

PERFORMANCE NITRO BLACK VALVES

- 21-4N high strength stainless alloy
- Swirl polished for improved flow characteristics
- Fully undercut stem
- Hard wafer tip
- One piece forging
- Proprietary liquid nitriding process that creates a valve that is smoother, stronger and more corrosion resistant than traditional chromed valves
- Deep nitriding provides better ductility under the hard nitrided layer as proven in rotating-bending fatigue tests
- Valve is less likely to break even if contacted by the piston
- Greater surface hardness means less valve guide wear
- Improved corrosion resistance even with exotic fuels
- Our nitriding process is much cleaner than chroming- it's better for the environment



PART #	TYPE	HEAD DIAMETER	STEM DIAMETER	INSTALLED HEIGHT	OVERALL LENGTH	TIP LENGTH
CHEVROLET SMALL BLOCK						
01-3000-8	EXH	1.500	11/32"	STOCK	4.910	.250*
01-3001-8	EXH	1.600	11/32"	STOCK	4.910	.250
01-3001.100-8	EXH	1.600	11/32"	+100	5.010	.250
01-3002-8	INT	1.940	11/32"	STOCK	4.910	.250*
01-3003-8	INT	2.020	11/32"	STOCK	4.910	.250
01-3003.100-8	INT	2.020	11/32"	+100	5.010	.250
01-3007.100-8	INT	2.055	11/32"	+100	5.010	.250
01-3008.100-8	INT	2.080	11/32"	+100	5.010	.250
* NO UNDERCUT						

CHEVROLET BIG BLOCK						
01-3004-8	EXH	1.880	3/8"	STOCK	5.352	.250
01-3014.100-8	EXH	1.880	11/32"	+100	5.452	.250
01-3014.150-8	EXH	1.880	11/32"	+150	5.502	.250
01-3015.100-8	EXH	1.880	11/32"	+100	5.452	.250*
01-3005-8	INT	2.190	3/8"	STOCK	5.228	.250
01-3012.250-8	INT	2.250	11/32"	+250	5.478	.250
01-3013.250-8	INT	2.300	11/32"	+250	5.478	.250
01-3013.300-8	INT	2.300	11/32"	+300	5.525	.250
* 20° NO UNDERCUT						

CHEVROLET LS1-- BEAD LOCK						
01-3200-8	EXH	1.570	0.313"	STK	4.890	.160
01-3201-8	EXH	1.600	0.313"	STK	4.890	.160
01-3202-8	INT	2.020	0.314"	STK	4.880	.160
01-3206-8	INT	2.041	0.314"	STK	4.880	.160
01-3207-8	INT	2.055	0.314"	STK	4.880	.160

Scanning Electron Microscope Comparison



Surface Texture Tests (Roughness measurement)

Nitro Black Rp:38.5 micro inches

Chrome Rp:48.8 micro inches

Laboratory tests prove that NITRO BLACK nitrided performance valves are more than 21% smoother than traditional chrome plated valves. Scanning electron microscope images back that up.

Smoother valve stems mean less valve and valve guide friction.

Less friction means more power, less wear and less chance of breakage.

NEW NITRO BLACK DIESEL PERFORMANCE VALVES

For Ford Powerstroke, GM Duramax and Dodge Cummins Engines



FEATURES

- Exotic inconel alloy is designed to function in extreme heat and stress conditions
- Stellite facing creates additional heat resistance on the head of the valve
- Liquid nitriding strengthens the entire valve material - not just the surface area
- Better ductility beneath the extremely hard magnetite outer layer makes the valve less likely to break, even if contacted by a piston
- Greater surface hardness reduces crack formation
- Smoother, stronger surface means less valve and valve guide wear than chrome
- Resists corrosion and deposits caused by exotic fuels



Our diesel performance valves are designed to perform reliably in the extreme conditions that exist in highly boosted turbo diesel engines.

Bi-metallic exhaust valves are made from inconel and HNV-3 alloys and are stellite faced to operate under extreme heat conditions.

Intake valves are made from 21-4N alloy steel. Both intake and exhaust valves are put through our proprietary five step liquid nitriding process, resulting in valves that are smoother, stronger and more corrosion resistant than traditional chrome plated stainless valves.

ENGINE PRO NITRO BLACK DIESEL PERFORMANCE VALVES

APPLICATION	PART #	TYPE	HEAD DIA	STEM DIA	OVERALL LGTH	TIP LGTH	SEAT ANGLE
DODGE/CUMMINS ISB 5.9L	01-4991-12	EXH	1.299	0.2756	4.893	0.299	45 DEG.
5.9L TURBO (98-10) 24 VALVES	01-4990-12	INT	1.299	0.2756	4.907	0.299	30 DEG.
FORD 6.0L POWERSTROKE	01-4985-8	EXH	1.102	0.2738	5.059	0.358	37 DEG.
NAVISTAR TURBO (03-10) 32 VALVES	01-4984-8	INT	1.139	0.2738	5.059	0.358	30 DEG.
FORD 6.4L POWERSTROKE	01-4987-8	EXH	1.161	0.2734	5.138	0.433	39.3 DEG.
NAVISTAR TURBO (08-10) 32 VALVES	01-4986-8	INT	1.339	0.2736	5.138	0.433	37 DEG.
FORD 6.7L POWERSTROKE	01-4989-8	EXH	1.195	0.2748	5.242	0.699	29.3 DEG.
FORD TURBO (2011 - ON) 32 VALVES	01-4988-8	INT	1.331	0.2748	5.242	0.699	29.3 DEG.
FORD 7.3L POWERSTROKE	01-4983-8	EXH	1.681	0.3122	5.801	0.289	37.3 DEG.
NAVISTAR 444TE TURBO (94-03) 16 VALVES	01-4982-8	INT	1.681	0.3122	5.798	0.339	30 DEG.
GM 6.6L DURAMAX DD	01-4995-8	EXH	1.220	0.2730	4.965	0.519	45 DEG.
(01-13) 32 VALVES	01-4994-8	INT	1.299	0.2741	4.975	0.519	45 DEG.

NOTE: 32 VALVE ENGINES REQUIRE 2 BOXES OF 8 EXHAUST VALVES AND 2 BOXES OF 8 INTAKE VALVES TO REPLACE VALVES IN COMPLETE ENGINE

PERFORMANCE INCONEL ALLOY VALVES

- For marine and supercharged applications
- Exotic alloy designed to function in extreme heat conditions
- One piece forging
- Swirl polished for improved flow characteristics
- Hard wafer tip

PART #	TYPE	HEAD DIAMETER	STEM DIAMETER	INSTALLED HEIGHT	OVERALL LENGTH	TIP LENGTH
CHEVROLET BIG BLOCK						
01-4301-8 INCONEL	EXH	1.890	3/8"	+0.048	5.400	.250
01-4312-8 INCONEL	EXH	1.880	11/32"	+0.098	5.450	.250
01-4313-8 INCONEL	EXH	1.900	11/32"	+0.098	5.450	.250

STAINLESS VALVES

2000 SERIES

Out perform the competition with these superior stainless one-piece valves. Our Competition Series Valves feature 21-4N stainless alloy, hard wafer tip, chromed stem, full undercut and swirl polished for optimum flow.

- High strength stainless alloy (21-4N)
- Swirl polished for improved flow characteristics
- Undercut stem
- Hardened tip
- One piece forging
- Hard chrome plated stem



PART #	TYPE	HEAD DIAMETER	STEM DIAMETER	INSTALLED HEIGHT	OVERALL LENGTH	TIP LENGTH	REFERENCE INFO
CHEVROLET SMALL BLOCK							
01-2000-8	EXH	1.500	11/32"	STOCK	4.910	.250	12° UNDERCUT, FLOW
01-2062.050-8	EXH	1.500	11/32"	+.050	4.960	.250	12° NO UNDERCUT
01-2001-8	EXH	1.600	11/32"	STOCK	4.910	.250	12° UNDERCUT, FLOW STOCK
01-2001.050-8	EXH	1.600	11/32"	+.050	4.960	.250	12° UNDERCUT, SUPER FLOW, EDELBROCK HEAD
01-2001.100-8	EXH	1.600	11/32"	+.100	5.010	.250	12° UNDERCUT, SUPER FLOW
01-2001.150-8	EXH	1.600	11/32"	+.150	5.060	.250	12° UNDERCUT
01-2001.250-8	EXH	1.600	11/32"	+.250	5.160	.250	15° UNDERCUT
01-2002-8	INT	1.940	11/32"	STOCK	4.910	.250	12° UNDERCUT
01-2002.050-8	INT	1.940	11/32"	+.050	4.960	.250	12° UNDERCUT
01-2061.050-8	INT	1.940	11/32"	+.050	4.960	.250	12° NO UNDERCUT
01-2003-8	INT	2.020	11/32"	STOCK	4.910	.250	12° UNDERCUT
01-2003.050-8	INT	2.020	11/32"	+.050	4.960	.250	12° UNDERCUT
01-2003.100-8	INT	2.020	11/32"	+.100	5.010	.250	12° UNDERCUT, SUPER FLOW
01-2007.100-8	INT	2.055	11/32"	+.100	5.010	.250	12° UNDERCUT, SUPER FLOW
01-2007.150-8	INT	2.055	11/32"	+.150	5.060	.250	12° UNDERCUT, SUPER FLOW
01-2008.100-8	INT	2.080	11/32"	+.100	5.010	.250	12° UNDERCUT, SUPER FLOW
01-2008.150-8	INT	2.080	11/32"	+.150	5.060	.250	12° UNDERCUT
CHEVROLET BIG BLOCK							
01-2004-8	EXH	1.880	3/8"	STOCK	5.352	.250	15° UNDERCUT, SUPER FLOW
01-2014.100-8	EXH	1.880	11/32"	+.100	5.421	.250	15° UNDERCUT, SUPER FLOW, BRODIX/DART 320-360
01-2014.150-8	EXH	1.880	11/32"	+.150	5.471	.250	15° UNDERCUT, SUPER FLOW
01-2005-8	INT	2.190	3/8"	STOCK	5.221	.225	12° UNDERCUT, SUPER FLOW
01-2012.100-8	INT	2.250	11/32"	+.100	5.355	.250	12° UNDERCUT, SUPER FLOW
01-2012.250-8	INT	2.250	11/32"	+.250	5.471	.250	12° UNDERCUT, SUPER FLOW
01-2013.250-8	INT	2.300	11/32"	+.250	5.471	.250	12° UNDERCUT, SUPER FLOW, BRODIX/DART 320-360
CHEVROLET LS							
01-2200-8	EXH	1.570	0.313	STOCK	4.915	.160	25° TULIP LS1, UNDERCUT, RADIUS GROOVE
01-2201-8	EXH	1.600	0.313	STOCK	4.915	.160	15° LS1, UNDERCUT, RADIUS GROOVE
01-2204-8	EXH	1.550	0.313	STOCK	4.915	.160	15° LS1, NO UNDERCUT, RADIUS GROOVE
01-2220-8	INT	2.000	0.3137	STOCK	4.900	.160	12° LS1, UNDERCUT, RADIUS GROOVE
01-2202-8	INT	2.020	0.3137	STOCK	4.900	.160	10° LS1, UNDERCUT, RADIUS GROOVE
01-2231-8	INT	2.165	0.3137	STOCK	4.900	.160	12° LS3, BACK CUT, 30° RADIUS GROOVE
01-2232-8	INT	2.200	0.3137	STOCK	4.900	.160	12° LS3, BACK CUT, 30° RADIUS GROOVE
FORD 4.6 - 32 VALVES							
01-2147-8	EXH	30MM	7MM	STOCK	117.1MM	10.65MM	25° SUPER FLOW, 3 RADIAL GROOVES
01-2146-8	INT	30MM	7MM	STOCK	135.9MM	15.7MM	20° SUPER FLOW, 3 RADIAL GROOVES
FORD FE							
01-2301-8	EXH	1.655	3/8"	STOCK	5.435	.330	12° SUPER FLOW, EDELBROCK HEAD
01-2300-8	INT	2.090	3/8"	STOCK	5.450	.330	22° SUPER FLOW, 30° SEAT, EDELBROCK HEAD

STAINLESS VALVES

1000 SERIES

Engine Pro Performance Stainless Valves feature superior design engineering and enhanced product features. Our valves are manufactured to exacting standards and from only the highest quality materials.

- Undercut stem
- Fully machined
- Hardened tip
- One piece forging
- Stainless steel alloy
- Hard chrome plated stem



PART #	TYPE	HEAD DIAMETER	STEM DIAMETER	INSTALLED HEIGHT	OVERALL LENGTH	TIP LENGTH	REFERENCE INFO
CHEVROLET SMALL BLOCK							
01-1000-8	EXH	1.500	11/32"	STOCK	4.910	.250	12° UNDERCUT, DISH HEAD
01-1000.100-8	EXH	1.500	11/32"	+100	5.010	.256	12° UNDERCUT
01-1001-8	EXH	1.600	11/32"	STOCK	4.910	.250	12° UNDERCUT, DISH HEAD
01-1001.100-8	EXH	1.600	11/32"	+100	5.010	.250	12° UNDERCUT, DISH HEAD
01-1052.150-8	EXH	1.650	11/32"	+150	5.060	.250	12° UNDERCUT, DISH HEAD
01-1002-8	INT	1.940	11/32"	STOCK	4.910	.250	10° UNDERCUT, DISH HEAD
01-1002.100-8	INT	1.940	11/32"	+100	5.010	.256	10° UNDERCUT
01-1003-8	INT	2.020	11/32"	STOCK	4.910	.250	10° UNDERCUT, DISH HEAD
01-1003.100-8	INT	2.020	11/32"	+100	5.010	.250	10° UNDERCUT, DISH HEAD
01-1007-8	INT	2.055	11/32"	STOCK	4.910	.250	10° UNDERCUT, DISH HEAD
01-1007.100-8	INT	2.055	11/32"	+100	5.010	.250	10° UNDERCUT, DISH HEAD
01-1008-8	INT	2.080	11/32"	STOCK	4.910	.250	10° UNDERCUT, DISH HEAD
01-1008.100-8	INT	2.080	11/32"	+100	5.010	.250	10° UNDERCUT, DISH HEAD
CHEVROLET BIG BLOCK							
01-1011-8	EXH	1.720	3/8"	STOCK	5.352	.250	12° UNDERCUT, DISH HEAD
01-1004-8	EXH	1.880	3/8"	STOCK	5.352	.250	12° UNDERCUT, DISH HEAD
01-1014.100-8	EXH	1.880	11/32"	+100	5.425	.250	12° UNDERCUT, DISH HEAD
01-1115.100-8	INT	2.190	11/32"	+100	5.300	.250	10° UNDERCUT, DISH HEAD
01-1010-8	INT	2.065	3/8"	STOCK	5.228	.250	10° UNDERCUT, DISH HEAD
01-1005-8	INT	2.190	3/8"	STOCK	5.228	.250	10° UNDERCUT, DISH HEAD
01-1032-8	INT	2.250	3/8"	STOCK	5.271	.225	10° UNDERCUT, DISH HEAD
CHRYSLER SMALL BLOCK 340, W2							
01-1600.070-8	EXH	1.600	3/8"	+070	5.075	.225	14° UNDERCUT
01-1602.050-8	INT	2.020	3/8"	+050	5.050	.225	12° UNDERCUT
CHRYSLER BIG BLOCK							
01-1311-8	EXH	1.740	3/8"	STOCK	4.910	.290	14° UNDERCUT
01-1310-8	INT	2.080	3/8"	STOCK	4.875	.290	12° UNDERCUT
FORD SMALL BLOCK							
01-1102-8	EXH	1.460	11/32"	STOCK	5.070	.395	12° UNDERCUT, DISH HEAD
01-1101-8	INT	1.780	11/32"	STOCK	5.070	.395	10° UNDERCUT, DISH HEAD
FORD 351C, BOSS 302, 429, 460							
01-1108-8	EXH	1.710	11/32"	STOCK	5.060	.250	12° UNDERCUT, DISH HEAD
01-1109-8	EXH	1.760	11/32"	STOCK	5.060	.250	9° FLOW, DISH HEAD
01-1110-8	INT	2.070	11/32"	STOCK	5.275	.250	12° UNDERCUT, DISH HEAD
01-1107.050-8	INT	2.250	11/32"	+050	5.271	.250	10° UNDERCUT, DISH HEAD
FORD 351W & GT40 HEAD							
01-1105-8	EXH	1.550	11/32"	STOCK	5.075	.395	12° UNDERCUT, DISH HEAD
01-1155-8	EXH	1.600	11/32"	STOCK	5.075	.395	12° UNDERCUT, DISH HEAD
01-1106-8	INT	1.940	11/32"	STOCK	5.075	.395	10° UNDERCUT, DISH HEAD
PONTIAC 400-455							
01-1500-8	EXH	1.770	11/32"	STOCK	5.110	.250	9° FLOW, DISH HEAD
01-1501-8	INT	2.110	11/32"	STOCK	5.095	.250	9° FLOW, DISH HEAD, 30° SEAT

ECONOMY STAINLESS VALVES

500 SERIES

PART #	TYPE	HEAD DIAMETER	STEM DIAMETER	INSTALLED HEIGHT	OVERALL LENGTH	TIP LENGTH
CHEVROLET SMALL BLOCK						
01-500-8	EXH	1.500	11/32"	STOCK	4.910	.250
01-501-8	EXH	1.600	11/32"	STOCK	4.910	.250
01-502-8	INT	1.940	11/32"	STOCK	4.910	.250
01-503-8	INT	2.020	11/32"	STOCK	4.910	.250

Our economy performance valves are one piece EV-12 stainless steel forgings with hard tips and chrome plated undercut stems.