<table>
<thead>
<tr>
<th>Part No.</th>
<th>Material</th>
<th>Stock Status</th>
<th>Specifications</th>
</tr>
</thead>
</table>
| AG40645TS | O1 tool steel    | Normally in stock | New - March 2019 End Discharge, High Flow  
The new **AG4** Series high flow gas injector is unequaled for full pressure profiling capabilities and high flow at reduced gas injection pressures. 1/4” Ø x 1.565” LOA, 1/4-28 threads. NO shoulder, hex for assembly at the tip – ideal for use on radiused surfaces. .645” body length stock; custom lengths available |
| AG40645SS | 316 stainless steel | Normally in stock | |
| A3SC312TS | O1 tool steel    | Normally in stock | End Discharge, High Flow  
High flow **A3SC** Series gas injector is unequaled for full pressure profiling capabilities and high flow at reduced gas injection pressures. Designed to be a direct remove and replace for any style injectors with 1/4-20 threads, 3/8” Ø shoulder x .180” deep tool bore. Normally a stock item. Available special order with 1/4-28 threads |
| A3SC312SS | 316 stainless steel | Normally in stock | |
| A4SC312TS | O1 tool steel    | Normally in stock | End Discharge, High Flow  
AEGIS’ high flow **A4SC** Series gas injector has the same internal design as the **A3SC** Series, with a .281” shoulder to fit tighter placement in molds, with 1/4-28 threads |
| A4SC312SS | 316 stainless steel | Normally in stock | |
| A5SC312TS-D |               |               | End Discharge, High Flow Durajector™  
AEGIS’ high flow **A5SC** Series gas injector is the same as the **A3SC** Series, with a unique titanium nitride coating for exceptional durability when molding reinforced resins. 1/4-20 threads |
| A6SC312TS-D |               |               | End Discharge, High Flow Durajector™  
AEGIS’ high flow **A6SC** Series gas injector is the same as the **A4SC** Series, with a unique titanium nitride coating for exceptional durability when molding reinforced resins. 1/4-28 threads |
| DET2-0001ACE | Special order |               | End Discharge, Fixed Position Center Element  
Recommended only for replacement of current similar injectors or where there is insufficient space in the mold for our indexing center element injectors. It does afford full pressure profiling capabilities. 3/16”Ø, 10-24 threads |

Gas Assisted Injection & Compression Molding  
Systems, Product-Process Development, Component Hardware  
**757-271-9927**
The most commonly used standard-build gas injectors we ship are the A3SC or A4SC series as shown on page 1. (A5SC or A6SC series if titanium nitride coated). The A3 and A4 have the exact same indexing internal center element which offers the highest flow capacity of any gas molding injector in the industry. The difference is only the smaller maximum diameter shoulder of the A4 for fit in smaller spaces in an injection mold. The A3, with the larger (.375") diameter shoulder includes an O-ring above the threads and below the shoulder as an extra measure to prevent N2 gas leakage around the threads.

The A3 through A6 Series injectors include a 3/16" hex at the base of the 3/16" Ø tip for assembly into a mold.

The new (in 2019) AG4 Series is an overall 1/4" Ø injector with no projecting shoulder and with a 7/32" hex at the tip. The design has the same internal center element as the A3 through A6 series injectors for the best gas flow in the gas molding industry. It is ideal for locating the injector on a radiused surface where a hex and shoulder would create an undesirable appearance or unbalanced counter-bore on the moldings surface.

Vent capacity: All AEGIS design gas injectors feature an open vent during the entire gas injection, hold, and venting profile pressure profile. There are several faced-off surfaces under the tip of the center element, allowing gas to vent through the injector body during gas decompression with the center element in the static (retracted) position. During N2 gas flow, the center element moves forward in the tip-bore providing maximum, unequaled N2 gas flow into the molten resin.

AEGIS has never offered a standard build (catalog) gas injector that requires retraction from the molded part to vent the gas. That type of injector eliminates the ability to reduce gas pressure during the cooling cycle, which is often necessary to prevent gas permeation into a nominal wall adjacent to the gas void or flow channel. We have however done so when asked for by a customer, but only to duplicate an injector that should now be considered obsolete and be replaced by self-venting gas injectors.

Sealing of threads: It is strongly recommended that all gas injectors have 2 or more wraps of PTFE tape applied to the threads for assembly into a mold. It makes assembly easier, and most importantly, assures a seal to prevents N2 gas from possibly passing along the threads during gas injection.

Standard gas injector tip length dimensions: The A3 through A6 Series injectors are stocked with .312" long tips, including the 3/16" x .090" assembly hex. This length was determined many years ago to be the most effective length for most, but not all, applications. We can and have produced injectors with tips as long as one inch, and as short as .133". Very short injector tips are not recommended. When gas is injected through the injector, the injected gas compresses resin around the tip and allows the resin to "grip" the injector tip, preventing gas leakage. Very short injector tips can let gas pass between the resin and injector tip, degrading the gas injection process and every gas molding cycle may be different as gas escapes the parting line.

Standard gas injector threads: A3SC injectors are stocked with 1/4-20 threads; standard and stock A4 injectors have 1/4-28 threads, however, we routinely build injectors with custom, including metric, threads. For new applications we recommend the standard stock threads so if a molder damages an injector, we can virtually have a replacement to you tomorrow.

Standard gas injector body material: O1 tool steel, 316 stainless steel is available on request, but stainless is not normally in stock, and should only be used when molding PVC, highly flame retardant or other corrosive resins.
### Standard Injector dimensions

#### AG4 Series

![AG4 Series Diagram](image1)

Part number AG40645 shown

#### A3SC and A5SC Series Standard Dimensions

![A3SC and A5SC Dimensions Diagram](image2)

#### A4SC and A6SC Series Standard Dimensions

![A4SC and A6SC Dimensions Diagram](image3)

#### DET2-0001ACE Series Standard Dimensions

![DET2-0001ACE Dimensions Diagram](image4)

---

Gas Assisted Injection & Compression Molding
Systems, Product-Process Development, Component Hardware

**757-271-9927**
A *small* selection of the many custom gas injectors we have furnished to the gas molding industry

- [Image 1](image1)
- [Image 2](image2)
- [Image 3](image3)
- [Image 4](image4)
- [Image 5](image5)
- [Image 6](image6)
- [Image 7](image7)
- [Image 8](image8)
- [Image 9](image9)
- [Image 10](image10)
- [Image 11](image11)
- [Image 12](image12)

**Gas Assisted Injection & Compression Molding**

Systems, Product-Process Development, Component Hardware

*757-271-9927*
E-mail AEGIS at gas101@gaspins.com or give us a call at 757-271-9927 for more information, or if you have any questions whatsoever about your specific application.

AEGIS
AEGIS Consultants, Inc.
P O Box 307  Pierre Part  LA  70339  USA
757-271-9927 e-mail: gas101@gaspins.com

www.gaspins.com

Our partner for the latest technology in gas assisted injection molding controllers

www.nitrojection.com