

Diamond Core Bits and Rigs Catalog

New
**Laser Welded
Pro Series**

*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 manufacturing of diamond drilling products to solve your toughest coring problem.

800-444-4180





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 NORMAL



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

Sizes 1/2" through 6-1/2" laser welded, sizes greater than 6-1/2" are brazed.

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"	I13522	I13549	I13576
5/8"	I13523	I13550	I13577
3/4"	I13524	I13551	I13578
7/8"	I13525	I13552	I13579
1"	I13526	I13553	I13580
1-1/4"	I13527	I13554	I13581
1-1/2"	I13528	I13555	I13582
1-3/4"	I13529	I13556	I13583
2"	I13530	I13557	I13584
2-1/4"	I13531	I13558	I13585
2-1/2"	I13532	I13559	I13586
2-3/4"	I13533	I13560	I13587
3"	I13534	I13561	I13588
3-1/4"	I13535	I13562	I13589
3-1/2"	I13536	I13563	I13590
4"	I13537	I13564	I13591
4-1/4"	I13538	I13565	I13592
4-1/2"	I13539	I13566	I13593
5"	I13540	I13567	I13594
5-1/2"	I13541	I13568	I13595
6"	I13542	I13569	I13596
6-1/4"	I13543	I13570	I13597
6-1/2"	I13544	I13571	I13598
7"	I13545	I13572	I13599
8"	I13546	I13573	I13600
9"	I13547	I13574	I13601
10"	I13548	I13575	I13602
12"	I20102	I20103	I20104
14"	I30072	I30073	I30074
16"	I40065	I40067	I40069
18"	I40066	I40068	I40070
20"	I50015	I50016	I50017
24"	I60013	I60014	I60015

Pro 1000 Series

Size	B10 Cat. No.	B30 Cat. No.	B50 Cat. No
1/2"	I13603	I13630	I13657
5/8"	I13604	I13631	I13658
3/4"	I13605	I13632	I13659
7/8"	I13606	I13633	I13660
1"	I13607	I13634	I13661
1-1/4"	I13608	I13635	I13662
1-1/2"	I13609	I13636	I13663
1-3/4"	I13610	I13637	I13664
2"	I13611	I13638	I13665
2-1/4"	I13612	I13639	I13666
2-1/2"	I13613	I13640	I13667
2-3/4"	I13614	I13641	I13668
3"	I13615	I13642	I13669
3-1/4"	I13616	I13643	I13670
3-1/2"	I13617	I13644	I13671
4"	I13618	I13645	I13672
4-1/4"	I13619	I13646	I13673
4-1/2"	I13620	I13647	I13674
5"	I13621	I13648	I13675
5-1/2"	I13622	I13649	I13676
6"	I13623	I13650	I13677
6-1/4"	I13624	I13651	I13678
6-1/2"	I13625	I13652	I13679
7"	I13626	I13653	I13680
8"	I13627	I13654	I13681
9"	I13628	I13655	I13682
10"	I13629	I13656	I13683
12"	I20105	I20106	I20107
14"	I30075	I30076	I30077
16"	I40071	I40073	I40075
18"	I40072	I40074	I40076
20"	I50018	I50019	I50020
24"	I60016	I60017	I60018



PRO 1200 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"	I13684	I13707	4-1/4"	I13696	I13719
1-1/4"	I13685	I13708	4-1/2"	I13697	I13720
1-1/2"	I13686	I13709	5"	I13698	I13721
1-3/4"	I13687	I13710	5-1/2"	I13699	I13722
2"	I13688	I13711	6"	I13700	I13723
2-1/4"	I13689	I13712	6-1/4"	I13701	I13724
2-1/2"	I13690	I13713	6-1/2"	I13702	I13725
2-3/4"	I13691	I13714	7"	I13703	I13726
3"	I13692	I13715	8"	I13704	I13727
3-1/4"	I13693	I13716	9"	I13705	I13728
3-1/2"	I13694	I13717	10"	I13706	I13729
4"	I13695	I13718			

PRO 1400 Series Core Bits



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"	I13730	I13743	1-3/4"	I13737	I13750
5/8"	I13731	I13744	2"	I13738	I13751
3/4"	I13732	I13745	2-1/4"	I13739	I13752
7/8"	I13733	I13746	2-1/2"	I13740	I13753
1"	I13734	I13747	2-3/4"	I13741	I13754
1-1/4"	I13735	I13748	3"	I13742	I13755
1-1/2"	I13736	I13749			



PRO 1000 Pre-stress Series Core Bits

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.

*Note: All Pre-stress Core Bit
Crowns are Brazed.*

Pro 1000 Pre-stress Series			
Size	B30 Cat. No.	Size	B30 Cat. No.
1"	I13423	3"	I12652
1-1/4"	I13872	3-1/2"	I12720
1-1/2"	I13873	4"	I12721
1-3/4"	I13874	4-1/2"	I12722
2"	I12719	5"	I12723
2-1/2"	I12651	6"	I12724

DRY PRO Series Core Bits



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.

Dry Pro Series

Size	Cat. No.	Size	Cat. No.
1"	I13875	2-1/2"	I13881
1-1/4"	I13876	3"	I13882
1-1/2"	I13877	3-1/2"	I13883
1-3/4"	I13878	4"	I13884
2"	I13879	5"	I13885
2-1/4"	I13880	6"	I13886

All bits are 9" core length with 5/8"-11 threaded adaptor

Core Bit Segments and Crowns

Core Bit Segments					Bit Crowns			
Size & Width	Pro 800 B30 Cat. No.	Pro 1000 B30 Cat. No.	Pro 1200 B30 Cat. No.	Pro 1400 B30 Cat. No.	Size	Pro 800 B30 Cat. No.	Pro 1000 B30 Cat. No.	Pro 1400 B30 Cat. No.
2 to 2-1/4" x .145"	I13450	I13474	I13498	I13514	1/2"	I13764	I13788	I13820
2-1/2 to 3-1/8" x .145"	I13451	I13475	I13499	I13515	5/8"	I13765	I13789	I13821
3-1/4 to 4-3/4" x .145"	I13452	I13476	I13500	I13516	3/4"	I13766	I13790	I13822
5 to 6-1/2" x .155	I13453	I13477	I13501	I13517	7/8"	I13767	I13791	I13823
7 to 11" x .165"	I13454	I13478	I13502	I13518	1"	I13768	I13792	I13824
12" and up x .187"	I13455	I13479	I13503	I13519	1-1/4"	I13769	I13793	I13825
12" and up x .220"	I13456	I13480	I13504	I13520	1-1/2"	I13770	I13794	I13826
12" and up x .250"	I13457	I13481	I13505	I13521	1-3/4"	I13771	I13795	I13827

Threaded Bits and Continental Tubing

Threaded Bit Crown and Tubing

Size	Crown Blanks (2" long)	Barrel 12" Long	Barrel 24" Long	Barrel 60" Long	Threaded Adaptor Only	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	I13828	I13839	I13850	I13861
2-1/2"	L10129	L10968	L10969	L12498	L10967	I13829	I13840	I13851	I13862
3"	L12149	L10976	L10975	L12499	L10977	I13830	I13841	I13852	I13863
3-1/2"	L11346	L11347	L11348	L12500	L11349	I13831	I13842	I13853	I13864
4"	L12235	L10904	L11335	L12501	L10903	I13832	I13843	I13854	I13865
4-1/4"	L12085	L12086	L11601	L12087	L11602	I13833	I13844	I13855	I13866
4-1/2"	L12506	L12436	L12400	L12502	L12503	I13834	I13845	I13856	I13867
5"	L12507	L10342	L10339	L12504	L10338	I13835	I13846	I13857	I13868
5-1/2"	L12508	L12494	L12495	L12496	L12497	I13836	I13847	I13858	I13869
6"	L12509	L11667	L12291	L11668	L11669	I13837	I13848	I13859	I13870
6-1/4"	L12510	L12206	L12207	L12505	L12208	I13838	I13849	I13860	I13871

Core Catchers

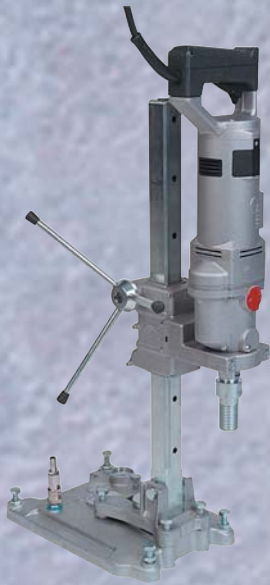
Size	Set Size
2"	2.437 x 2.000"
3"	3.437 x 2.875"
4"	4.437 x 3.922"



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 on request. In addition, Hoffman also offers several sizes of core catchers.

COMPLETE DRILL RIGS

CARDI C-100 Drill Rig



C-100 Drill Rig with T1M motor and optional vacuum base

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"

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 w/motor & wheels 28-1/2"
- Weight approx.150 lbs

Optional:

Angle base available



GM-100 Drill Rig with Dewalt 20Amp 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 w/motor & wheels 27"
- Weight 155 lbs



GM-200 Drill Rig with Dewalt 20Amp 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	3/4"	1-1/2"	2-1/2"
					2	1340	930	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	900	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"	14"	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



Extension Rods

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

Drill Rig Accessories

Item Description	Cat. No.
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, 110 V.



GM-100 Angle Combination Drill Stand



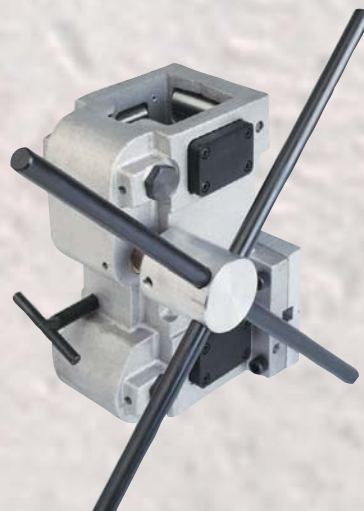
GM-200 Large Anchor Drill Stand



Water Pressure Tank - 4 Gallon Capacity



Dovetail Motor Mount



Roller Carriage



Water Trap Ring

Core Drilling Tips

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 the 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 bit's 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 bit's 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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