

# Sealing-Fabrication- Manufacturing

*Your Source for Sealing, Fabrication, Integration ,  
Assembly & Design Solutions*

# Introduction

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2. Sealing Solutions
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# Why Florida Seal & Rubber LLC?

**Customer** - As they become larger and face margin pressure, they transition their focus from Products to Solutions

**Suppliers** - Their focus is on the Design & Manufacturing of products

- Sales, General and Administrative Expenses (SGA) – The operating expenses to support the customer are managed by Florida Seal & Rubber LLC

**Florida Seal & Rubber**

- Sealing Product Solutions – The engineering and product solutions channel for the supplier to the customer (SGA). We are registered to the Standard ISO 9001:2008 and ITAR registrant code.
- Fabrication Solutions - The custom fabrication of Gaskets, EMI/RFI Shielding, and other die cut parts to the highest standards. The facility is registered to the International Standard ISO 9000.
- Manufacturing Solutions (Assembly, Integration, and Design) – Reduce part count, part numbers, assembly time, system costs, improve reliability and performance.

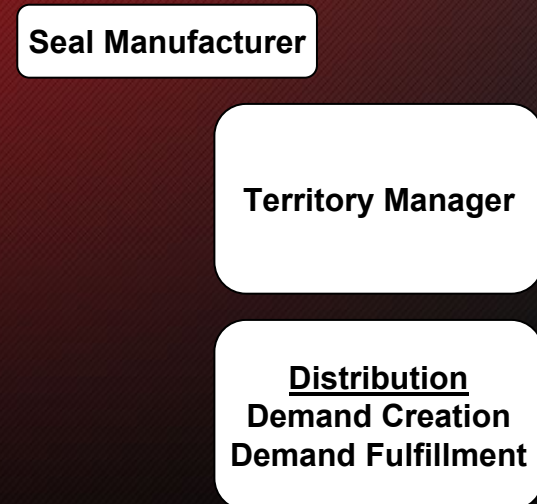
Florida Seal is a Sealing Technology Center (STC) for Parker Seal

# Sealing Solution Supply Chain

## Conventional Model



## Sealing Solutions Model “Science”



# Engineering

## Demand Creation / Engineering Support

- New Programs
  - Design assistance
  - Product specifications/ identification (color)
  - Samples
- Current Programs
  - Failure analysis
  - Cost reduction
  - Alternate sourcing
  - Manufacturing assistance (feeder bowl)
- New Material Introduction
  - Material/Test Information
  - Product specifications
  - Samples

# Product: Sealing Solutions

- Back Up Rings
- Composite Seals
- Custom Molded Products
- EMI/ESD Shielding Laminates
- EMI/RFI Shielding
- Extrusions
- Gaskets
- Hydraulic Seals
- Metal Seals
- Custom Molded Seals
- O-Rings
- O-Ring Accessories
- Rotary Seals
- Sheet Goods
- Teflon® Seals
- Thermal Management

# Fabrication

## Gaskets & EMI/RFI Shielding Solutions

- Die Cutting (Flatbed)
- Die Cutting (Rotary)
- Hand Fabrication
- Laser Cutting
- Water jet
- Prototyping
- Silk Screening
- Sub Assembly



## Product/Trade Names

- Bump on
- Formex
- Glastec
- Lexan
- Mylar
- Nomex
- PCB Spacers
- POLASHEET
- PORON
- Shielded Vents
- Shielded Windows
- SOFT SHIELD
- Teflon
- THERMATTACH
- Valox
- Velcro
- VHB Adhesive
- Volara

# Manufacturing

## Product Integration & Assembly

Florida Seal & Rubber LLC:

*Engineering & Logistics Manufacturing/Fabrication*

- Presscut Industries
- Parker Seal Group
- Sea Link International



# Manufacturing

## Plastic & Rubber Assemblies

We custom manufacture valves primarily for IBC's.

- Plunger Valves
- Ball Valves
- Butterfly Valves
- Gate Valves
- And more...

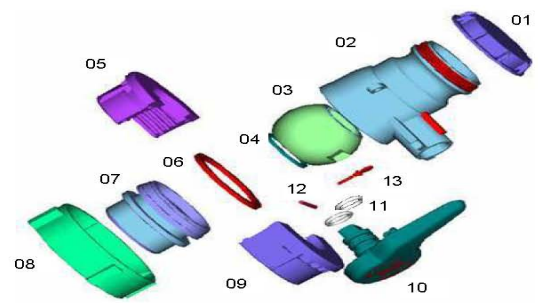
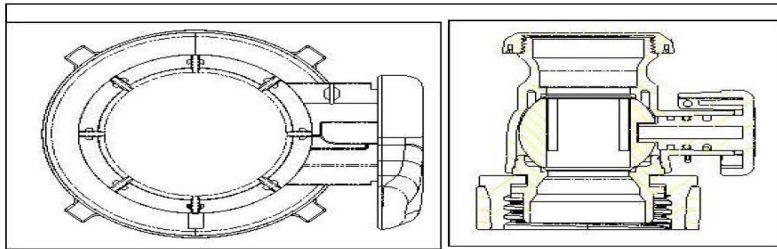


# Manufacturing

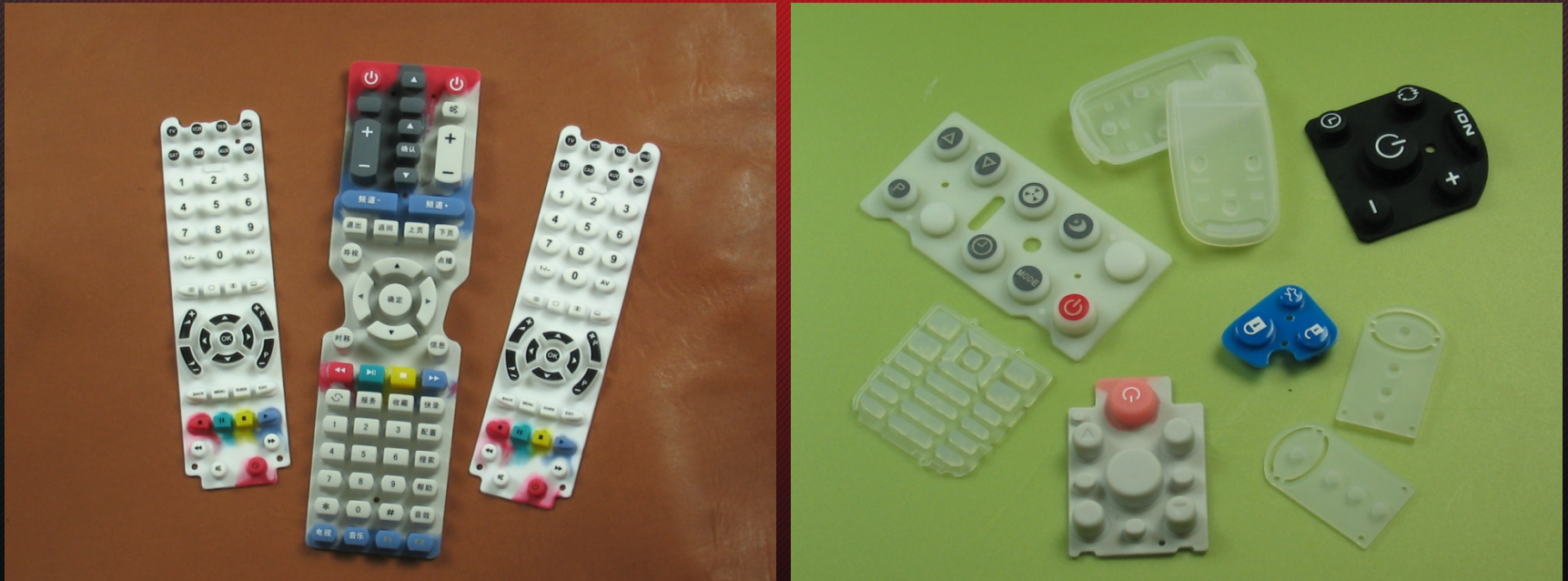
KamLock Ball Valve		
Item	Part Name	Material
1	Dust Cap	Polypropylene
2	Body-Part A	Polypropylene
3	Ball	Polypropylene
4	Ball Gasket	Teflon
5	Collar Half - A	Polypropylene
6	Collar Gasket	Opt: Santoprene or Viton
7	Body-Part B	Polypropylene
8	Collar Ring	Polypropylene
9	Collar Half - B	Polypropylene
10	Handle	Polypropylene
11	Handle Oring	Rubber
12	Handle Pin	Polypropylene
13	Tamper Proof	Polypropylene

Not To Scale		
Date:	3/11/2008	Material: Listed Above
Drawn By:	Sea Link	
Part Name:	2 in. KamLock Ball Valve	
Part Number:	IBC V34-M (viton) or V36-M (santoprene)	Rev. A



# Manufacturing Silicone Molded Products



# Manufacturing Design Challenge & Solution

## Over-molded Filters

*Maximize filter capability extend product life.*

The Integrated Sealing Systems over-molded technology maximizes filter potential and increases product life by sealing the outer edge of the filter membrane from harmful debris.

Over-molded rubber or plastic onto felt, industrial fabrics or metal screening can be customized to meet today's system environments.

Our over-molding technology prevents system blow-by and eases installation providing a premium filter seal that will lower warranty costs and extend system life. We can use your current filter or help you design one to meet your system needs. Contact your local representative to get more details.

Kitting and assembly services are available for aftermarket and line production needs.

*See bulletin ISS 5808 for more details*



### Product Features:

- Custom shapes, sizes and cross sections to meet application requirements
- Single or multiple molded materials available.
- Variety of filter media available.

### Benefits:

- Ease of installation
- Adaptable to any system configuration.
- Long life in aggressive environments.
- Can be shipped as part of an assembly

# Manufacturing Design Challenge & Solution

## Capabilities with Unlimited Possibilities

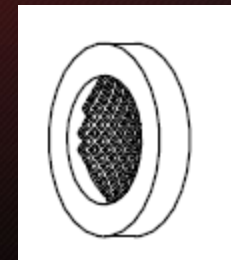
Integrated Sealing Systems Over-molded Casting Transit Technology is well suited for heavy duty applications



Press-in-Place air intake seal w/ integrated stamped deflector screen



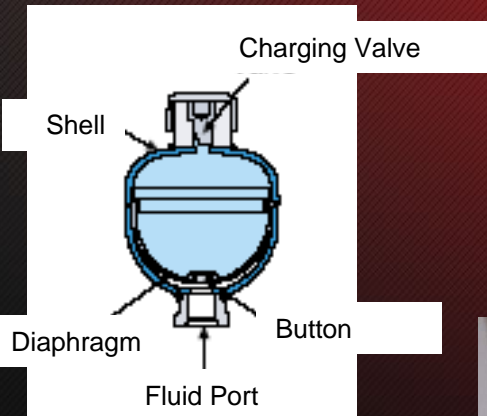
Water flow  
→



NSF EPDM rubber material  
w/ integrated SS screen

# Manufacturing Design Challenge & Solution

## Capabilities with Unlimited Possibilities



Integrated Sealing Systems Teams up with Mobile Climate Systems to meet the needs of Hydraulic Accumulator Division



2 piece  
assembly

or



no assembly

Which would  
you choose?

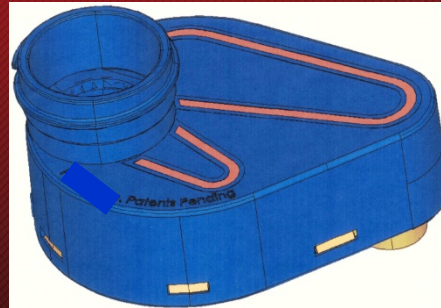
# Manufacturing Design Challenge & Solution

## Industrial/Consumer Mist Applicator



- 3 piece construction
- Ultrasonic weld 3 locations
- 25% leak rate

or

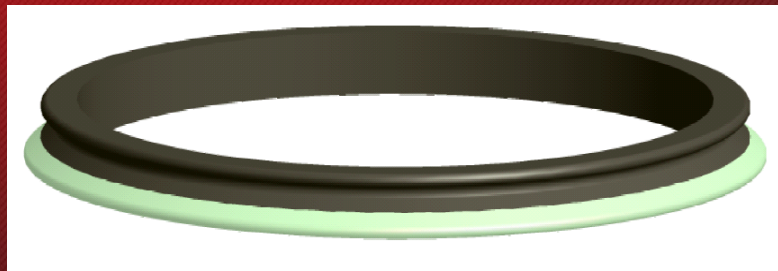


- 2 piece construction
- Snap together sealed assembly
- Zero Leak

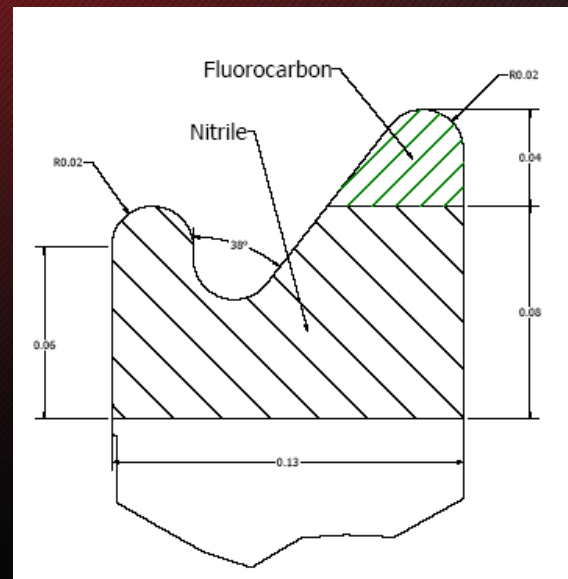


# Manufacturing Design Challenge & Solution

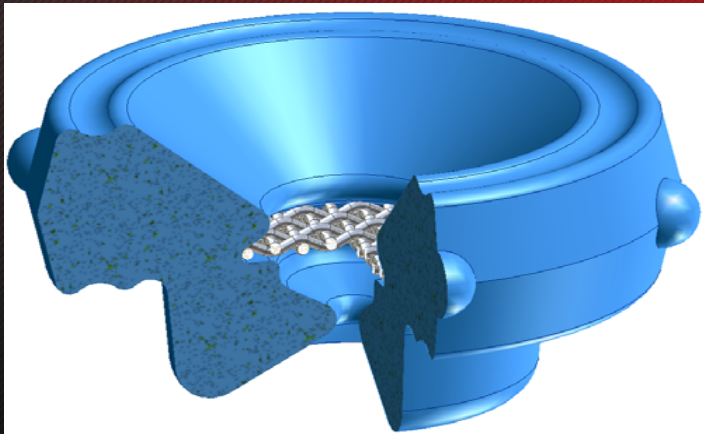
- Capless Fuel Tank Seal
- Complex Ground
- Bi-Laminate Seals Solve
- Problems for Automotive
- Fuel Systems



By combining Fluorocarbon with lower cost Nitriles, high performance seals can be manufactured without high performance prices!



# Manufacturing Design Challenge & Solution



## Consolidation & Optimization

- Reduced part count
- Reduced part numbers
- Reduced assembly time
- Reduced system cost
- Improved reliability
- Improved performance



# Manufacturing Design Challenge & Solution



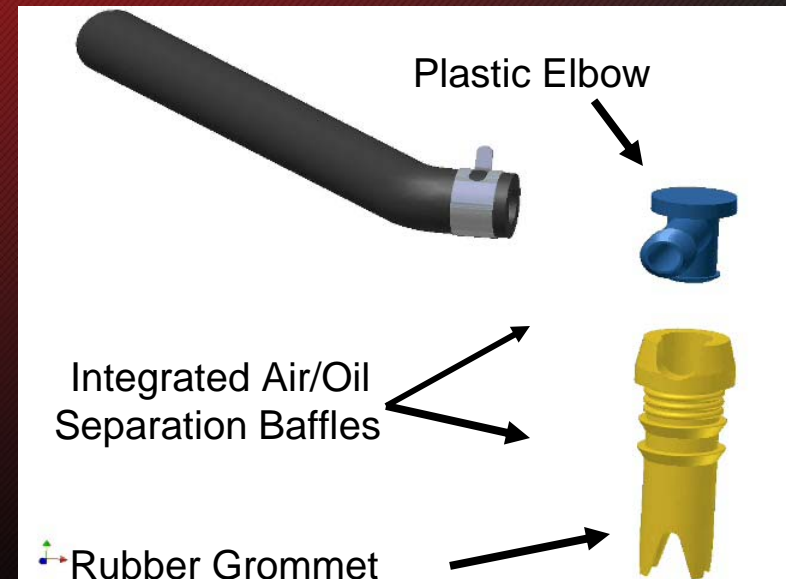
## Current Technology:

Vent uses 6 components screwed into axle housing.

## Parker proposal: 6 → 4 components

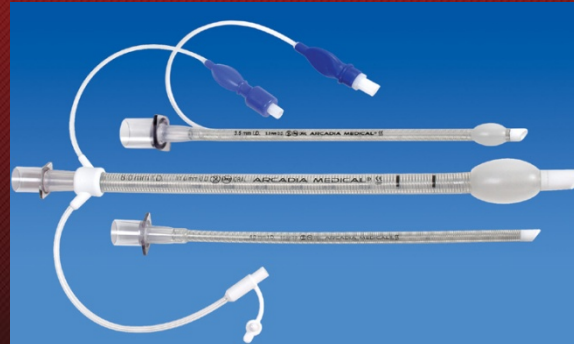
Rubber grommet:

- provides integrated retention
- eliminates threads on two components
- incorporates air/fluid separation baffles to prevent axle lube loss.



# Manufacturing Design Challenge & Solution

## Finished Medical Devices



- Medical Devices
- Molded Components
- Medical Grade Extrusions & Tubing
- FDA Registered
- ISO 13485 Certified

# Logistics

## Logistics: Demand Fulfillment

**Cash Conversion Cycle: (Days Inventory + Days Receivables) - Days Payables)**

- Financial
  - Terms & Conditions
  - Summary billing
- Inventory
  - Bonded
  - Consigned
- Operations
  - Order placement
  - Order changes
  - Expediting
- Value Add
  - TAC Program (total cost of ownership)
  - VMI Programs (ParZap, Internet, EDI, Email, Fax)
  - Packaging
  - Bar coding
  - Custom Labels
  - Custom Kitting

# Quality

## Quality: ISO9001/2008 and ITAR Registration

- **Customer Service (Mindshare)**
  - Daily communication
  - Weekly engineering and Purchasing visits (as required)
  
- **Geographical Location**
  - Hand deliver samples and production parts
  
- **Quality Issues**
  - Production problems
  - Product rejections (RGA's)
  - Corrective Action Requests
  - 8D Requirements
  - PPAP requirements

# Customer Knowledge

- People (purchasing, engineering, quality, management)
- Industry requirements
- Quality requirements (ISO, QS, PPAP, etc.)
- Production demands
- Cost limitations
- Receiving processes
- Inventory/Storage

# Summary

- Established presence in Florida
- Extensive market knowledge
- Strong supplier relationships
- Long term commitment to mutual success
- Technical sales team
- State of the art information technology
- Proven track record selling design intensive products
- Proven Strategic Selling Practices – Best in Market