

Certified API Q1 (2437),
ISO 9001: 2015 (2567),
API Spec 7-1(1204)

WORLD WIDE CONTACTS

AUXANO GROUP PTY LTD
T/A Cenerg. For Australia,
PNG and New Zealand
Ph: + 61 8 9284 1106
sales@auxanogroup.com.au
Perth, Australia

Compr Mining Services
For South Africa
Ph: +27 83 634 0636
sales@comprmining.com
Middelburg, South Africa

Xceed Mining Services
For Africa
Ph: +618 9284 1106
sales@cenergint.com

Shilmann Rocbit LLC USA
DBA Cenerg Global Tools
Ph: (304) 768 5815
sales@cenerg.us USA

Teaschile LTDA Chile
Ph: 56-55-2895520-2895521
credenz@teaschile.com
Antofagasta, Chile

Ryder Drilling Tools SAC
Peru
Ph: +51 (01)7391228
rebic@ryderdrilling.com
Lima -Peru

Marchi Giorgio Italy
Ph: +39 348 154 5840
info@marchigiorgio.it
Italy

MinPhu Vietnam
Ph: +844.3205.1199
lexuanphong@minhphuheavyequipment.com
Ha Noi, Vietnam

Pusaka Tandi Indonesia
Ph: (62-21) 5437 6366 - 70
alifranky@pusakatandi.com
Jakarta, Indonesia

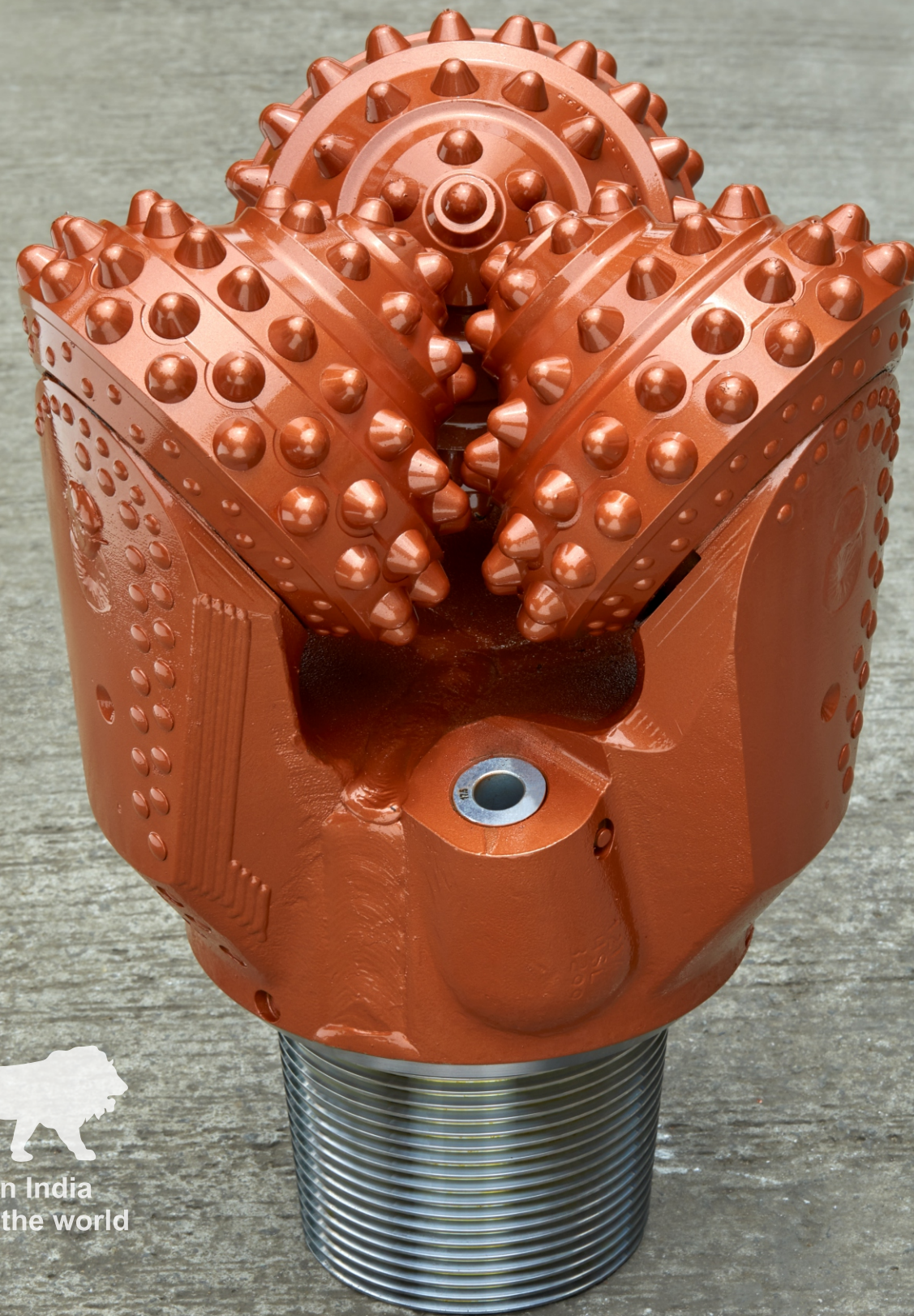
CENERG GLOBAL TOOLS PVT. LTD.

PLOT# 62, EPIP, PASHAMYLARAM, MEDAK DISTRICT, TELANGANA, INDIA 502307
PHONE: +91 8455-223594, 96, 97. EMAIL: marketing@cenerg.in

Visit us at www.cenerg.in



Rotary Drill Bits



Made in India
Made for the world



CENERG, established in 2012, has grown to be a leading Rotary Drill Bit manufacturer based at Hyderabad – India. With an output of around 2500 bits per month, **CENERG** serves a strong customer base spread across 20 countries.

CENERG range of Rotary Drill Bits cover Blasthole, Water well, Construction, Raise boring, Exploration and Horizontal Directional Drilling Applications. Bit sizes range from 2 3/8" to 17 1/2" in Milled Tooth and Tungsten Carbide Insert types.

Customer's unique drilling challenges call for special solutions. **CENERG** is well equipped to respond to these challenges from its wide range of products with short delivery times.

CENERG product development activity is aligned with evolving drill rig developments suiting autonomous drilling machines by providing reliable and high performing Rotary Drill Bits.

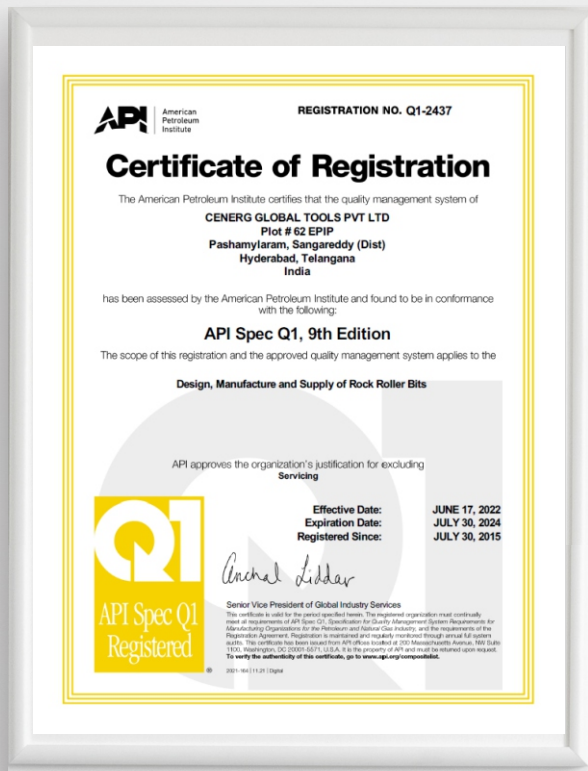
Our Vision

Make rock drilling Reliable,
Affordable and Smooth
for our Customers

Our Mission

Focus on continual innovation
of products to meet unique
customer challenges.





CENERG is spread across a 9000 square meter manufacturing facility and has the latest CNC Machines, Automated Heat Treatment Furnaces, Metallurgical labs, Inspection & Testing Machines.

In addition to ISO9001: 2015, API Spec 7-1 certifications, CENERG rotary drill bit facility in India is certified by American Petroleum Institute for quality management system conforming to API Q1.

CENERG has a strong leadership that guides a team of 300+ skilled employees working relentlessly to deliver the best in class products.

CENERG believes in workplace safety and reduction of incidents by investing in safety equipment and continuous training of personnel.

Emerging technologies like robotics and automation are used to enhance Safety, Reliability and Productivity.



CENERG QUALITY POLICY



We shall strive to achieve customer delight with respect to Quality, Timely Delivery & Dependability of our products.

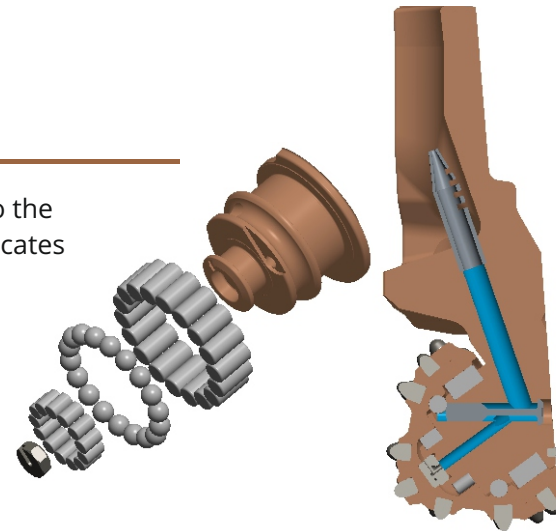
We are committed to continually improve our performance with a team of dedicated professionals in all aspects of our business.

We are committed to comply with requirements & continually improve effectiveness of Quality Management System .

Bearing Types

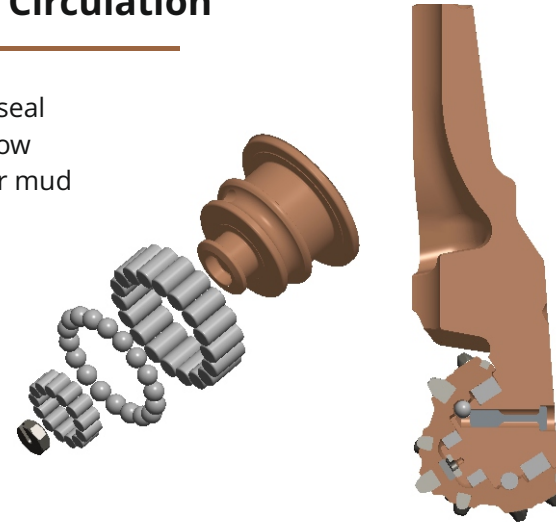
Open bearing – Air Circulation

In this configuration an air passage is provided to the bearing area. The compressed air cools and lubricates the bearings and blows away any drilling debris extending the life of the bearing. This bearing configuration is commonly used in Blasthole Mining applications



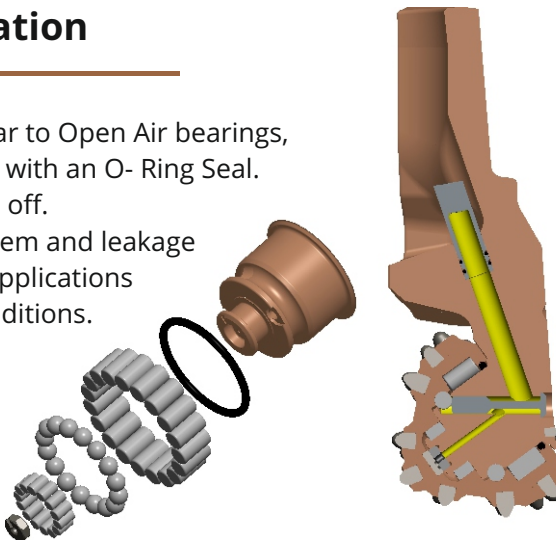
Open bearing - Air, Mud or Foam Circulation

The standard open roller bearings are without a seal or an air passage. They are ideal for drilling shallow holes, in the hundreds of feet with either foam or mud circulation. These bearing configurations are commonly used in Water Well applications.



Semi-Sealed bearing – Air Circulation

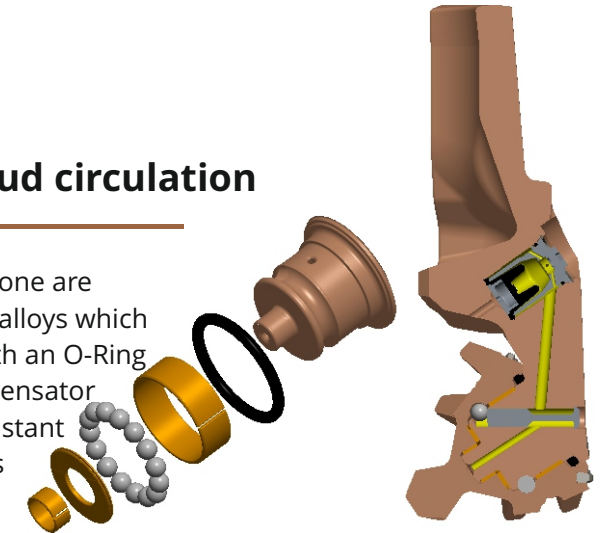
Semi-Sealed bearings for air circulation are similar to Open Air bearings, only difference being the bearing pack protected with an O- Ring Seal. The lubricant is filled into the bearing and sealed off. This prevents ingress of dirt into the bearing system and leakage of grease. This configuration is used for Mining applications with heavy water injection and ground water conditions.



Bearing Types

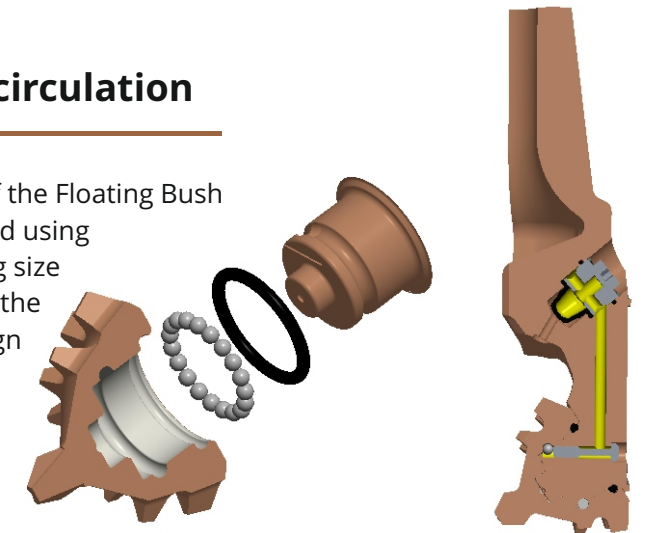
Sealed Journal bearing - Air & Mud circulation

In Sealed Journal bearing the Rollers inside the cone are replaced by a Floating Bush made out of special alloys which is silver plated. The bearing Pack is protected with an O-Ring Seal. The bearing lubrication and pressure compensator system is built in. The Floating Bush is highly resistant to heat and galling. Consequently these bearings are very durable and suitable for Mining, Raise Boring, HDD applications



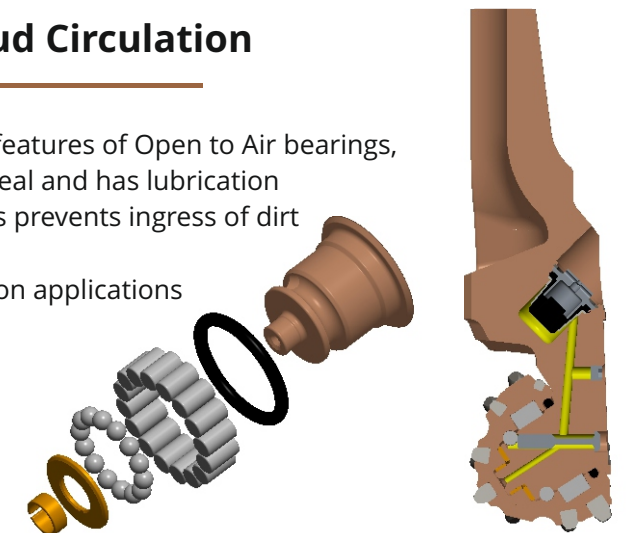
Sealed friction bearing - Mud circulation

In bearings for Small Diameter Bits instead of the Floating Bush the internal surface of the Cone is silver plated using a special process. This design enables bearing size to be increased in relation to the diameter of the Bit enhancing its durability. This bearing design finds application in Reverse circulation and Waterwell drilling applications

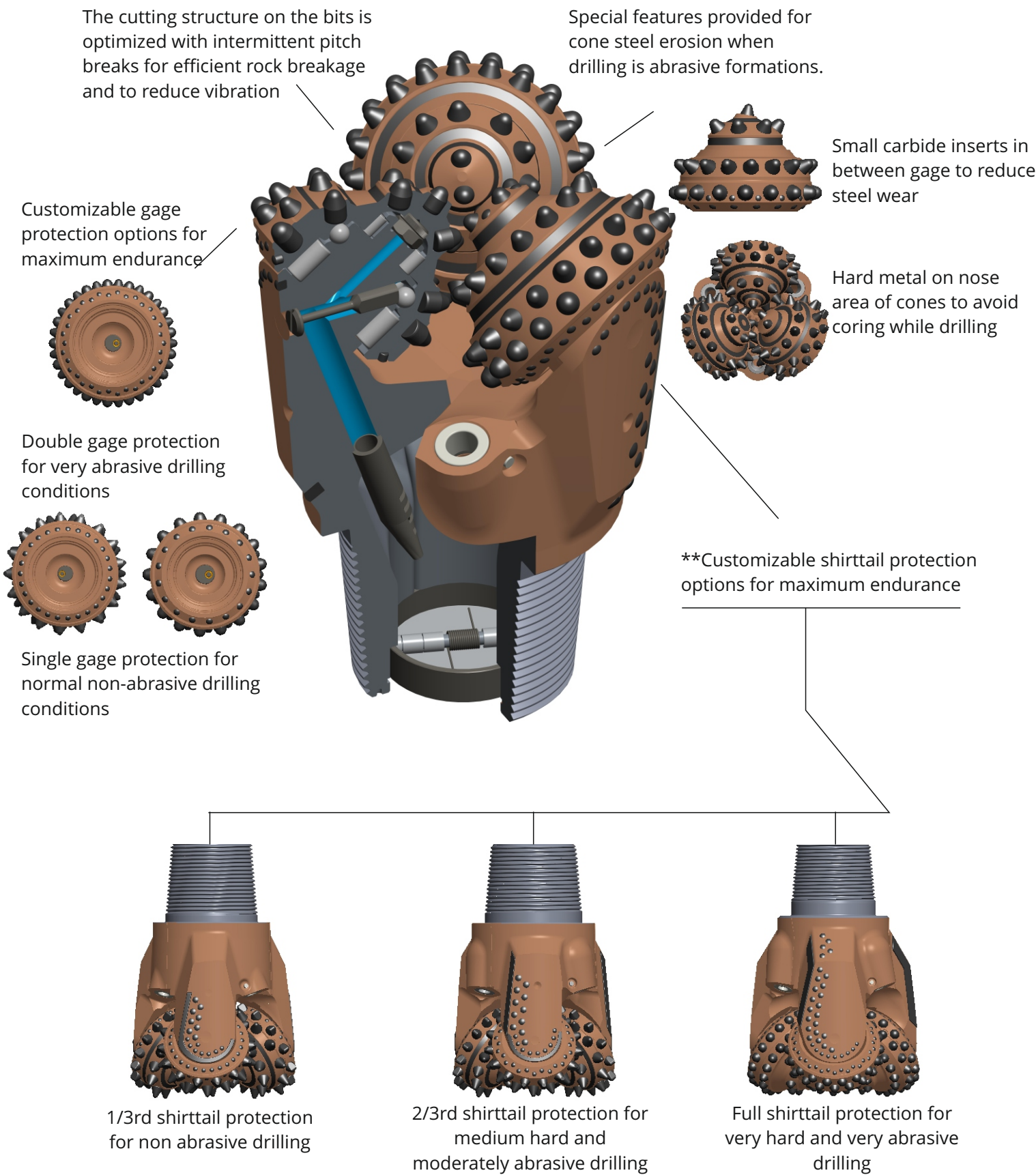


Sealed roller bearing – Air & Mud Circulation

While sealed roller bearings have some of the features of Open to Air bearings, the bearing pack is protected with an O- Ring Seal and has lubrication and pressure compensator system built in. This prevents ingress of dirt into the bearing system and leakage of grease. This configuration is used for Mining, Exploration applications



Air to Bearing Bit features

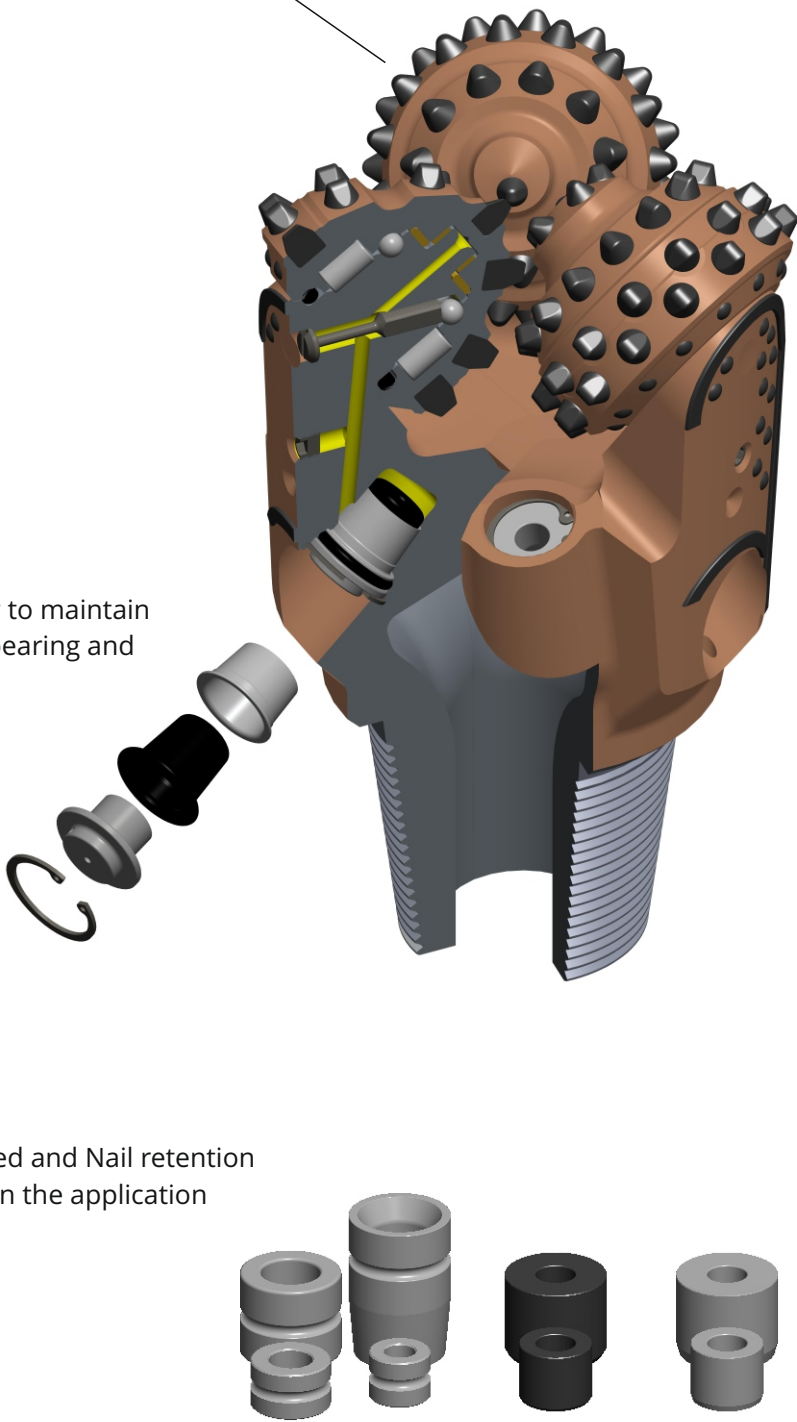


Sealed Bearing Bit features

The teeth are long, strong, widely spaced with intermittent deletions to permit deep penetration in the formation with comparatively light weight on bit

Grease compensator to maintain pressure inside the bearing and improve lubrication

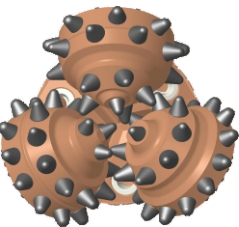
Nozzles with Threaded and Nail retention options depending on the application



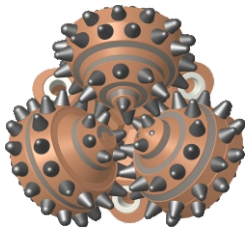
CENERG Rotary Drill Bit Series

CN 25 - CN 31 Series Very Soft Formation Rotary Drill Bits

Design features: Large diameter and widely spaced chisel or sharp conical carbide insert with high projection. Small flat inserts placed in between, on gage and inner rows to prevent cone shell erosion. Laser hard faced spot deposits to arrest steel erosion. Additional flush space on shirttail for quick evacuation of cuttings.



CN25



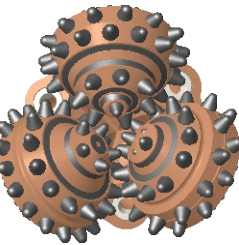
CN30

Benefits: Vibration free drilling resulting in maimum penetration rates in very soft formation.

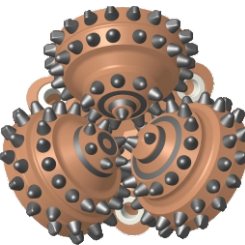
Applications: suitable for Sand, Mudstone, Sandstone type sedimentary formations with low compressive strengths of 20 to 60 Mpa

CN 37 – CN 44 Series Soft Formation Rotary Drill Bits

Design features: Large diameter and widely spaced chisel or sharp conical carbide inserts with high projection. Small flat inserts placed in between, on gage and inner rows to prevent cone shell erosion. Hard faced cone shell to delay erosion and exposure of active inserts.



CN37



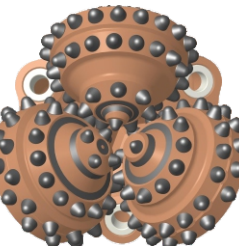
CN44

Benefits: High penetration rates in soft formation along with vibration free drilling.

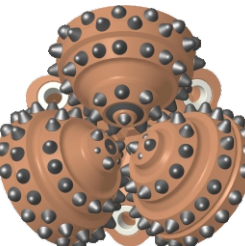
Applications: Suitable for Shale, Lime stone, Sandstone, Gravel - Soft formations with compressive strengths of 50 to 110 Mpa.

CN50 - CN 60 Series Medium Hard Formation Rotary Drill Bits

Design features: Moderately spaced conical inserts with medium projection. Doublerow gage protection inserts. Hard metal deposit on nose area to protect against cone shell erosion.



CN54



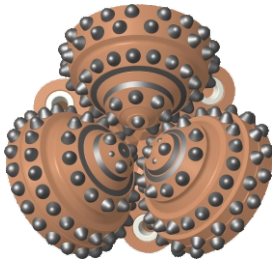
CN60

Benefits: Good penetration rates and longer life in medium hard and moderately abrasive formation. Longer bearing due to Smooth Drilling.

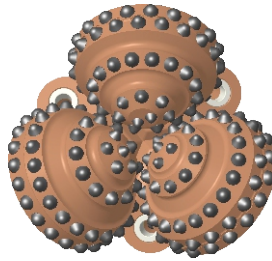
Applications: Suitable for Granite, Marble, Hard Sandstone - Medium Hard formations with Compressive Strengths of 90 - 150 Mpa.

CN 64 – CN70 Hard Formation Rotary Drill Bits

Design features: Closely spaced conical or spherical Inserts with medium to low projection. Hard metal deposit on nose area to protect against cone shell erosion.



CN64



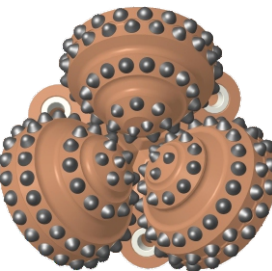
CN73

Benefits: Good penetration rates in hard, consolidated and very abrasive formation. Longer bearing due to Smooth Drilling

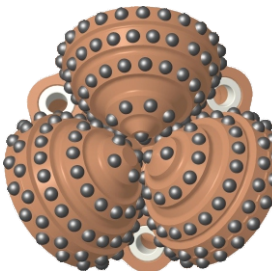
Applications: Suitable for Dolomite, Granodiorite, Quartzite, Magnetite, Banded Hematite Quartzite. Formation of 150 to 250 Mpa. and banded iron and abrasive consolidated formations with compressive strengths of above 200 Mpa.

CN 74 - CN 80 Very Hard Formation Rotary Drill Bits

Design features: Closely spaced conical or spherical medium to low projection crack resistant tough carbide Inserts. Load balanced layout of inserts



CN74



CN80

Benefits: Stable penetration rates in very abrasive formation. Longer bearing life due to smooth drilling.

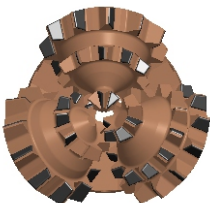
Applications: Quartzite, Taconite, Banded Iron. Very hard grade formations of 260 to 400 Mpa

Milled Tooth – Soft, Medium and Hard Formation

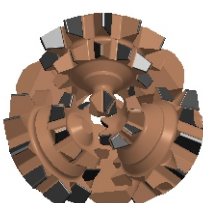
Design features: Aggressive and robust teeth protected with Tungsten carbide hard facing for extended performance

Benefits: Good penetration rates in unconsolidated and unfavourable rock conditions

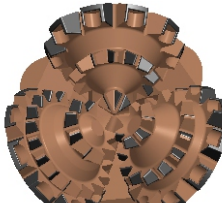
Applications: Clay, Sand, Sandstone, Gravel, Silt stone, Mud Stone formations Compressive strengths upto 100 Mpa



CN11



CN22



CN33

Product offering

Blasthole Mining Application

Bit Diameter		IADC X - X - 2															
Inch	mm	4-1	4-2	4-3	4-4	5-1	5-2	5-3	5-4	6-1	6-2	6-3	6-4	7-1	7-2	7-3	7-4
5 1/8"	130							✓									
5 5/8"	143							✓									
5 7/8"	150		✓					✓				✓			✓		
6 1/4"	159	✓	✓					✓				✓			✓		
6 1/2"	165		✓									✓					
6 3/4"	171	✓	✓					✓				✓	✓		✓	✓	
7"	178	✓													✓		
7 7/8"	200	✓	✓					✓				✓	✓		✓		
8 1/2"	216							✓	✓			✓	✓		✓		
8 5/8"	219							✓	✓			✓	✓		✓		
8 3/4"	222							✓	✓			✓	✓		✓		
9"	229	✓	✓	✓	✓			✓	✓			✓	✓	✓	✓	✓	
9 1/2"	241							✓				✓	✓		✓		
9 7/8"	251	✓	✓	✓	✓	✓		✓	✓			✓	✓		✓	✓	
10 5/8"	270	✓	✓		✓	✓		✓	✓			✓	✓		✓		
11"	284							✓				✓	✓				
12 1/4"	311				✓			✓	✓			✓	✓		✓	✓	
13 3/4"	349								✓				✓				
16"	406								✓				✓				

Open bearing
– Air Circulation

Blasthole Mining Application

Bit Diameter		IADC X - X - 5															
Inch	mm	4-1	4-2	4-3	4-4	5-1	5-2	5-3	5-4	6-1	6-2	6-3	6-4	7-1	7-2	7-3	7-4
6 3/4"	171							✓					✓				
7 7/8"	200	✓	✓	✓													
8 1/2"	216							✓				✓	✓				
8 5/8"	219											✓	✓				
8 3/4"	222							✓	✓			✓	✓		✓		
9"	229	✓	✓	✓				✓	✓			✓	✓				
9 5/8"	244							✓				✓	✓				
9 7/8"	251	✓	✓		✓			✓				✓	✓				
10 5/8"	270	✓	✓		✓							✓	✓				
11"	284							✓									
12 1/4"	311				✓			✓	✓				✓				

Semi Sealed Bearing
– Air Circulations

Blasthole Mining Application

Bit Diameter		IADC X - X - 7																
Inch	mm	4-1	4-2	4-3	4-4	5-1	5-2	5-3	5-4	6-1	6-2	6-3	6-4	7-1	7-2	7-3	7-4	8-3
6 3/4"	171								✓				✓					
7 7/8"	200		✓						✓			✓	✓			✓		
8 1/2"	216								✓			✓	✓			✓		
8 5/8"	219								✓			✓	✓			✓		
8 3/4"	222							✓	✓			✓	✓		✓			
9"	229	✓	✓		✓								✓			✓		
9 5/8"	244															✓		
9 7/8"	251	✓	✓		✓				✓			✓	✓			✓		
10 5/8"	270	✓	✓		✓		✓		✓			✓	✓		✓	✓		✓
11"	284												✓					
12 1/4"	311				✓		✓		✓			✓	✓			✓		✓

Sealed Journal Bearing

Waterwell Application

Bit Diameter		IADC X - X - 1							
Inches	mm.	1-1	2-3	3-2	3-3	4-3	5-2	6-2	7-2
2 1/2"	64	✓	✓	✓	✓		✓	✓	✓
2 5/8"	66	✓	✓	✓	✓		✓	✓	✓
2 7/8"	73	✓	✓	✓	✓		✓	✓	✓
2 15/16"	75	✓	✓	✓	✓		✓	✓	✓
3"	76	✓	✓	✓	✓		✓	✓	✓
3 1/8"	79	✓	✓	✓	✓		✓	✓	✓
3 1/4"	83	✓	✓	✓	✓		✓	✓	✓
3 3/8"	86	✓	✓	✓	✓		✓	✓	✓
3 1/2"	89	✓	✓	✓	✓		✓	✓	✓
3 5/8"	92	✓	✓	✓	✓		✓	✓	✓
3 3/4"	95	✓	✓	✓	✓		✓	✓	✓
3 7/8"	98	✓	✓	✓	✓		✓	✓	✓

Bit Diameter		IADC X - X - 1								
Inches	mm.	1-1	2-3	3-2	3-3	4-3	5-2	6-2	7-2	
4"	102	✓	✓	✓	✓		✓	✓	✓	
4 1/8"	105	✓	✓	✓	✓		✓	✓	✓	
4 1/4"	108	✓	✓	✓	✓		✓	✓	✓	
4 3/8"	111	✓	✓	✓	✓		✓	✓	✓	
4 1/2"	114	✓	✓	✓	✓		✓	✓	✓	
4 5/8"	118	✓	✓	✓	✓		✓	✓	✓	
4 3/4"	121	✓	✓	✓	✓		✓	✓	✓	
4 7/8"	124	✓	✓	✓	✓		✓	✓	✓	
5"	127	✓	✓	✓	✓		✓	✓	✓	
5 1/8"	130	✓	✓	✓	✓		✓	✓	✓	
5 1/4"	133	✓	✓	✓	✓		✓	✓	✓	
5 3/8"	137	✓	✓	✓	✓		✓	✓	✓	
5 1/2"	140	✓	✓	✓	✓		✓	✓	✓	

Open bearing
– Air, Mud or Foam Circulation

Product offering

Waterwell Application

Bit Diameter		IADC X - X - 1								
Inches	mm.	1-1	2-3	3-2	3-3	4-3	5-2	6-2	7-2	
5 5/8"	143	✓	✓	✓	✓		✓	✓	✓	
5 3/4"	146	✓	✓	✓	✓		✓	✓	✓	
5 7/8"	149	✓	✓	✓	✓	✓	✓	✓	✓	
6"	152	✓	✓	✓	✓	✓	✓	✓	✓	
6 1/8"	156	✓	✓	✓	✓		✓	✓	✓	
6 1/4"	159	✓	✓	✓	✓		✓	✓	✓	
6 3/8"	162	✓	✓	✓	✓		✓	✓	✓	
6 1/2"	165	✓	✓	✓	✓		✓		✓	
6 5/8"	168	✓	✓	✓	✓		✓		✓	
6 3/4"	172	✓	✓	✓	✓	✓	✓	✓	✓	
7"	178	✓	✓	✓	✓		✓	✓	✓	
7 1/4"	184			✓					✓	
7 3/8"	187	✓	✓	✓	✓		✓	✓	✓	
7 1/2"	191	✓	✓	✓	✓		✓	✓	✓	

Bit Diameter		IADC X - X - 1							
Inches	mm.	1-1	2-3	3-2	3-3	4-2	5-2	6-2	7-2
7 5/8"	194	✓	✓	✓	✓	✓	✓	✓	✓
7 7/8"	200	✓	✓	✓	✓	✓	✓	✓	✓
8"	203	✓	✓	✓	✓		✓	✓	✓
8 1/2"	216	✓	✓	✓	✓		✓	✓	✓
8 5/8"	219	✓	✓	✓	✓		✓	✓	✓
9 1/2"	241	✓	✓	✓	✓		✓		✓
9 5/8"	244	✓	✓	✓	✓		✓		✓
9 7/8"	251	✓	✓	✓	✓	✓	✓	✓	✓
10"	254	✓	✓	✓	✓		✓	✓	✓
10 5/8"	270			✓					✓
12 1/4"	311			✓					✓
14"	356							✓	
15"	381						✓	✓	
15 1/2"	394							✓	

Open bearing
– Air, Mud or Foam Circulation

Waterwell, Reverse Circulation, Utility Application

Bit Diameter		IADC X - X - 7																											
Inch	mm	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	4-1	4-2	4-3	4-4	5-1	5-2	5-3	5-4	6-1	6-2	6-3	6-4	7-1	7-2	7-3	7-4			
3 7/8"	98	✓			✓											✓													
4 1/2"	114	✓			✓			✓																					
4 5/8"	118				✓																								
4 3/4"	121	✓			✓			✓							✓	✓	✓				✓								
5"	127																✓												
5 1/8"	130															✓													
5 1/2"	140	✓													✓	✓	✓	✓			✓								
5 5/8"	143								✓							✓	✓	✓			✓								
5 3/4"	146	✓																✓											
5 7/8"	149	✓																			✓								
6"	152	✓			✓										✓	✓	✓												
6 1/8"	156	✓			✓												✓												
6 1/4"	159	✓															✓												
6 1/2"	165	✓						✓							✓	✓	✓	✓											
6 3/4"	171	✓				✓									✓														
7 1/4"	184								✓																				
7 3/8"	187								✓																				
7 1/2"	191																✓												
7 7/8"	200	✓															✓												
8 1/2"	216	✓			✓										✓		✓												
8 3/4"	222	✓		✓					✓								✓												
9 1/2"	241																✓												
9 7/8"	251	✓		✓	✓				✓						✓		✓								✓				
10 5/8"	270	✓															✓												
12 1/4"	311	✓	✓		✓							✓			✓		✓	✓			✓								
13 3/4"	349															✓													
14 3/4"	375																									✓			
16"	406																									✓			

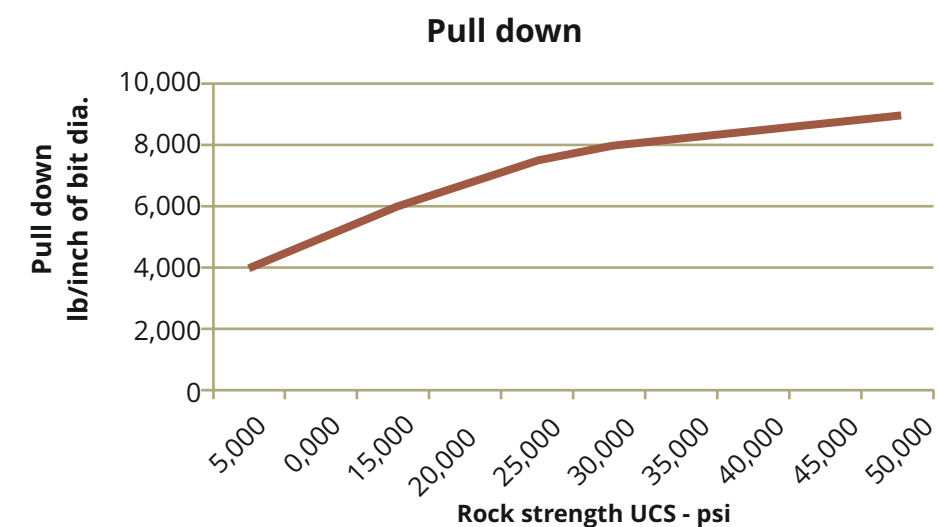
Useful Operating Information

- When a new bit is installed, drill at reduced weight for 30 minutes
- Select the correct nozzle size to provide adequate air to the bit for optimal bearing performance and reduced abrasion wear on cones & shirttails. (Recommended 40 – 45 psi at the bit checked with U tube gage)
- Turn the air on before lowering the bit to collar the hole. Continue to keep the air on until the bit finishes drilling and is out of the hole.
- Rotate the bit when moving in and out of the hole.
- Rotating the bit when moving out of the hole
 - Helps in cleaning the cuttings from the hole.
 - Prevents the cuttings from entering the bearings.
- Indications that the hole is not being properly cleaned are:
 - Increase in torque/ higher hydraulic pressure.
 - Increase in air pressure.
 - Heavy wear / damage on shirttails.
- Do not use the hydraulic pressure on the bit for leveling the machine
- When adding extra drill pipe in wet holes, run three or four clean passes to get a cleaner hole bottom.
- Bit cones should be checked periodically for temperature. An odd hot cone indicates that the air passage to the bearing is being obstructed. Clean this cone with water.
- When repairs require lowering of the head assembly to the deck, Bit should never be left down the hole.
- Also the bit should be substituted by a dull bit to protect the drill pipe threads.
- Drill pipe and its threaded connections should be maintained properly as a bent pipe will often lead to early failure.
- Blasthole bits drill most economically when sufficient weight is applied to cause fracture of the formation.
- Selecting correct rotary speed is a matter of trial and error, depends upon the formation being drilled.
- Alternatively use the factory recommended weight and rotation speeds.
- It is necessary to make an analysis of each discarded bit for dulling and its causes. These findings help in determining the suitable bit design features for the application.

Pull Down & Rotation

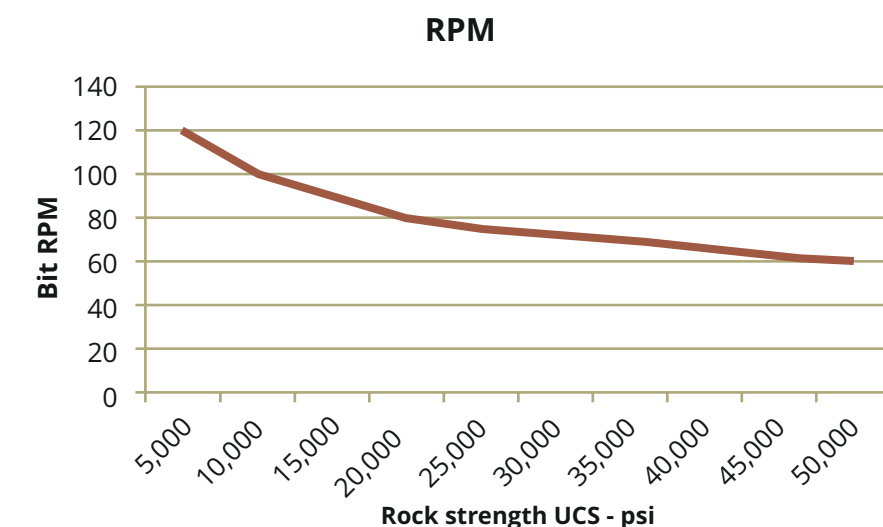
Pull down load is required to adequately push teeth into the rock to break in efficiently. It is the primary factor in rate of penetration. The unconfined compressive strength of the rock determines how much pull down is to be applied.

High UCS rocks may need time for the indenter to break it. Lower RPM is often required for efficient rock breakage.



Rotation is required to move the cutting teeth to the next rock cutting position. The faster you move the teeth to the next position, the faster you will drill. If the rock resists indentation by the teeth, there will be minimal rock breakage, and rate of penetration will not increase proportionally with higher rotation.

For softer rock high RPM is required as Soft rock responds to frequency and for harder rock low RPM is required as Hard rock responds to time



Air Requirements

In rotary blasthole drilling, delivery of air in sufficient volume and at proper pressure is very essential to assure optimum bit performance.

Right amount of air ensures efficient cuttings removal from the hole bottom to the surface. It also reduces the cutting structure wear and bearing erosive wear by means of efficient bottom hole cleaning.

The right amount of back pressure is also required to cool the bearing and to keep the bearing clean from drilling debris.

The air volume provided must be good enough to produce a bailing velocity of 5,000-7,000 ft./min. for dry cuttings; and 7,000-10,000 ft./min. for wet cuttings.

To determine volumetric requirements, and bailing velocity the simple equation may be used.

$$Q = V/183.35 (D^2 - d^2)$$

Q = cubic feet per minute of free air.

V = Annular Velocity feet / min

d = drill pipe outside diameter, inches.

D = hole diameter, inches.

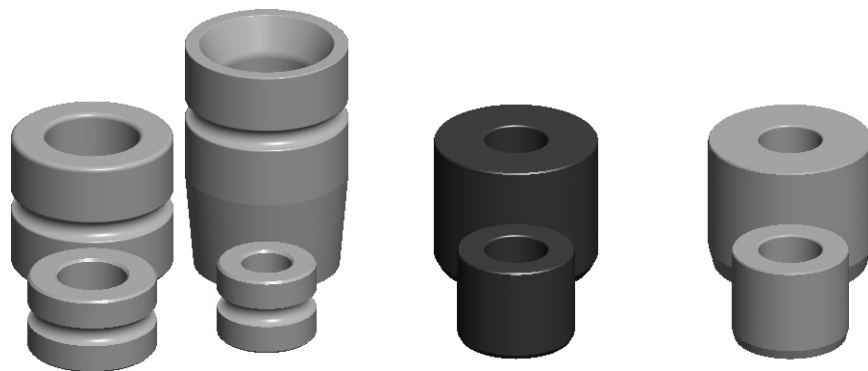
183.35 = Factor for conversion

Hence to determine the bailing velocity the equations is

$$V = Q \times 183.35 / (D^2 - d^2) \text{ feet per min}$$

Nozzle selection

Nozzles should be selected so that the pressure inside the bit is 40-45 psi. The cab operating pressure inside the drills cabin could be higher, depending on the type of drill and CFM of air circulated. Typically, on compressors rated with 80-100 psi bit pressures can be 10 - 25 psi lower than the cab gauge reading.



Nozzle Selection Table

Bit Diameter	Thread connection	Nozzle size	NOZZLE SELECTION																							
			Air Pressure drop across Blast-hole bits with various nozzle size. Air volume delivered - CFM (cubic feet per minute)																							
5"-6"	2 7/8" & 3 1/2"	8 mm	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2600	2800	3000	
		62	77																							
		10 mm	47	59	71																					
		11 mm	35	45	55	66	75																			
		12.7 mm	26	34	42	50	58	66	74																	
		14 mm	18	24	31	38	44	58	58	64	71															
6 1/4" to 7 3/8"	3 1/2"	8 mm	52	62	72	81																				
		10 mm	43	51	61	69	78																			
		11 mm	34	41	48	57	65	73	79																	
		12.7 mm	29	33	41	48	54	61	67	73	79															
		14 mm	23	29	34	41	47	51	56	62	67	73	79													
		10 mm	35	44	54	65	74	82																		
7 7/8" to 9"	4 1/2"	11 mm	29	36	43	50	56	64	70	76	82															
		12.7 mm	22	26	32	38	44	50	58	66	75	83														
		14 mm		21	27	33	38	44	50	56	62	68	74	81												
		16 mm			20	25	30	35	41	46	51	56	64	68	72	78										
		17.5 mm				22	26	30	35	40	45	51	56	61	66	72	78									
		19 mm					20	24	28	33	36	40	46	50	54	59	64	69	74	78						
9 9/8" to 11"	6 5/8"	10 mm	35	45	53	61	69	76																		
		11 mm	28	36	43	51	59	66	73	80																
		12.7 mm	20	26	32	38	44	52	59	65	70	76														
		14 mm		21	27	33	39	44	50	55	59	65	67	74	79											
		16 mm			18	24	31	35	40	47	48	52	59	61	65	69	73	77								
		17.5 mm				21	25	30	35	38	44	48	50	55	59	63	67	71	75	79						
12 1/4" to 15"	6 3/4"	19 mm					18	21	25	32	35	39	44	46	49	53	56	60	63	67	72	74	78			
		22 mm							21	23	27	31	31	36	39	42	45	47	50	53	54	60	64	70		
		25 mm										20	22	22	24	27	29	32	34	37	39	41	46	51		
		10 mm							45	52	57	62	68	74												
		11 mm							39	44	48	53	57	61	66	71	76									
		12.7 mm							30	33	37	41	45	49	54	58	62	66	71							
12 1/4" to 15" <td rowspan="6">6 5/8"</td> <td>14 mm</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>26</td> <td>28</td> <td>32</td> <td>35</td> <td>39</td> <td>43</td> <td>47</td> <td>50</td> <td>54</td> <td>58</td> <td>62</td> <td>65</td> <td>69</td> <td>73</td> <td></td> <td></td>	6 5/8"	14 mm							26	28	32	35	39	43	47	50	54	58	62	65	69	73				
		16 mm							19	22	25	28	31	34	38	41	44	47	51	54	57	61	65	69		
		17.5 mm								20	23	26	29	32	35	38	41	43	46	49	52	54	58	66		
		19 mm									16	18	20	22	24	26	27	29	32	34	36	39	41	43		
		22 mm																								
		25 mm																								

