



Diamond Core Bits & Rigs Catalog

Hoffman Diamond Products is the oldest diamond tool manufacturer in the United States. Today, after more than 100 years, we are proud to have remained a privately held, American owned and operated diamond tool company. Hoffman gives you over 100 years of experience in the design and manufacture of diamond drilling products to solve your toughest coring problems.



800-444-4180

Diamond Core Bits & Rigs Catalog

PRO 800 Series Core Bits



PRO 800 Orange Series

is designed for speed and footage in wet drilling applications involving light to moderate steel.

- B10 - Hard Aggregate, Fast Drilling
- B30 - General Purpose
- B50 - Asphalt/Block, Long life

Standard drilling depth is 14", on core sizes up to 6-1/2". Other drill depths are available on request. Core bits 1/2" to 1-1/2" have 5/8"-11 hubs. Core bits 1-3/4" and up have 1-1/4"-7 hubs.

NOTE: ALL DIAMETERS ARE NOMINAL

PRO 1000 Series Core Bits



PRO 1000 Black Series

is designed for speed and footage in wet drilling applications involving moderate to heavy steel.

- B10 - Hard Aggregate, Fast Drilling
- B30 - General Purpose
- B50 - Asphalt/Block, Long life

LARGER DIAMETER BITS UP TO 48" ARE AVAILABLE IN EITHER THE PRO 800 OR PRO 1000 SERIES UPON REQUEST.

PRO 800 Series

Size	B10 Cat. No.	B30 Cat. No.	B50 Cat. No.
1/2"	113522	113549	113576
5/8"	113523	113550	113577
3/4"	113524	113551	113578
7/8"	113525	113552	113579
1"	113526	113553	113580
1-1/4"	113527	113554	113581
1-1/2"	113528	113555	113582
1-3/4"	113529	113556	113583
2"	113530	113557	113584
2-1/4"	113531	113558	113585
2-1/2"	113532	113559	113586
2-3/4"	113533	113560	113587
3"	113534	113561	113588
3-1/4"	113535	113562	113589
3-1/2"	113536	113563	113590
4"	113537	113564	113591
4-1/4"	113538	113565	113592
4-1/2"	113539	113566	113593
5"	113540	113567	113594
5-1/2"	113541	113568	113595
6"	113542	113569	113596
6-1/4"	113543	113570	113597
6-1/2"	113544	113571	113598
7"	113545	113572	113599
8"	113546	113573	113600
9"	113547	113574	113601
10"	113548	113575	113602
12"	120102	120103	120104
14"	130072	130073	130074
16"	140065	140067	140069
18"	140066	140068	140070
20"	150015	150016	150017
24"	160013	160014	160015

PRO 1000 Series

Size	B10 Cat. No.	B30 Cat. No.	B50 Cat. No.
1/2"	113603	113630	113657
5/8"	113604	113631	113658
3/4"	113605	113632	113659
7/8"	113606	113633	113660
1"	113607	113634	113661
1-1/4"	113608	113635	113662
1-1/2"	113609	113636	113663
1-3/4"	113610	113637	113664
2"	113611	113638	113665
2-1/4"	113612	113639	113666
2-1/2"	113613	113640	113667
2-3/4"	113614	113641	113668
3"	113615	113642	113669
3-1/4"	113616	113643	113670
3-1/2"	113617	113644	113671
4"	113618	113645	113672
4-1/4"	113619	113646	113673
4-1/2"	113620	113647	113674
5"	113621	113648	113675
5-1/2"	113622	113649	113676
6"	113623	113650	113677
6-1/4"	113624	113651	113678
6-1/2"	113625	113652	113679
7"	113626	113653	113680
8"	113627	113654	113681
9"	113628	113655	113682
10"	113629	113656	113683
12"	120105	120106	120107
14"	130075	130076	130077
16"	140071	140073	140075
18"	140072	140074	140076
20"	150018	150019	150020
24"	160016	160017	160018

PRO 1200 & 1400 Series Core Bits PRO 1000 Pre-Stress Series Core Bits



PRO 1200 Blue Series

is designed for very tough wet drilling applications involving heavy steel and hard aggregates

B10 - Hard Aggregate, Fast Drilling

B30 - General Purpose

PRO 1200 Series

Size	B10 Cat. No.	B30 Cat. No.	Size	B10 Cat. No.	B30 Cat. No.
1"	113684	113707	4-1/4"	113696	113719
1-1/4"	113685	113708	4-1/2"	113697	113720
1-1/2"	113686	113709	5"	113698	113721
1-3/4"	113687	113710	5-1/2"	113699	113722
2"	113688	113711	6"	113700	113723
2-1/4"	113689	113712	6-1/4"	113701	113724
2-1/2"	113690	113713	6-1/2"	113702	113725
2-3/4"	113691	113714	7"	113703	113726
3"	113692	113715	8"	113704	113727
3-1/4"	113693	113716	9"	113705	113728
3-1/2"	113694	113717	10"	113706	113729
4"	113695	113718			

PRO 1400 Gold Series

is designed for smaller diameter holes in the most demanding wet drilling applications involving very heavy steel or extremely hard aggregates.

B10 - Hard Aggregate, Fast Drilling

B30 - General Purpose



PRO 1400 Series

Size	B10 Cat. No.	B30 Cat. No.	Size	B10 Cat. No.	B30 Cat. No.
1/2"	113730	113743	1-3/4"	113737	113750
5/8"	113731	113744	2"	113738	113751
3/4"	113732	113745	2-1/4"	113739	113752
7/8"	113733	113746	2-1/2"	113740	113753
1"	113734	113747	2-3/4"	113741	113754
1-1/4"	113735	113748	3"	113742	113755
1-1/2"	113736	113749			

PRO 1000 Pre-stress Green Series

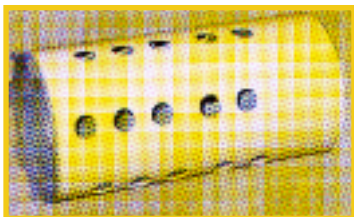
is designed with a solid crown and narrow slotted waterways to resist segment failure when cutting pre tension wire.

PRO 1000 Pre-stress Green Series

Size	B30 Cat. No.	Size	B30 Cat. No.
1"	113423	3"	112652
1-1/4"	113872	3-1/2"	112720
1-1/2"	113873	4"	112721
1-3/4"	113874	4-1/2"	112722
2"	112719	5"	112723
2-1/2"	112651	6"	112724



DRY PRO Series Core Bits



Dry Pro Series

Size	Cat. No.	Size	Cat. No.
1"	113875	2-1/2"	113881
1-1/4"	113876	3"	113882
1-1/2"	113877	3-1/2"	113883
1-3/4"	113878	4"	113884
2"	113879	5"	113885
2-1/4"	113880	6"	113886

DRY PRO Series

is designed for use on right angle grinders for dry drilling concrete brick and block. No water is needed, allowing for easy and quick cleanup.

Core Bit Segments and Crowns

Core Bit Segments

Bit Crowns

Size & Width	Core Bit Segments				Size	Bit Crowns		
	Pro 800 B30 Cat. No.	Pro 1000 B30 Cat. No.	Pro 1200 B30 Cat. No.	Pro 1400 B30 Cat. No.		Pro 800 B30 Cat. No.	Pro 1000 B30 Cat. No.	Pro 1400 B30 Cat. No.
2" to 2-1/4" x 145'	113450	113474	113498	113514	1/2"	113764	113788	113820
2-1/2" to 3-1/8" x 145'	113451	113475	113499	113515	5/8"	113765	113789	113821
3-1/4" to 4-5/4" x 145'	113452	113476	113500	113516	3/4"	113766	113790	113822
5" to 6-1/2" x 155'	113453	113477	113501	113517	7/8"	113767	113791	113823
7" to 11" x 165'	113454	113478	113502	113518	1"	113768	113792	113824
12" and up x 187'	113455	113479	113503	113519	1-1/4"	113769	113793	113825
12" and up x 220'	113456	113480	113504	113520	1-1/2"	113770	113794	113826
12" and up x 250'	113457	113481	113505	113521	1-3/4"	113771	113795	113827

Threaded Bits and Continental Tubing

Threaded Bit Crown and Tubing

Size	Continental Tubing				Threaded Adaptor Only	Threaded Bit Crown			
	Crown Blanks (2" Long)	Barrel 12" Long	Barrel 24" Long	Barrel 60" Long		Pro 800 B30 Bit Crown	Pro 1000 B30 Bit Crown	Pro 1200 B30 Bit Crown	Pro 1400 B30 Bit Crown
2"	L11834	L11030	L11136	L12311	L11029	113828	113839	113850	113861
2-1/2"	L10129	L10968	L10969	L12498	L10967	113829	113840	113851	113862
3"	L12149	L10976	L10975	L12499	L10977	113830	113841	113852	113863
3-1/2"	L11346	L11347	L11348	L12500	L11349	113831	113842	113853	113864
4"	L12235	L10904	L11335	L12501	L10903	113832	113843	113854	113865
4-1/4"	L12085	L12086	L11601	L12087	L11602	113833	113844	113855	113866
4-1/2"	L12506	L12436	L12400	L12502	L12503	113834	113845	113856	113867
5"	L12507	L10342	L10339	L12504	L10338	113835	113846	113857	113868
5-1/2"	L12508	L12494	L12495	L12496	L12497	113836	113847	113858	113869
6"	L12509	L11667	L12291	L11668	L11669	113837	113848	113859	113870
6-1/4"	L12510	L12206	L12207	L12505	L12208	113838	113849	113860	113871

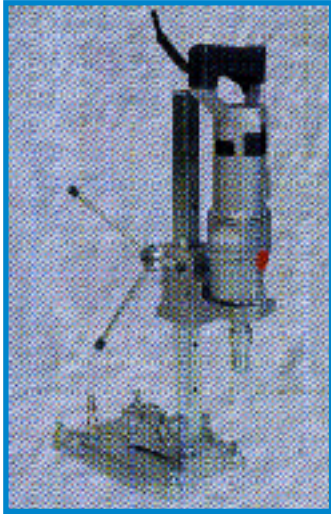
Core Catchers

Size	Set Size
2"	2.437 x 2.000"
3"	3.437 x 2.875"
4"	4.437 x 3.922"



Hoffman "Continental Style" threaded bits, barrels and adaptors are available in standard sizes 2" through 6-1/4" for variable depth hole drilling. High quality D.O.M. steel tubing and single point threading ensure proper fit. Other barrel lengths are available upon request. In addition, Hoffman also offers several sizes of core catchers.

Complete Drill Rigs



CARDI C-100 Drill Rig

Standard features:

- Small anchor drill standard not tilting
- 15 lbs. Super lightweight rig for anchor holes
- 6'1/4" bit capacity with T1M motor with HH adaptor
- 1-1/2" zinc plated square steel column 27" long
- Roller carriage with 16 roller bearings for precise drilling
- Quick release carriage lock, locks every 2-1/2"
- Small cast aluminum anchor base
- Wrench 19 mm
- Drill rig with anchor base - Width 4-1/2", Height 33", Length 7"
- Drill rig with optional vacuum base - Width 11", Height 35", Length 16"

Model shown: C-100 Drill Rig with T1M Motor and Optional Vacuum Base

GM-100 Drill Rig

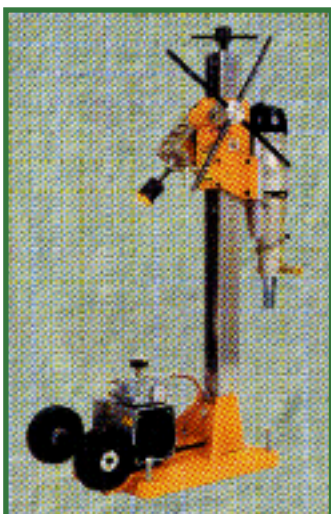
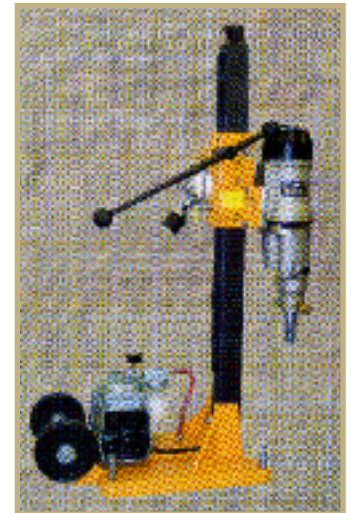
Standard features:

- Anchor/vacuum base with 6" wheels
- Up to 8" bit - 12" with spacer
- Quick change over from vacuum to anchor base
- 2-1/2" square column
- Ceiling jack, vacuum pump, and motor mount plate
- Choice of Cardi D3-250 or Dewalt 20 Amp motor
- Width 13-1/2", Height 44-1/4", Length 17"
- Length with motor & wheels 28-1/2"
- Weighs approx. 150 lbs.

Option:

- Angle base available

Model Shown: GM-100 Drill Rig with Dewalt 20 Amp Motor



GM-200 Drill Rig

Standard features:

- Combination anchor/vacuum base with 6" wheels
- Up to 10" bit - 20" with spacer
- Quick change over from vacuum to anchor base
- 2-7/8" square column
- 4 spoke handle for easy grip
- Ceiling jack, vacuum pump, and motor mount plate
- Choice of Cardi D9-450 or 500 motor
- Width 15", Height 44", Length 18-1/2"
- Length with motor & wheels 27"
- Weighs approx. 155 lbs.

Model Shown: GM-200 Drill Rig with Dewalt 20 Amp Motor

Drilling Accessories

Electric Motors

Motor	Volt	Amp	Weight	Shaft	Gears	Idle RPM	Load RPM	Min. Bit Diameter	Opt. Bit Diameter	Max. Bit Diameter
CARDI - TOL	120	15	15 lbs	1-1/4-7	1	2500	1700	1/4"	1-1/2"	2-1/2"
					2	1340	950	2"	3"	5"
CARDI TIM	115	15	17 lbs	1-1/4-7	1	2580	1920	1/2"	1-1/2"	3"
					2	1860	1380	1-1/2"	2-1/2"	4-1/2"
					3	770	570	2-1/2"	4"	6"
DEWALT*	115	20	30 lbs	1-1/4-7	1	350	230	2"	4"	6"
2					980	600	6"	10"	14"	
CARDI D3-250	115	20	30 lbs	1-1/4-7	1	859	622	2"	4"	6"
					2	416	301	6"	10"	14"
CARDI D9-450	115	25	35 lbs	1-1/4-7	1	1420	880	1"	3"	5"
					2	870	525	3"	5"	8"
					3	530	320	5"	8"	12"
					4	310	190	10"	14"	18"
CARDI D9-500	115	25	35 lbs	1-1/4-7	1	720	480	4"	6"	8"
					2	500	340	6"	9"	12"
					3	340	230	10"	15"	18"
					4	220	140	14"	18"	24"

*Available with top mounted on/off switch

Water Swivels

Cat. No.	Shank - Spindle	Thread Size	Spindle (only)	Body	Bearings (2 Req.)	Seals (2 Req.)
WS -15	1/2"	1/2 - 20	01062008	801	01B	01S
WS -1A	#1 Morse Taper	1/2 - 20	0106200M	801	01B	01S
WS -25	1/2"	5/8 - 11	02101106	802	02B	02S
WS -26	5/8"	5/8 - 11	02101110	802	02B	02S
WS -2A	#2 Morse Taper	5/8 - 11	02101102M	802	02B	02S
WS -36	5/8"	1-1/4 - 7	03200710	803	03B	03S
WS -37	3/4"	1-1/4 - 7	03200712	803	03B	03S
WS -3A	#3 Morse Taper	1-1/4 - 7	03200703M	803	03B	03S

Water Swivel



Extension Rods

Cat No.	Thread Size	Extension Length
SF 65	5/8 - 11	6
SF 65L	5/8 - 11	12
SF 125S	1-1/4 - 7	6
SF 125L	1-1/4 - 7	12

Shaft Coupling or Subs

Cat No.	Thread Size	Adaptor Extension Length
SA 56	1/2 - 20	5/8 - 11
SA 65	5/8 - 11	1/2 - 20
SA 612	5/8 - 11	1-1/4 - 7
SA 126	1-1/4 - 7	5/8 - 11

Extension Rods



Drill Rig Accessories

Electric Motors

Vacuum kit w/ base, vacuum gage and gasket for CARDI C-100	K11297
Vacuum Pump for CARDI C-100	K10745
Ceiling jack for CARDI C-100 Drill Rig	K11184
Gast Vacuum Pump 1/8 HP, w/ Fittings for GM 100/200	K10745
Control Panel Dual Switch / Dual Outlet, 110 V.	K11371
8" Water Collector Ring and Teel Pump	K11372
Water Pressure Tank - 4 Gallon Capacity	K11373
Teel Pump for Trap Rings	K11374
Collection Ring Gasket	K11375
E-250 Wet/Dry Vacuum Hose Adaptor	K11376
GM-100 Dovetail Motor Mount Quick Disconnect	K11377
GM-200 Dovetail Motor Mount Quick Disconnect	K11378
1-3/8" Spindle Wrench	K11379
GM-200 Roller Carriage	K11380
GM-100 2" Spacer Block (Adds 4" to drilling diameter capacity)	K10781
GM-200 2" Spacer Block (Adds 4" to drilling diameter capacity)	K10737
Gasket for GM-100 Combination Base	K10753
Gasket for GM-200 Combination Base	K10754
GM-100 Angle Combination Drill Stand	K11381
GM-200 Large Anchor Drill Stand	K11382



Gast Vacuum Pump 1/8 HP for GM-100/200



Control Panel Dual Switch/ Dual Outlet, 110V



GM-100 Angle Combination Drill Stand



GM-200 Large Anchor Drill Stand



Water Pressure Tank 4 Gallon Capacity



Dovetail Motor Mount



Roller Carriage



Water Trap Ring

Core Drilling Information

Tips for Core Drilling

Always secure the drill rig using a mechanical anchor, vacuum system, or by using the jack screw. **NEVER STAND ON THE DRILL RIG WITHOUT ANCHORING.**

Level the drill rig by use of base leveling screws and a small level attached to the column

Turn on the water prior to starting the motor to prevent the water seals from overheating and leaking

Never rotate or spin the bit in the hole without applying drilling pressure. Spinning the bit in the hole can overheat the bit and glaze the segments

When drilling through reinforcement steel (rebar), reduce the drilling pressure to approximately 1/3 and allow the bit to drill at its own rate. **DO NOT OVER PRESSURE THE BIT WHEN DRILLING THROUGH STEEL**

When drilling in high PSI concrete or concrete with hard aggregate (i.e. flint, river rock, hard granite) the bit can glaze over. To reopen the bit, do one of the following:

- Decrease the water flow to 1/2 for a few minutes, as the bits penetration rate increases, slowly increase the water flow back to it's original level.
- Slowly pour sand or sandblast media such as "Black Beauty" into the slurry. Then decrease the water flow to 1/2 for a few minutes, and as the bits penetration rate increases, slowly increase the water flow back to it's original level.
- Remove the bit from the hole and drill into a cement block or cinder block with sufficient water flow to form a wet paste-like slurry. Repeat this procedure until the bit is open.

Coring Problems and Solutions

Segment Cracking

Cause: Bond is too hard for material being drilled

Remedy: Use softer bond

Cause: Drill rig is not firmly secured

Remedy: Secure drill rig - tighten anchor, check vacuum system

Glazing

Cause: Too much feed pressure

Remedy: Open bit, reduce feed pressure

Cause: Aggregate is too hard

Remedy: Use a softer bond

Cause: Too much water, flushing slurry away

Remedy: Open bit, reduce water flow

Core Hangs Up

Cause: Insufficient water flow causing slurry to bind core in bit

Remedy: Increase water flow

Cause: Dented core barrel

Remedy: Repair core barrel and increase water flow

Loss of Segments

Cause: Snagging on steel reinforcement (rebar)

Remedy: Reduce drilling pressure, use higher grade bit

Cause: Insufficient water flow

Remedy: Increase water flow

Cause: Drill rig is not firmly secured

Remedy: Secure drill rig - tighten anchor, check vacuum system

Bent Segments

Cause: Too much feed pressure and insufficient water

Remedy: Reduce feed pressure and increase water flow

Cause: Aggregate is too hard

Remedy: Use a softer bond

Barrel cracking

Cause: Too much feed pressure

Remedy: Reduce feed pressure

Cause: Aggregate is too hard

Remedy: Use a softer bond

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