



# Pro Action™ Small Block Chevy Cylinder Head #12029

## DESCRIPTION

**RHS™ Pro Action™ Small Block Chevy 23° cylinder head, bare casting aluminum, 220cc intake runner, 64cc combustion chamber, angle plug 2.020" intake/1.600" exhaust valves**

## Specifications

	Intake	Exhaust
<b>Port Volume:</b>	220cc	74cc
<b>Port Dimension:</b>	1.225" X 2.200"	1.350" X 1.400"
<b>Port Location:</b>	Stock	stock
<b>Valve Angle:</b>	23°(stock angle )	23°(stock angle )
<b>Valve Head Diameter:</b>	2.020"	1.600"
<b>Valve Length:</b>	5.011" (std length + .100")	5.011" (std length + .100")
<b>Valve Seat Dimensions:</b>	2.120" X 1.812" X .375"	1.656" X 1.350" X .375"
<b>Valve Seat Angles:</b>	35/45/60/75	35/45/55/radius
<b>Valve Guide Diameter:</b>	11/32"	11/32"
<b>Valve Guide Dimensions:</b>	.502" O.D. X 2.130"L X .530" boss dia.	.502" O.D. X 2.130"L X .530" boss dia.
<b>Valve Guide Spacing:</b>	1.890"	
<b>Valve Guide Material:</b>	Premium bronze material for superior heat dissipation and longer life	
<b>Cylinder Head Material:</b>	Aluminum	
<b>Chamber Volume:</b>	64cc	
<b>Spark Plug Configuration:</b>	Angle plug	
<b>Spark Plug Type:</b>	14mm, .750" reach, 5/8" hex, flat gasket style	
<b>Spring Pocket Diameter:</b>	1.55"	
<b>Pushrod Diameter:</b>	5/16" (larger diameter will require clearancing)	
<b>Weight:</b>	20 lbs	

## Features

- Optimal port design for greater flow, better atomization & enhanced dynamics
- Unique multi-angled intake & radiused exhaust valve seats for increased flow and horsepower output
- Hardened valve seats for exceptional durability even when used in extreme applications with harsh fuels
- More efficient water jacket design for improved cooling and thermal conductivity, and reduced risk of detonation
- Thick deck faces with added material to allow angle milling for increased compression
- Revised combustion chamber design for excellent combustion thermodynamics and enhanced fuel efficiency
- All accessory bolt holes drilled and tapped to exact tolerances

## Tech Notes

<b>Flat Milling:</b>	.006" per cc
<b>Angle Milling:</b>	.0075" per cc (excessive milling can cause intake manifold misalignment)
<b>Head Bolt Torque:</b>	Refer to cylinder head bolt manufacturer's specifications
<b>Rocker Stud Torque:</b>	45 lb/ft
<b>Intake Manifold Torque:</b>	35 lb/ft
<b>Spring Pocket Machining:</b>	Can be machined to 1.625" maximum diameter, cannot be machined deeper
<b>Pushrod Length:</b>	Measuring with length checker (COMP Cams® #7705) required to verify pushrod geometry
<b>Piston to Valve Clearance:</b>	Must be verified -minimum clearance is .080" intake and .100" exhaust
<b>Retainer to Guide Clearance:</b>	Must always be measured when using high lift cams
<b>Chamber to Dome Clearance:</b>	Must always be checked with domed pistons, clearancing may be necessary
<b>Chamber Volume:</b>	Varies due to valve margins and dishes, should always be verified before installation
<b>Valve Guide Clearance:</b>	Must be checked due to the variance in valve stem diameters between manufacturers Recommended clearance: intake .0015"-.0016", exhaust .002"-.0025" Water jackets require flushing prior to cylinder head installation
<b>Header/Spark Plug Clearance:</b>	Spark plug/ wire boot clearance verification is required prior to header installation. Minor modifications may be necessary in order to achieve proper clearance.

RHS™

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Part #12029IS  
Revised 01/31/07



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## Suggested Assembly Components

Part Type	Brand/Part #	Description
<b>Intake Valves</b>	COMP Cams® #6001-8	2.020", + .100" long, 11/32" valve stem diameter
<b>Exhaust Valves</b>	COMP Cams® #6002-8	1.600", + .100" long, 11/32" valve stem diameter
<b>Valve Springs*</b>	COMP Cams® #972-16 (-01)	1.460 single valve spring set, 124# @ 1.800" max lift .560"
	COMP Cams® #987-16 (-02)	1.430 dual valve spring set, 95# @ 1.800" max lift .550"
<b>Retainers*</b>	COMP Cams® #743-16 (-01)	1.400" 7° steel retainer set
	COMP Cams® #740-16 (-02)	1.400" 10° Super Lock™ steel retainer set
<b>Valve Locks*</b>	COMP Cams® #601-16 (-01)	11/32" 7° valve lock set
	COMP Cams® #611-16 (-02)	11/32" 10° Super Lock™ valve lock set
<b>Valve Stem Seals</b>	COMP Cams® #529-16	.530" metal body viton valve stem seals
<b>Spring Locators*</b>	COMP Cams® #4696-16 (-01)	1.510" valve spring locators
	COMP Cams® #4770-16 (-02)	1.550" valve spring locators
<b>Guide Plates</b>	COMP Cams® #4808-8	5/16" guide plate set
<b>Rocker Arm Studs</b>	COMP Cams® #4502-16	3/8" Magnum™ rocker arm stud set
	COMP Cams® #4503-16	7/16" Magnum™ rocker arm stud set

## Additional Recommended Components

Part Type	Brand/Part #	Description
<b>Spark Plugs</b>	ZEX™ #82003-8	Street/strip: 14mm, .750" reach, 5/8" hex, premium spark plug set
	ZEX™ #82216-8	Race: Champion C57YC, 14mm, .750" reach, 5/8" hex, spark plug set
<b>Rocker Arms</b>	COMP Cams® #1301-16	Pro Magnum™ 1.52 ratio rocker arm set, 3/8" stud diameter
<b>Shaft Mount Rockers</b>	COMP Cams® #1503	1.6 ratio shaft-mounted full roller aluminum rocker arms
<b>Intake Gaskets</b>	RHS™ #1707	Intake manifold gasket, 2.09" X 1.28" port, .060" thick
<b>Exhaust Gaskets</b>	RHS™ #1708	Header gasket, 1.500" X 1.500" port size, graphite
<b>Head Gaskets</b>	RHS™ #1700	Cylinder head gasket, 4.060" bore X .041" compressed thickness
	RHS™ #1701	Cylinder head gasket, 4.165" bore X .041" compressed thickness
<b>Valve Cover Gaskets</b>	RHS™ #1709	Valve cover gasket, .120" thick, silicone reinforced
<b>Head Bolts**</b>	ARP #134-3701	HP head bolt set, 265-400 SBC
<b>Head Studs**</b>	ARP #234-4301	8740 head stud set, 265-400 SBC
<b>Stud Girdle**</b>	COMP Cams® #4004	Aluminum stud girdle set, 265-400 SBC

## Application Notes

- \* -01 indicates flat tappet application
- \* -02 indicates hydraulic roller application
- \*\* Recommended components only, individual application must be verified prior to installation



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