
MODEL	DRILLING DIA	RETRACTED DIA	CASING		SHANK TYPE
			O.D.	I.D.	
PES 90	125MM	91MM	114MM	102MM	MACH33, DH3.5
PES115	155MM	116MM	141MM	126MM	SD4, DHD340, QL4
PES140	188MM	141MM	168MM	153MM	SD5, DHD350, QL5
PES165	215MM	166MM	194MM	181MM	SD6, DHD360, QL6
PES190	238MM	190MM	219MM	203MM	SD6, DHD360, QL6
PES215	276MM	215MM	254MM	240MM	SD8, DHD380, QL8
PES235	293MM	235MM	273MM	255MM	SD8, DHD380, QL8
PES240	293MM	240MM	273MM	260MM	SD8, DHD380, QL8

P-CON

Concentric Underreaming System



The Pneumec P-CON underreaming system is specially designed to drill and case a hole through unstabled ground conditions for large diameter casings from 323mm up to 813mm diameter. The P-CON is characterized by its concentric design that incorporates a full face pilot bit together with three independent reamers. Its design revolutionizes system performance in difficult overburden drilling. The pilot bit drills through the loose formation and the reamers behind simultaneously widens the hole sufficiently for the casing to slide down. This two-stage drilling concept greatly increases the penetration rates and is particularly efficient in hard abrasive and decomposed rock conditions.



P-CON UNDERREAMERS' CHOICES

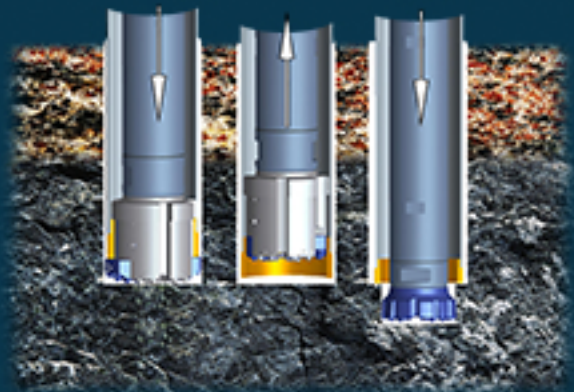
MODEL	DRILLING DIA	RETRACTED DIA	CASING		SHANK TYPE
			O.D.	LD.	
P-CON 280	345MM	280MM	323MM	302MM	SD-10
P-CON 365	432MM	364MM	406MM	387MM	SD12, N125
P-CON 460	530MM	460MM	508MM	483MM	N125, N180
P-CON 510	580MM	509MM	559MM	533MM	N180
P-CON 560	635MM	560MM	610MM	584MM	N180, N240
P-CON 610	685MM	600MM	660MM	632MM	N240
P-CON 660	735MM	656MM	711MM	685MM	N240
P-CON 745	838MM	745MM	813MM	780MM	N240

P-CON-E

Concentric Underreaming System



The Pneumec P-CON-E underreaming system is the economical version of the P-CON system. Its concentric design consisting of only a driver bit and reamers makes the system very easy to operate and maintain. At the beginning of the operation, the reamers are in the closed position to allow the system to pass through the casing shoe. When drilling commences, the reamers will open up when rotating in clockwise direction, and ream a large enough hole to allow the casing to be carried down the hole. The P-CON-E system has a complete flat face when the reamers are opened, and this effectively improves the penetration rate of the drilling.



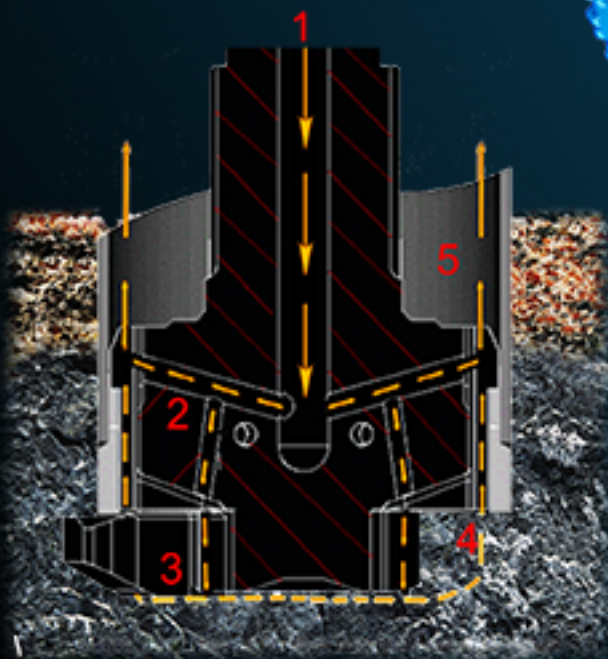
PCON-E UNDERREAMERS' CHOICES

MODEL	DRILLING DIA	RETRACTED DIA	CASING		SHANK TYPE
			O.D.	I.D.	
P-CON-E 190	238MM	190MM	219MM	203MM	QL6, SD6, DHD360
P-CON-E 215	276MM	215MM	254MM	240MM	QL8, SD8, DHD380
P-CON-E 240	293MM	240MM	273MM	260MM	QL8, SD8, DHD380
P-CON-E 280	345MM	280MM	323MM	302MM	SD10
P-CON-E 365	432MM	364MM	406MM	387MM	N125
P-CON-E 460	530MM	460MM	508MM	483MM	N125
P-CON-E 510	580MM	509MM	559MM	533MM	N180
P-CON-E 560	635MM	560MM	610MM	584MM	N180, N240
P-CON-E 610	685MM	510MM	660MM	532MM	N240
P-CON-E 660	735MM	660MM	711MM	685MM	N240
P-CON-E 745	838MM	745MM	813MM	780MM	N240

P-CONE-VF

Ground Stabilization System

Unlike the conventional underreaming system, the patented PCONE-VF limits most of the compressed air used for operating the DTH hammer to exit to the bottom of the drilled hole, and preventing disturbance to the surroundings to minimum. The PCONE-VF incorporates with upward flushing holes and by the airlift effect, it vacuums the debris out of the drilled hole.



1. Compressed air is travelling down through the main air-hole of the system
2. Air paths in the system direct most of the compressed air to the side flutes of the driver bit
3. Only a small percentage of the air goes to the front of the bit face to clear the cuttings
4. Cuttings are circulated up to the side flutes
5. Once the cuttings enter the side flutes, the main stream of air vacuums the cuttings up and flush them out of the casing
6. Even with the largest PCONE-VF system, it only protrudes 120mm out of the casing shoes. The casing together with the casing shoes about completely seals off the hole.



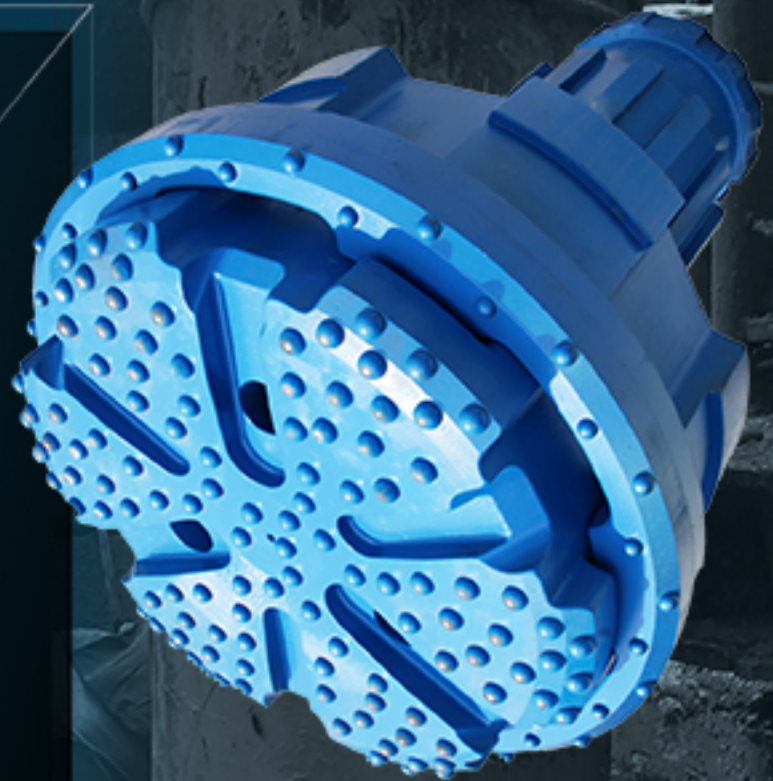
P-RING

Ring Bit Casing System

The Pneumec P-RING concentric drilling system is designed to drill and case a hole simultaneously through unstable ground conditions. The driver bit incorporated with a sacrificial ring or reusable ring makes it a perfect drill with a complete full face that significantly improves the penetration rate and hole straightness. The internal flushing grooves together with the casing shoes gives a good seal to the bottom of the drilling hole, and thus minimizing the disturbance to the surroundings in certain sensitive ground conditions.

Advantages :

- full face head design for faster penetration and straighter hole
- less torque is required
- can drill in vertical, horizontal or any direction
- minimize disturbance to the drilled hole
- varied ring bit diameters to suit different casing requirement
- some models provide extra large ring ID for DTH Bit to pass through if drilling into rocket socket is required with DTH Bit.



P-RING CASING SYSTEMS' CHOICES

MODEL	CASING O.D.	CASING I.D.	RING O.D.	SHANK TYPE
P-RING 90	114MM	102MM	125MM	MACH33, DH3.5
P-RING115	141MM	126MM	155MM	DHD340, SD4, QL4
P-RING140	168MM	153MM	188MM	DHD350, SD5, QL5
P-RING165	194MM	181MM	215MM	DHD360, SD6, QL6
P-RING190	219MM	203MM	238MM	DHD360, SD6, QL6
P-RING215	254MM	240MM	278MM	DHD380, SD8, QL8
P-RING240	273MM	260MM	293MM	DHD380, SD8, QL8
P-RING280	323MM	302MM	345MM	SD-10
P-RING315	355MM	335MM	375MM	SD-10
P-RING365	406MM	387MM	432MM	N120, N125, SD12
P-RING460	508MM	483MM	530MM	N125, N180
P-RING510	559MM	533MM	580MM	N180
P-RING560	610MM	584MM	635MM	N180, N240
P-RING610	660MM	632MM	685MM	N240
P-RING660	711MM	685MM	735MM	N240
P-RING745	813MM	780MM	838MM	N240
P-RING845	914MM	882MM	940MM	P240S, P300
P-RING830	1016MM	984MM	1040MM	P240S, P300

PRING-E

The Pneumec PRING-E system is the economical version of the Pneumec Ring Bit System. It uses a conventional casing shoe without attached to the ring. Once the hole is completed the driver bit can be pulled out of the hole, leaving the casing and the ring down in the hole. If the casing is to be recovered, the ring will still be left down in the hole as it is not attached to the casing shoe.

PRING-S

The Pneumec PRING-S system has a completely full face concentric design consisting of a driver bit, a ring assembly with the ring and casing shoe attached together. The driver bit has several retaining recesses on its body and when the system is rotating clockwise, the ring locks into them. Though the ring assembly is designed for single use, it can be recovered when the casing is pulled out of the hole.

PRING-SX

The Pneumec PRING-SX system has a completely full face concentric design consisting of a driver bit, a ring assembly with the ring and casing shoe attached together. Similar to the PRING-S system, the ring assembly is designed for single use. However, it has a larger ring ID so that if it is required to drill continuously into the rock socket with a button bit, this is the system to go for.

PRING-XD

The Pneumec PRING-XD system has a completely full face concentric design consisting of a driver bit, a ring assembly with the ring and casing shoe attached together. It is purposely designed so that the ring assembly can be reused. It also allows a larger pass through diameter through the ring, and if required a button bit can pass through the ring and continue to drill into the rock socket.



PNEUMEC

Down The Hole Button Bit

PNEUMEC DTH Button Bits are manufactured using the highest quality nickel chrome alloy steels and tungsten carbide buttons for optimum strength and longer sustained bit life. All our bits are subject to rigorous quality control throughout their manufacturing process giving you a perfect drilling tool for all kinds of rock conditions. Because Pneumec realizes your cutting needs, all our bit face configurations are well designed for faster penetration and chip removal. They are also designed to minimize chuck and body wear of your DTH hammer, with a wide range of head patterns including concave, convex and flat face with hemispherical, ballistic or parabolic buttons. DTH button bits are available from 90mm up to 1200mm diameter.



CONVEX



CONCAVE



FLAT FACE

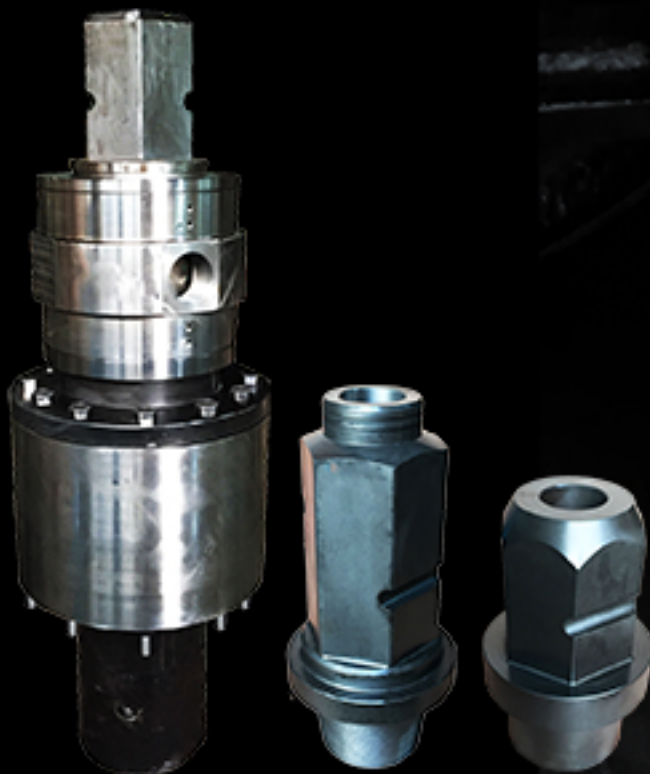


PNEUMEC

Drill Rods, Adaptors & Accessories

Pneumec Drill rods and adaptors are produced from the highest quality of alloy steels. All joints are heat treated in-house and surfaced treated to ensure outstanding wear resistance, durability and long life of the drill tools. Drill rods and accessories include :

- API Drill Rods
- Hexagon Drill Rods
- Rod Shrouds and Hammer Shrouds
- Sub-adaptors
- Side Inlet Swivel
- Shock Absorbers
- Pneumatic Button Grinders and Pins
- Air Lubricators



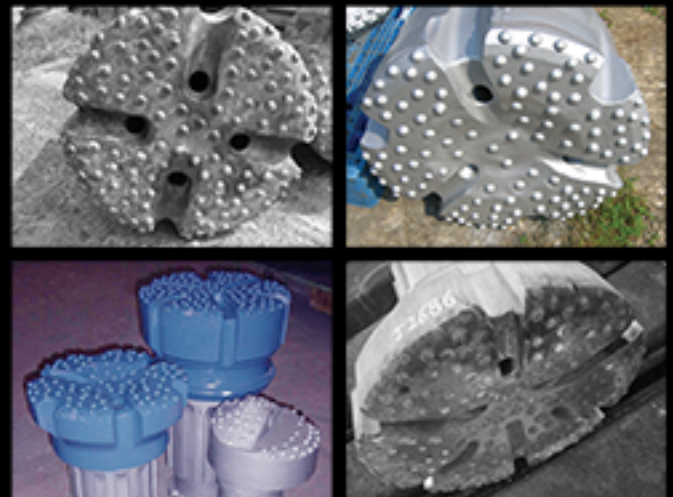
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Remanufacturing Services

Down-The-Hole button bits are designed to cope with a variety of different drilling conditions. The cutting or rock fracturing comes from the special grade tungsten carbide buttons that are in the face of the bit. Drilling in hard rock is very abrasive, and these buttons will eventually wear down to a smaller size and in some instances crack or shear off. It is not cost effective to throw away a forging simply because some buttons are worn or broken, especially for larger diameter bits. In the past, contractors were able to resharpen tungsten carbide buttons on site only if they were unbroken. Pneumec's remanufacturing process replaces even the most shattered tungsten carbide buttons cost effectively, greatly extending bit life.

Remanufactured bits operate at no less efficiency than that of new ones, in some cases the depth drilled by remanufactured bits has been found to exceed that of new ones. Pneumec currently has the capability to remanufacture button bits ranging from diameter 165mm up to 850mm.

Pneumec's remanufacturing process can normally double the life of a drill bit. Experience has shown that drill bits can be remanufactured 2/3 times, providing that specific test criteria are met, therefore saving the need for new forgings. During customer consultations, Pneumec offers practical solutions to specific problems. Pneumec have successfully redesigned various face patterns that have given customers superior depth over the original face design. We are eager to customize solutions for our customers to ensure their needs are met.



PNEUMEC

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