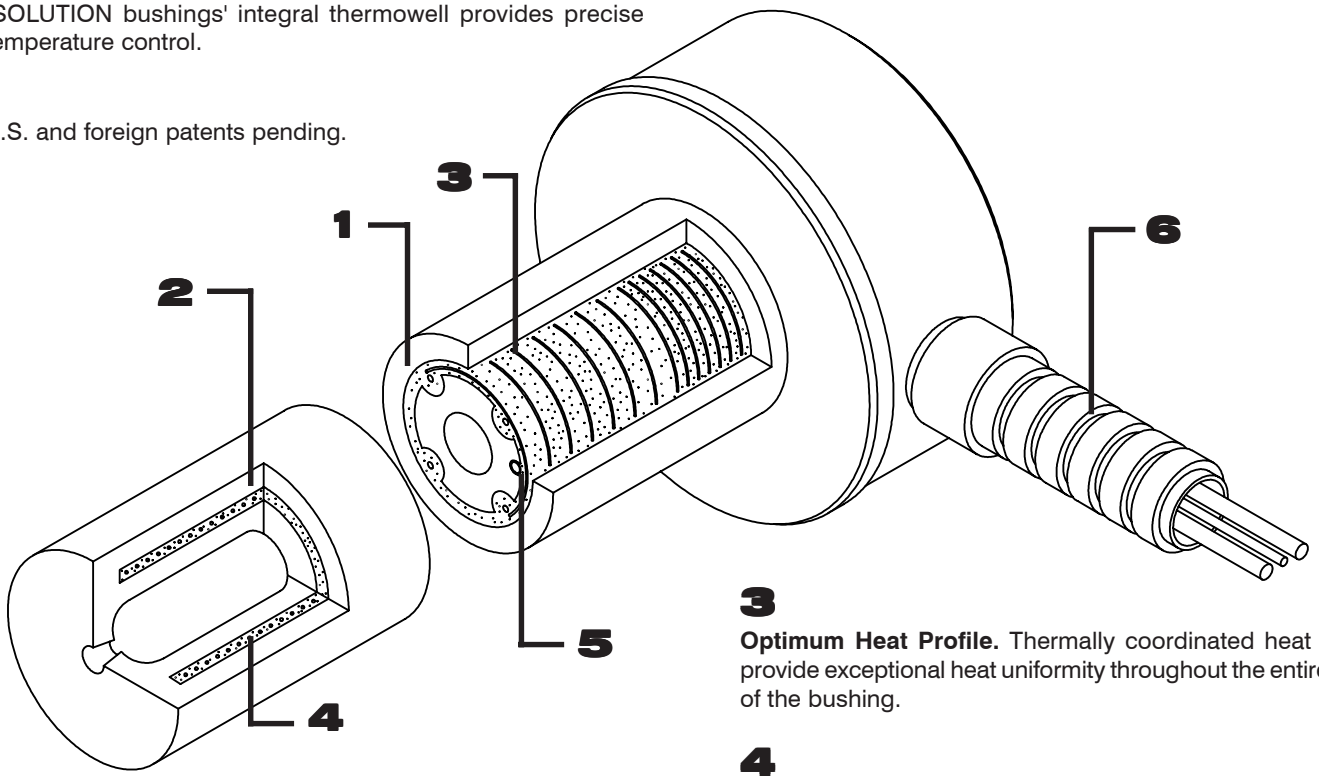
"SOLUTION" Center-Feed Sprue Bushings.....For Durability And Performance.

Our impressive "SOLUTION" center-feed bushing construction establishes a level of durability, performance and versatility surpassing all others in the industry. This unique construction forms an incredibly compact, high strength bushing capable of reliable performance under the most severe operating conditions.

"SOLUTION" bushing thermal characteristics are coordinated to the actual mold environment. This thermal coordination establishes the optimum temperature profile for actual mold operating conditions and provides the temperature uniformity essential to quality molding of all thermoplastic resins.

A removable mineral insulated thermocouple installed into the "SOLUTION bushings' integral thermowell provides precise temperature control.

U.S. and foreign patents pending.



"SOLUTION" bushing performance has been extensively evaluated in a variety of molding applications. Molders have repeatedly confirmed the superior results provided by our system coordinated heat profiles. "SOLUTION" center-feed bushings are the logical choice for processing both commodity and engineering resins.

Standard "SOLUTION" center-feed bushings are offered in a variety of configurations and sizes designed to accommodate most single sprue and multi-cavity hot manifold applications.

Custom "SOLUTION" bushings are readily available and can be supplied in configurations designed to satisfy special dimensional requirements in new molds or to retrofit existing bushings in problem molds.

1

High Strength Construction. A combination of high quality H13 tool steel, a substantial metal cross-section and our swaged, ultra thin element construction maximizes bushing mechanical strength.

2

Reliable Integral Heat. Our exceptionally thin element construction utilizes high temperature wire embedded in swage compacted ceramic insulation. This advanced design dramatically increases heat transfer rates and establishes the lowest possible internal element temperature.

3

Optimum Heat Profile. Thermally coordinated heat profiles provide exceptional heat uniformity throughout the entire length of the bushing.

4

High Temperature Design. Our thermally efficient element construction provides operating temperature capabilities far exceeding those of other bushing designs.

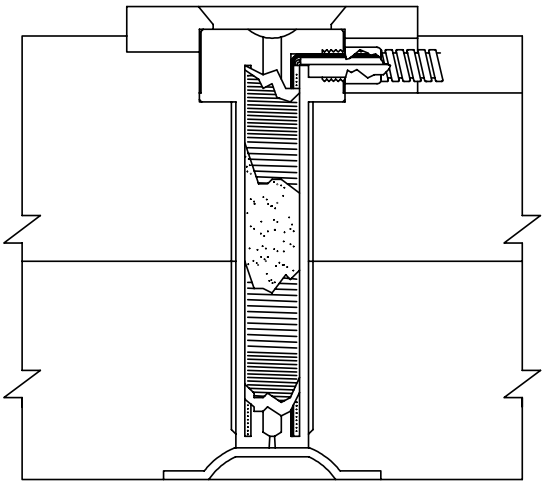
5

Superior Temperature Control. The thermocouple sensing location is within the central metal core of the bushing. This sensor location insures rapid response and precise control of melt passage surface temperatures.

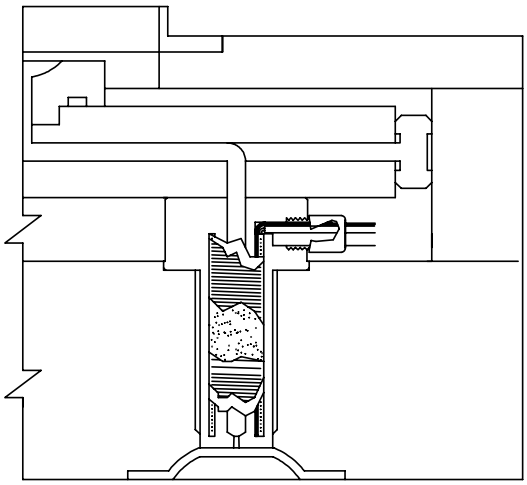
6

Rugged Lead Systems. External leads are securely attached to the internal conductors of the bushing element and sealed to prevent contaminants from entering the element assembly. Lead protection provides resistance to mechanical abuse.

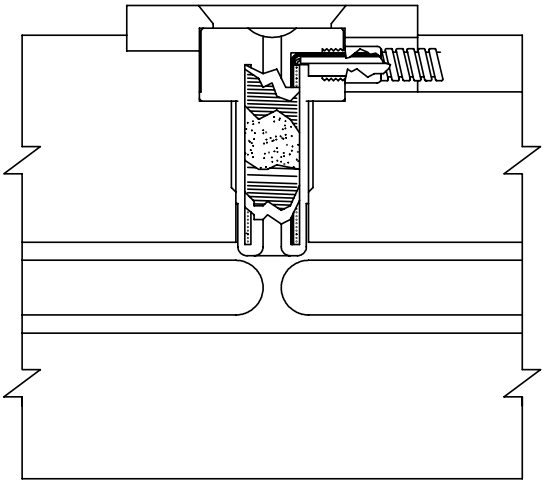
“SOLUTION” Center-Feed Bushings.....For Superior Versatility.



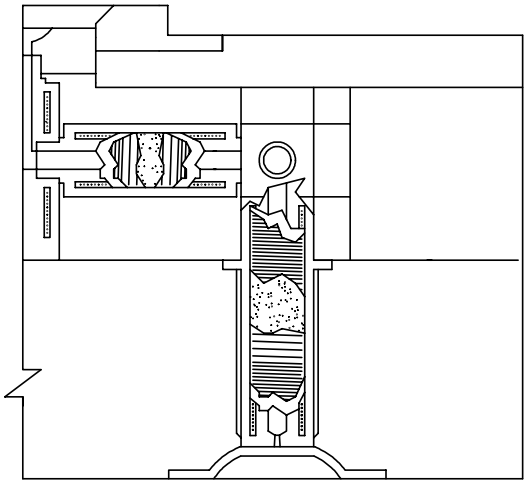
Sprue Bushings For Gating Of Parts And Runners.



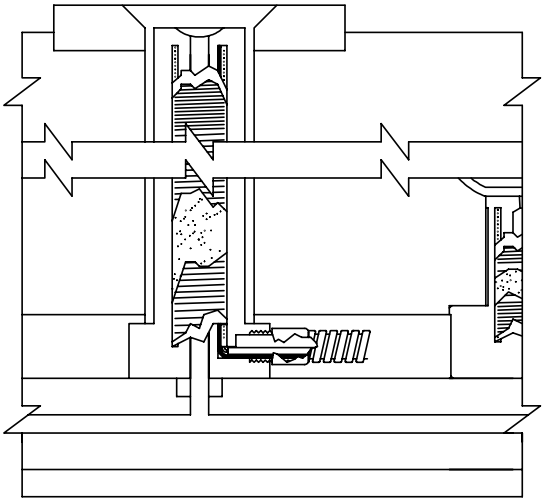
Bushings For Hot Manifold Molds.



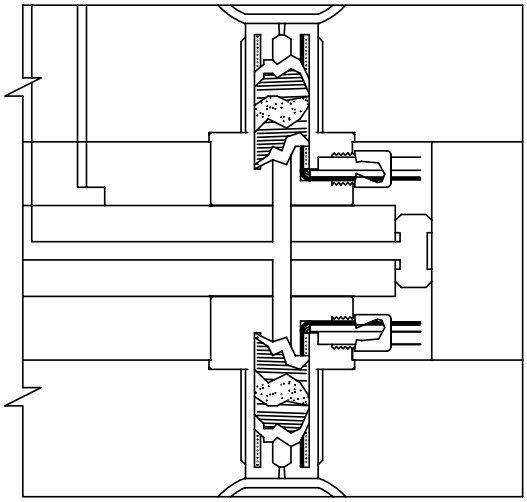
Feed Bushings For Internally Heated Systems



Components For Modular Manifold Systems.



Melt Transfer Tubes For Stack Molds



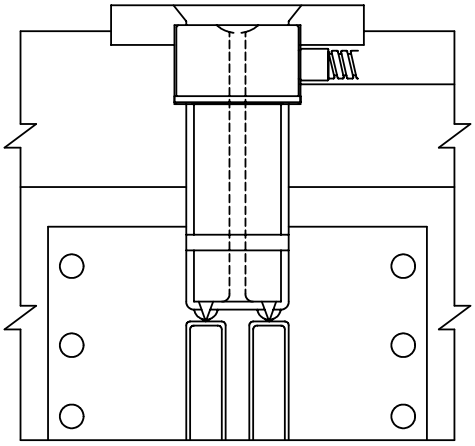
Bushings For Stack Mold Systems.

"SOLUTION" Center-Feed Bushing Selection

Ordering Standard Bushing Components

Our extensive listing of standard bushing components was developed to satisfy the majority of mechanical and thermal system requirements with stock component configurations. The standard bushing components are manufactured of prehard H13 tool steel (35 Rc) with other materials available on request. Our wide assortment of tip, head and lead exit options facilitate retrofit of components in existing runnerless systems. These standard bushing components can be utilized in the processing of virtually all thermoplastics resins, including high temperature, heat sensitive varieties.

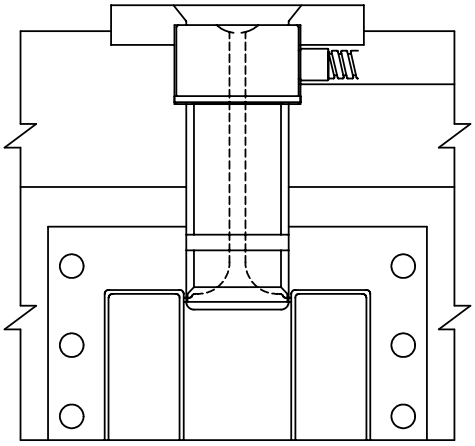
The standard component selection process requires selection of the desired physical size and any desired configuration options. Standard tip options include a variety of machining stock and finished tip options. All bushing diameters are available with removable tip configurations. Contact Duratherm engineering for any additional tip design and gating information required for your molding application.



"SOLUTION" Bushings With Multiple Pin Gating Tips

Ordering Modified Standard Bushing Components.

Processing of mineral and glass filled resins or resins containing corrosive additives may dictate the use of a full hard H13 bushings or wear resistant body materials. Common material variations include D2 and S7 as well as the more exotic particle metallurgy created alloys. We can recommend an appropriate body material for your application or will manufacture to your specific material requirements.



"SOLUTION" Bushings With Multiple Tunnel Gating Tips

Ordering Custom Bushing Components.

Some applications will require special mechanical or electrical component configurations. Our versatile bushing design is easily and economically produced in configurations meeting all the dimensional requirements of most commercially marketed and custom runnerless systems. Additional gate styles including multiple pin gates and tunnel gates can be supplied when required. We supply significant quantities of custom components and would welcome the opportunity to quote on your special requirements. If your application requires a custom configuration, please submit a drawing to our sales office, detailing your exact requirements.

Special Thermal Requirements

Special thermal designs may be required when mold design features radically alter the system's heat transfer characteristics. We have compiled extensive test data on the affects of mold design features on component heat transfer and can readily compensate for their effects. To properly review an application, we require a part drawing indicating resin type and a top and side view of your system. This review is particularly crucial in applications involving heat sensitive resins, long cycles or low resin throughput rates. Multiple heat and sensor zones are available on all "SOLUTION" bushings and will provide the molder with full control of bushing thermal characteristics.

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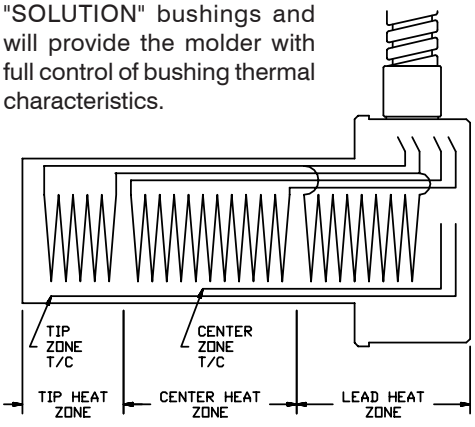

"SOLUTION" Bushings With Multiple Heat Zones