



INJ-223 (Blue Dot) Injector Information

Part Number:	INJ-223	
Length:	Short	
Connector:	Bosch Jetronic/Minitimer	
O-Ring Diameter:	14mm Top and Bottom	
Coil Resistance:	8.5 Ω @ 22°C	
Min Opening Voltage:	10V @ 22°C	
Test Fluid:	N-Heptane	
Fluid Density:	0.684 g/cm ³	
Fluid Viscosity:	0.61 mm ² /s	
Test Temperature:	21±2°C	
Test Pressure:	300, 400 and 500 kPa	
Test Voltage:	6-14 V	
Q _{stat} , Static Flow Rate	1500 cc/min ±1.5%	
Q _{dyn} , Dynamic Flow Rate	107.4mg/pulse @ 7.5ms	
Fuel Compatibility	Gasoline, Ethanol and Methanol	
Spray Pattern	Pencil	
Spray Direction	Straight	

Slope [g/s] vs. Pressure [kPa]

Fuel Pressure

[psi]	40.0	43.5	50.0	55.0	58.0	60.0	65.0	72.5	80.0	90.0
[kPa]	276	300	345	379	400	414	448	500	552	621
[g/s]	15.60	16.26	17.58	18.47	18.96	19.27	19.95	20.79	21.85	23.17

Injector Offset [ms] vs. Pressure [kPa] vs. Voltage [V]

Fuel Pressure

[psi]	40.0	43.5	50.0	55.0	58.0	60.0	65.0	72.5	80.0	90.0	
[kPa]	276	300	345	379	400	414	448	500	552	621	
Voltage [V]	15	0.464	0.482	0.516	0.542	0.558	0.583	0.644	0.738	0.831	0.956
	14	0.590	0.629	0.702	0.757	0.791	0.834	0.937	1.095	1.252	1.462
	13	0.780	0.838	0.946	1.028	1.079	1.204	1.508	1.973	2.437	3.054
	12	1.014	1.113	1.300	1.442	1.529	1.653	1.953	2.412	2.872	3.481
	11	1.338	1.506	1.822	2.061	2.209	2.303	2.534	2.887	3.240	3.708
	10	1.925	2.111	2.461	2.725	2.888	3.063	3.487	4.135	4.784	5.644
	9	2.725	2.929	3.311	3.599	3.777	3.924	4.279	4.823	5.367	6.088
	8	3.579	3.865	4.401	4.806	5.056	5.176	5.466	5.911	6.355	6.944
	7	4.836	5.351	6.318	7.049	7.500	7.500	7.500	7.500	7.500	7.500
	6	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500

Static Flow Rate vs. Pressure [kPa]

Fuel Pressure

(psi)	40.0	43.5	50.0	55.0	58.0	60.0	65.0	72.5	80.0	90.0
(kPa)	276	300	345	379	400	414	448	500	552	621
[g/min]	16.62	17.33	18.67	19.62	20.18	20.54	21.37	22.53	23.67	25.11
[cc/min]	1460	1523	1640	1724	1773	1804	1877	1979	2079	2206

For Ford/GM Plug and Play data, please visit

<https://www.raceworks.com.au/fuel/injectors/data/INJ-223>



INJ-223 (Red Dot) Injector Information

Part Number:	INJ-223	
Length:	Short	
Connector:	Bosch Jetronic/Minitimer	
O-Ring Diameter:	14mm Top and Bottom	
Coil Resistance:	8.5 Ω @ 22°C	
Min Opening Voltage:	10V @ 22°C	
Test Fluid:	N-Heptane	
Fluid Density:	0.684 g/cm ³	
Fluid Viscosity:	0.61 mm ² /s	
Test Temperature:	21±2°C	
Test Pressure:	300, 400 and 500 kPa	
Test Voltage:	6-14 V	
Q _{stat} , Static Flow Rate	1580 cc/min ±1.5%	
Q _{dyn} , Dynamic Flow Rate	111.1mg/pulse @ 7.5ms	
Fuel Compatibility	Gasoline, Ethanol and Methanol	
Spray Pattern	Pencil	
Spray Direction	Straight	

Slope [g/s] vs. Pressure [kPa]

Fuel Pressure

[psi]	40.0	43.5	50.0	55.0	58.0	60.0	65.0	72.5	80.0	90.0
[kPa]	276	300	345	379	400	414	448	500	552	621
[g/s]	15.78	16.45	18.05	19.06	19.60	19.92	20.59	21.30	22.38	23.73

Injector Offset [ms] vs. Pressure [kPa] vs. Voltage [V]

Fuel Pressure

[psi]	40.0	43.5	50.0	55.0	58.0	60.0	65.0	72.5	80.0	90.0	
[kPa]	276	300	345	379	400	414	448	500	552	621	
Voltage [V]	15	0.572	0.581	0.598	0.611	0.619	0.634	0.671	0.728	0.785	0.860
	14	0.730	0.754	0.798	0.831	0.852	0.889	0.978	1.115	1.252	1.433
	13	0.975	1.010	1.077	1.127	1.157	1.265	1.525	1.924	2.323	2.851
	12	1.244	1.315	1.450	1.551	1.614	1.737	2.036	2.493	2.950	3.557
	11	1.637	1.773	2.027	2.219	2.337	2.418	2.615	2.916	3.218	3.617
	10	2.316	2.454	2.712	2.906	3.027	3.102	3.285	3.565	3.844	4.215
	9	3.010	3.199	3.552	3.818	3.983	4.036	4.163	4.359	4.554	4.813
	8	3.641	3.942	4.505	4.931	5.194	5.249	5.385	5.591	5.798	6.072
	7	4.709	5.249	6.262	7.027	7.500	7.500	7.500	7.500	7.500	7.500
	6	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500

Static Flow Rate vs. Pressure [kPa]

Fuel Pressure

(psi)	40.0	43.5	50.0	55.0	58.0	60.0	65.0	72.5	80.0	90.0
(kPa)	276	300	345	379	400	414	448	500	552	621
[g/min]	17.18	17.91	19.16	20.08	20.64	21.00	21.88	23.18	24.35	25.83
[cc/min]	1509	1574	1683	1764	1813	1845	1922	2036	2139	2269

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INJ-223 (Yellow Dot) Injector Information

Part Number:	INJ-223	
Length:	Short	
Connector:	Bosch Jetronic/Minitimer	
O-Ring Diameter:	14mm Top and Bottom	
Coil Resistance:	8.5 Ω @ 22°C	
Min Opening Voltage:	10V @ 22°C	
Test Fluid:	N-Heptane	
Fluid Density:	0.684 g/cm ³	
Fluid Viscosity:	0.61 mm ² /s	
Test Temperature:	21±2°C	
Test Pressure:	300, 400 and 500 kPa	
Test Voltage:	6-14 V	
Qstat, Static Flow Rate	1540 cc/min ±1.5%	
Qdyn, Dynamic Flow Rate	108.9mg/pulse @ 7.5ms	
Fuel Compatibility	Gasoline, Ethanol and Methanol	
Spray Pattern	Pencil	
Spray Direction	Straight	

Slope [g/s] vs. Pressure [kPa]

Fuel Pressure

[psi]	40.0	43.5	50.0	55.0	58.0	60.0	65.0	72.5	80.0	90.0
[kPa]	276	300	345	379	400	414	448	500	552	621
[g/s]	15.61	16.27	17.57	18.48	19.01	19.35	20.14	21.24	22.32	23.67

Injector Offset [ms] vs. Pressure [kPa] vs. Voltage [V]

Fuel Pressure

[psi]	40.0	43.5	50.0	55.0	58.0	60.0	65.0	72.5	80.0	90.0
[kPa]	276	300	345	379	400	414	448	500	552	621
15	0.492	0.537	0.622	0.685	0.725	0.750	0.812	0.905	0.999	1.124
14	0.774	0.807	0.869	0.916	0.945	0.957	0.986	1.031	1.077	1.137
13	0.974	0.993	1.027	1.053	1.069	1.088	1.133	1.201	1.270	1.361
12	1.309	1.349	1.423	1.479	1.514	1.528	1.564	1.618	1.671	1.743
11	1.769	1.814	1.896	1.959	1.998	2.028	2.103	2.217	2.332	2.483
10	2.189	2.243	2.343	2.418	2.465	2.495	2.567	2.677	2.787	2.933
9	2.916	2.968	3.068	3.143	3.189	3.220	3.294	3.407	3.520	3.670
8	3.612	3.665	3.765	3.841	3.887	3.929	4.030	4.185	4.340	4.545
7	5.312	5.735	6.529	7.129	7.500	7.500	7.500	7.500	7.500	7.500
6	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.500

Static Flow Rate vs. Pressure [kPa]

Fuel Pressure

(psi)	40.0	43.5	50.0	55.0	58.0	60.0	65.0	72.5	80.0	90.0
(kPa)	276	300	345	379	400	414	448	500	552	621
[g/min]	16.78	17.50	18.85	19.81	20.38	20.76	21.63	22.87	24.03	25.49
[cc/min]	1474	1537	1656	1740	1791	1823	1900	2009	2111	2239

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