

# Raiseboring equipment – pilot bits

A complete raiseboring drilling system





# Raise your productivity with Epiroc raisebore pilot bits

As part of our on-going commitment to the raisebore industry we have re-designed our pilot bit range to meet the most demanding performance and drilling conditions. With up to 30% more meters drilled than our Bullseye range, and whatever the rock conditions you're working in, our Primo bits will meet your challenge.

## The latest technology

Using the latest technology in carbide grades we have increased gage row wear resistance and toughness while additional advancements to bearing design, geometry and components increases bearing hours.

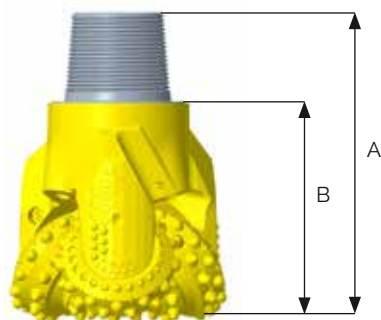
While our engineers improved the way our bits crush the rock; with refinements to bearing geometry that makes the bit roll true. Further enhancing carbide life and reducing vibrations. All combined, this increases our reliability to drill further – faster.



# 13 ways to get the most out of your pilot bits

1. Use a bit gauge to check that the gauge diameter is within recommended tolerances.
2. If the pilot bit is used, check that the carbide buttons are in good condition and the cones are free to turn without excessive play. Furthermore, make sure that all flushing passages are clear.
3. Make sure that the design of the pilot bit complies with the geological formation you're drilling in as well as the flushing fluid used.
4. If flushing with compressed air, check that nozzles are installed and of the correct size.
5. If flushing with water, check that nozzles have been removed from flushing passages or that the proper nozzles have been installed.
6. Always engage the circulation system until returns are present before applying load or rotating the pilot bit.
7. Clean up and inspect the threads and mating shoulders of the pilot bit and drill string component. Liberally coat with lubricant approved by the bit manufacturer.
8. To avoid damaging the threads of the pilot bit and drill string component, thread the bit by hand onto the drill string component before installing the component in the float box of the machine. Proper lifting equipment and techniques should be employed whenever lifting any size of pilot bit.
9. Do not over torque the pilot bit during makeup. Recommended torques given by API manufacturers should be followed. Slow rotation speed during makeup is advised.
10. During bit breakout, raise the pilot bit and drill string component high enough to allow the bit to drop into the bit breaker box.
11. Do not drop the pilot bit with the drill string weight attached.
12. After removing the pilot bit and bit reamer stabilizer from the drill string after breakthrough, lubricate the cones of the bit with light oil prior to storage.
13. Any time the pilot hole is open make sure nothing is dropped in it. If something drops into the pilot hole ensure the foreign object is removed before continuing to drill the pilot hole.

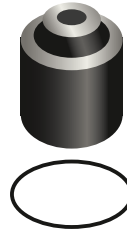
Size	Product number	Product code	Pin thread	IADC	Height A		Height B		Bit weight		Make-Up torque		Weight On Bit		Rotary speed
					mm	in	mm	in	kg	lbs	kNm	kft-lbs	Metric ton	klbs	
9	91003285	117-3229-73-RB-OA-07	4 1/2" API Reg	737	344	13,6	237	9,3	43	95	16-21	12-16	16-33	12-16	50-90
9 3/16	91003351	117-3233-73-RB-OAW-07	4 1/2" API Reg	737	344	13,6	237	9,3	43	95	16-21	12 - 16	17-33	12-16	50-90
9 7/8	91003286	118-3251-73-RB-OA-07	6 5/8" API Reg	737	377	14,8	250	9,8	67	148	38-43	28-32	17-36	28-32	50-90
11	91003268	118-3279-73-RB-NA-07	6 5/8" API Reg	737	402	15,8	275	10,8	76	168	38-43	28-32	20-40	28-32	50-90
11	91003269	118-3279-83-RB-OA-07	6 5/8" API Reg	837	399	15,7	272	10,7	76	168	38-43	28-32	20-45	28-32	40-80
12 1/4	91003277	118-3311-73-RB-OA-07	6 5/8" API Reg	737	455	17,9	328	12,9	104	244	38-43	28-32	22-45	28-32	50-90
12 1/4	91003276	118-3311-83-RB-NA-07	6 5/8" API Reg	837	453	17,8	326	12,8	104	244	38-43	28-32	22-50	28-32	40-80
13 3/4	91003275	118-3349-73-RB-NA-05	6 5/8" API Reg	737	484	19,1	357	14,1	135	298	38-43	28-32	25-50	28-32	50-90
13 3/4	91003274	118-3349-83-RB-NA-05	6 5/8" API Reg	837	482	19,0	355	14,0	135	298	38-43	28-32	25-56	28-32	40-80
15	91003273	132-3381-73-RB-CA-05	7 5/8" API Reg	735	474	18,7	341	13,4	168	370	48-62	35-45	27-55	35-45	50-90
15	91003272	132-3381-83-RB-NA-05	7 5/8" API Reg	835	471	18,5	338	13,3	168	370	48-62	35-45	27-61	35-45	40-80
16	91003271	132-3406-83-RB-NA-05	7 5/8" API Reg	835	529	20,8	396	15,6	185	410	48-62	35-45	29-65	35-45	40-80
17 1/2	91003270	132-3445-83-RB-NA-05	7 5/8" API Reg	835	527	20,7	393	15,5	244	539	48-62	35-45	32-72	35-45	40-80



# Nozzle selection guide

Select nozzle ID size based on available fluid volume and pressure limitations\*

Standard jet nozzles			
		Bit size range	
		9 – 11 ¾	12 ¼ – 17 ½
Nozzle ID inch	Nozzle ID mm	Part #	Part #
BLANK	BLANK	91000135	91000157
½	13	91000136	91000007
9/16	14	91000137	91000009
5/8	16	91000138	91000170
11/16	17	91000139	91000158
¾	19	91000140	91000159
13/16	21	91000141	91000160
7/8	22	91000142	91000161
15/16	24	91000949	91000162
1	25	91000167	91000163
1 1/16	27	x	91000164
1 1/8	29	x	91000165
1 13/16	30	x	91000169
1 ¼	32	x	91000166



## Accessories

O-ring

91001078

91000181

Nail

91000134

91000134

\*Minimum order 3 of each nozzle, o-ring and nail.

## United in performance. Inspired by innovation.

Performance unites us, innovation inspires us, and commitment drives us to keep moving forward. Count on Epiroc to deliver the solutions you need to succeed today and the technology to lead tomorrow.

[epiroc.com](http://epiroc.com)

