



Big Block Chevy Cylinder Head

Big Block Chevy cylinder head, bare casting, cast iron, 320cc intake runner
119cc combustion chamber, 2.250" intake/1.880" exhaust valves

Specifications

	INTAKE	EXHAUST
Port Volume:	320cc	135cc
Port Dimension:	1.700" X 2.450"	1.560" X 1.900"
Port Location:	Stock	raised .500"
Valve Angle:	24°(stock angle is 26°)	15° (stock angle is 17°)
Valve Head Diameter:	2.250"	1.880"
Valve Length:	5.468" (std length + .250")	5.468" (std length + .100")
Valve Seat Dimensions:	2.380" X 1.900" X .375"	2.006" X 1.900" X .375"
Valve Seat Angles:	40/45/60/75	40/45/Radius
Valve Guide Diameter:	11/32"	11/32"
Valve Guide Dimensions:	.502" O.D. X 2.100"L X .530" boss dia.	.502" O.D. X 2.100"L X .530" boss dia.
Valve Guide Material:	Premium bronze material for superior heat dissipation and longer life	
Material:	Cast iron	
Chamber Volume:	119cc	
Spark Plug Location:	Optimized for best performance	
Spark Plug Type:	14mm, .750" reach, 5/8" hex, flat gasket style	
Spring Pocket Diameter:	1.625"	
Pushrod Diameter:	3/8" (larger diameter will require clearancing)	
Weight:	78 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 seat 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

Flat Milling:	.006" per cc
Angle Milling:	.0075" per cc (excessive milling can cause intake manifold misalignment)
Head Bolt Torque:	Refer to cylinder head bolt manufacturer's specifications
Rocker Stud Torque:	45 lb/ft
Intake Manifold Torque:	35 lb/ft
Spring Pocket Machining:	Can be machined to 1.750" maximum diameter, cannot be machined deeper
Pushrod Length:	Measuring with length checker required to verify pushrod geometry
Piston to Valve Clearance:	Must be verified -minimum clearance is .080" intake and .100" exhaust
Retainer to Guide Clearance:	Must always be measured when using high lift cams
Chamber to Dome Clearance:	Must always be checked with domed pistons, clearancing may be necessary
Chamber Volume:	Varies due to valve margins and dishes, should always be verified before installation
Valve Guide Clearance:	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
Cylinder Head Bolts:	Raised exhaust ports require longer exhaust side head bolts/studs
Header/Spark Plug Clearance:	Spark plug/ wire boot clearance verification is required prior to header installation. Minor modifications may be necessary in order to achieve proper clearance.

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Suggested Assembly Components

<u>Part Type</u>	<u>Description</u>
Intake Valves	2.250", + .250" long, 11/32" valve stem diameter
Exhaust Valves	1.880", + .100" long, 11/32" valve stem diameter
Valve Springs	1.509" O.D. dual valve springs, 112# @ 1.900", max lift .600" 1.625" O.D. dual valve springs, 214# @ 1.950", max lift .750"
Retainers	1.500" 10° steel retainer set 1.625" titanium retainer set
Valve Locks	11/32" 10° valve lock set 11/32" 10° valve lock set
Valve Stem Seals	.530" metal body viton valve stem seals
Spring Locators	1.550" valve spring locators 1.625" valve spring locators
Guide Plates	3/8" guide plate set
Rocker Arm Studs	7/16" rocker arm stud set

Additional Recommended Components

<u>Part Type</u>	<u>Description</u>
Spark Plugs	Street/strip: 14mm, .750" reach, 5/8" hex, premium spark plug set Race: 14mm, .750" reach, 5/8" hex, premium spark plug
Rocker Arms	1.7 ratio rocker arm set, 7/16" stud diameter 1.7 ratio rocker arm set, 7/16" stud diameter
Intake Gaskets	Intake manifold gasket set, 1.82" X 2.54" port, .060" thick
Exhaust Gaskets	Header gasket set, 1.880" X 1.880" port size, graphite
Head Gaskets	Cylinder head gasket, 4.375" bore X .040" compressed thickness Cylinder head gasket, 4.630" bore X .040" compressed thickness
Valve Covers	Sand cast aluminum valve covers w/mounting studs and gaskets
Valve Cover Gaskets	Valve cover gasket set, silicone impregnated
Head Bolts**	HP head bolt set, includes correct bolts for raised exhaust ports
Head Studs**	8740 head stud set, includes correct studs for raised exhaust ports

Additional Notes

** Recommended components only, individual application must be verified prior to installation

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