



Port Flow Analyzer v3.0 Performance World  
 Test: PW BBC 90290A [www.performance-world.com](http://www.performance-world.com)  
 Folder: Chevrolet Page: 1

Head #: PW BBC 90290A Bore Adapter Diameter: 4.00"  
 Customer: Int Port Adapter: Radiused Inlet  
 Operator: Exh Port Adapter: Short "stub stack"

Test Comments:  
 PW 90290A BB Chevrolet aluminum head as cast. Note:

Report of:		Tested at	28"	Corr to	28.0"	# Vlvs	1	Vlv Dia	2.25"	Stem Dia	.341"	Port Area	0.00 sq in
Comparing	Int:												
1 Cylinders	Exh:	28"	28.0"	1	1.88"	.341"	0.00 sq in						

Port	Lift	L/D	Avg CFM	Cyl 1 CFM	
Intake	0.100	0.044	81.8	81.8	
Intake	0.200	0.089	160.0	160.0	
Intake	0.300	0.133	231.5	231.5	
Intake	0.400	0.178	289.2	289.2	
Intake	0.500	0.222	325.8	325.8	
Intake	0.600	0.267	340.3	340.3	
Intake	0.700	0.311	343.3	343.3	
Intake	0.800	0.356	348.1	348.1	
Exhaust	0.100	0.053	60.4	60.4	
Exhaust	0.200	0.106	121.7	121.7	
Exhaust	0.300	0.160	172.8	172.8	
Exhaust	0.400	0.213	204.0	204.0	
Exhaust	0.500	0.266	232.6	232.6	
Exhaust	0.600	0.319	255.6	255.6	
Exhaust	0.700	0.372	263.2	263.2	
Exhaust	0.800	0.426	267.2	267.2	

**NOTE: ALL FLOWBENCHES ARE NOT CREATED EQUAL!**  
**Data from one bench to the next can be vastly different.**  
**If you are modifying this head, it is important to "baseline" first to ensure accuracy.**  
**The data on this sheet is for reference only.**

Head File: 90290A  
 Head Comments:  
 PW 90290A BB Chevrolet aluminum head as cast.

Head Number	Customer
Intake	Exhaust
Layout: 1 valve & 1 port	Layout: 1 valve & 1 port
Valve Diameter, in 2.25"	Valve Diameter, in 1.88"
Stem Diameter, in .341"	Stem Diameter, in .341"
Throat Diameter, in	Throat Diameter, in
Avg Seat Angle, deg 45	Avg Seat Angle, deg 45
Port Shape: Oval	Port Shape: "D" .375" Raised
Port Volume, ccs 290cc	Port Volume, ccs 123cc
Avg Port Diameter, in	Avg Port Diameter, in
Avg Port Height, in	Avg Port Height, in
Port Length, in	Port Length, in

**Specifications 90290A**

Material	A356 Aluminum
Combustion Chamber CC	112cc
Intake Port Volume CC	290cc
Intake Port Dimension	2.01" x 1.75" Oval Port
Exhaust Port Volume CC	123cc
Exhaust Port Design	1.75" x 2.00" D Shape .375" Raised
Spark Plug Location	Stock
Intake Valve Size	2.25" (+.250" Length)
Exhaust Valve Size	1.88" (Std. Length)
Valve Stem Diameter	11/32" (.341")
Valve Spring Pocket I.D.	1.735"
Valve Spring Installed Height	1.95"-1.97"
Valve Guide Material	Manganese Bronze
Valve Guide O.D.	0.530" (.570" at base)
Rocker Stud Thread Size	7/16"x20 (.820"-1.30" u.h.l.)
Valve Cover Mounting	Perimeter
Valve Angle	24° Intake/15° Exhaust
Valve Seat Machining	Intake=4-Angle Exhaust=3-Angle
Oiling	Through Pushrod

**Hydraulic Roller (up to .600" lift) (Check Cam Manufacturer Recommendation)**

<b>Installed Components</b>	<b>Size</b>	<b>Brand</b>
Intake Valves	2.25" x 5.49" x 11/32"	PW 360025
Exhaust Valves	1.88" x 5.42" x 11/32"	PW 360019
Valve Springs		Howards 98632-16
Valve Retainers	10-Degree	Comp Cams 741-16
Valve Locks	10-Degree 11/32" (-.050")	Comp Cams 630-16
Valve Seals	11/32" x .530"	PW 360480
Valve Spring Locators		Comp Cams 4776-16
Rocker Arm Studs	7/16"-14 x 7/16"-20	PW 360372
Pushrod Guide Plates	3/8" Raised	Manley 42164-8
Spark Plugs	Autolite 3924 or equivalent	

**Valves Lapped & Checked****Valve Spring Installed Height & Pressure Checked****Vacuum Tested**

**NOTE: Assembled cylinder heads are supplied without the pushrod guideplates and rocker studs installed as they require adjusting for proper rocker alignment and pushrod clearance. Use thread sealant where required.**