

M.I.R. LLC

Making Ideas Reality

M.I.R. Making Ideas Reality LLC is an engineering service owned by Robert Banik. Robert has over 25 diverse years in the medical industry from startups to some of the largest device companies developing “what if” scenarios into prototypes and pushing to product launch in a hands on manner.

If your idea or team needs a spark, an engineering push, or your project needs an experienced hand to cut costs and time out or design verification...
There is no substitute for experience.

Please take time to review a sample of the diverse history of Robert’s successful experiences and consider him on your project team.....

winkler

1992-1993

- Custom Machine Design: belts-chains and drive components , S/S Sheet Metal part design, drawings, assembly and machine trial
- Plant layout drawings for equipment location and custom conveyors for Tasty Cake, Amerosa Bakery of Philly, Pepperidge Farms NY and All Pro Miami Dolphin John Offerdahl's for Offerdahl's Grill.

11	Timing Sprocket	Poly Chain GT BM-305-12	1
10	Timing Sprocket	Poly Chain GT BM-305-12	1
9	Belt	Poly Chain GT Belt BM-2000-12	1
8	Belt	Poly Chain GT Belt BM-640-12	1
7	Tension Base		20117469
6	Tension Arm		20114469
5	Tension Arm Mount		20113469
4	Timing Sprocket	Poly Chain GT Sprocket BM-305-12	20112469
3	Timing Sprocket		20111469
2	Timing Sprocket	Poly Chain GT Sprocket BM-285-34	20110469
1	After Stop		20109469
POS.	PART NAME	SPECIFICATIONS	PART NUMBER QTY.

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WINKLER USA

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SUPERSEDES DWG NO. SUP.DWG. NO.

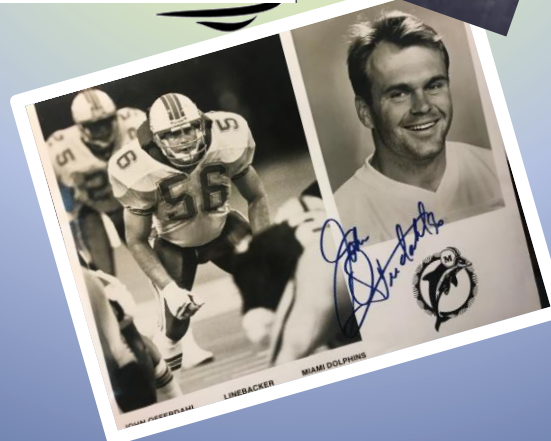
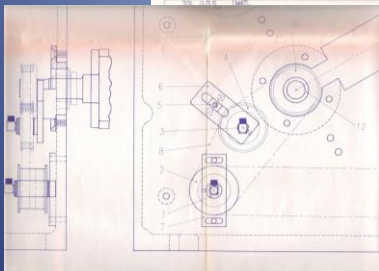
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DATE: 6/16/93 BY: RA

DESIGNED: APPROVED:

CONVEYOR DRIVE ASSEMBLY

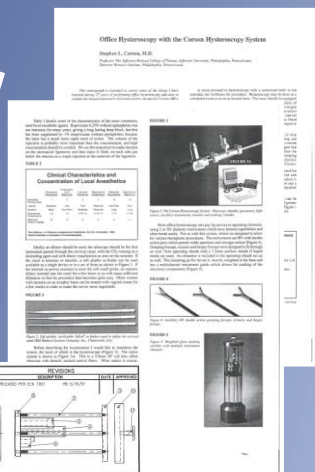
02090000





1995-1998

- Women's health care products;
 - Sterile Disposable Catheters (PP Extrusion, tipped skived side hole, PP plunger)
 - Stainless Steel hand instruments (custom designs per surgeons' requests)
 - Loop Electrode Designs and small batch manufacturing
- Corson Hysteroscopy **White Paper Feature**
 - Design, test, vendor selection, build, scale up
- Veronikas Vault Elevator
 - Responsibility: Design, test, vendor selection, build
 - Outcome: Launched in 1997 **Still Marketed Today**



- One of the oldest surgical instrument makers in the US , established 1814
- Surgical Instrument and Disposable Device Design and Project Team Lead

5mm Atraugrip Grasping Forceps

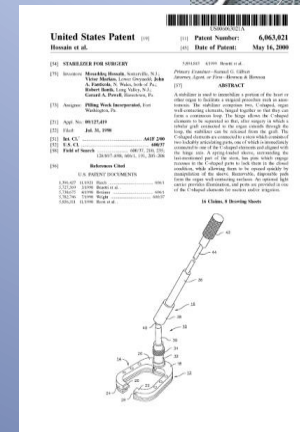
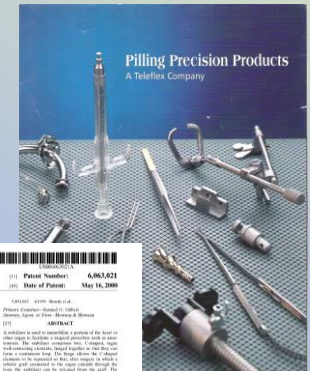
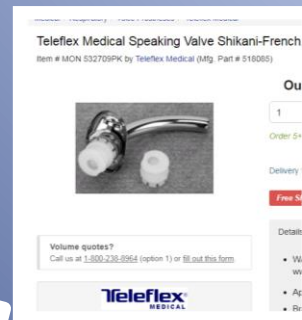
Jaw Design, Disposable Pad Design
Manufacturing Process Development
Launch 2000 US Patent 6,406,485

Heart Stabilizer

Design, test, animal lab validation
US Patent 6,063,021

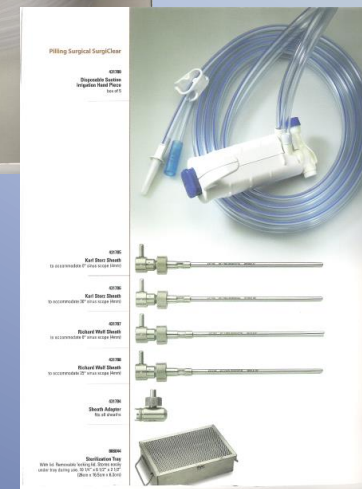
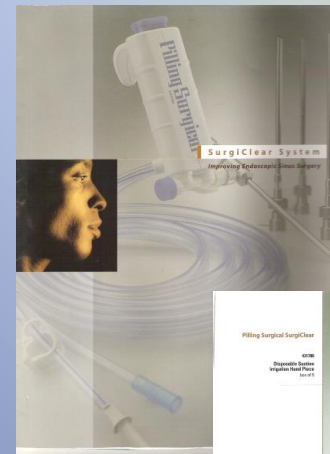
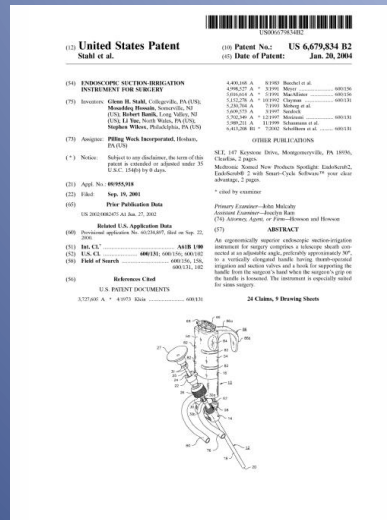
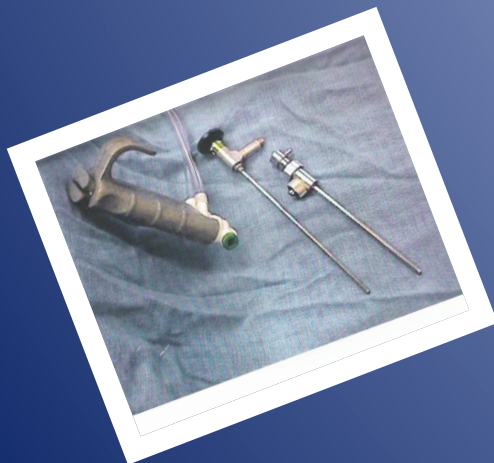


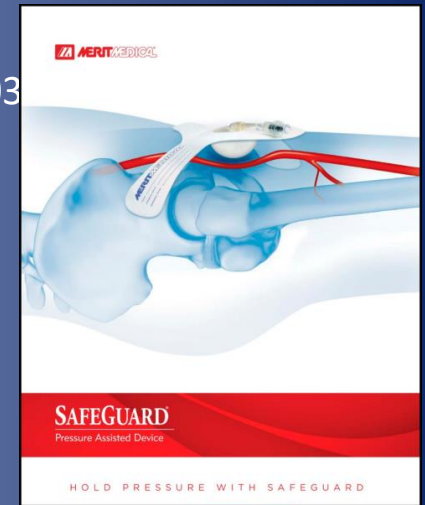
Shikani-French Speaking Valve
Design, test, Non Sterile -Launch
Still Marketed Today





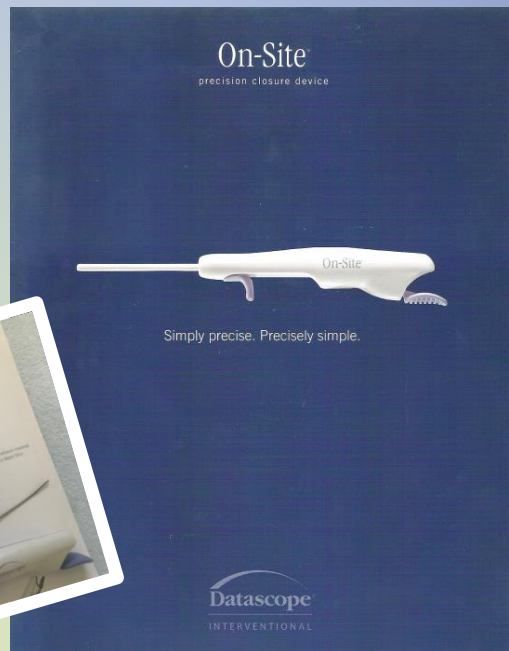
- SurgiClear; Sinus Surgery Irrigation and Suction
 - Responsibility: Design Reusable Sheaths & utilizing off the shelf trumpet valve system, Build, Test
 - Outcome: Successful Scale up in 2002
US Patent 6,679,834







- On-Site;
 - Responsibility: ½ Project Leader, Design, Test , Full Clean Room Process Design / Layout , Manufacturing Validation,
 - PU Blow Molded Balloon, Bonding, Nitinol Basket Potting, Micro Laser Welding
 - Outcome: Product Launched 2006



ON-SITE FEATURES AND BENEFITS

Features	Benefits
Single-Operator Deployment	<ul style="list-style-type: none"> • Easy to use by a single operator • Promotes consistent results • Quick and simple
Locator Wire Technology	<ul style="list-style-type: none"> • Precise location of arteriotomy • Provides temporary mechanical hemostasis • Acts as platform for precise delivery of collagen at the arteriotomy
Locking Delivery Device	<ul style="list-style-type: none"> • Device locks securely onto locator wire • Maintains position during collagen deployment • Frees up hands
Micro-pore Collagen	<ul style="list-style-type: none"> • Advanced sponge collagen expands quickly • Fills the tissue tract to create a secure mechanical seal • Proven method of hemostasis
Extravascular	<ul style="list-style-type: none"> • No intra-arterial components left behind • Enhanced safety

ON-SITE SPECIFICATIONS

The On-Site device consists of the following components:

- 41cm length Locator Wire with a retractable 4.9mm diameter Nitinol Mesh Disc covered with flexible polyurethane
- Introducer Catheter
- 10.5 French Tissue Tract Dilator
- 10.5 French Collagen Delivery System containing a 45-60mg plug of purified bovine Collagen

ORDERING INFORMATION

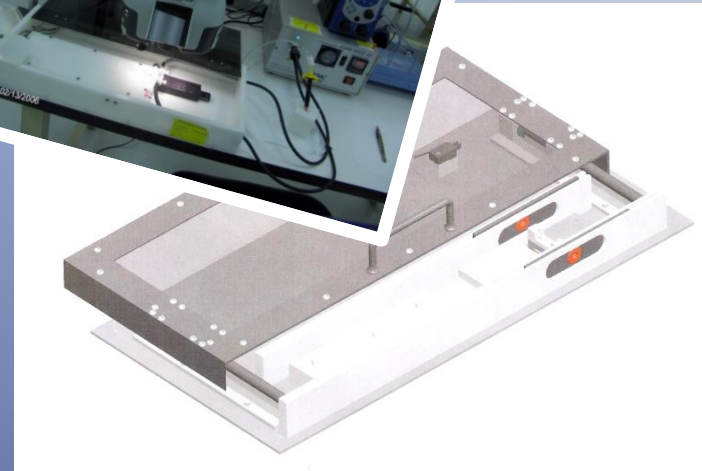
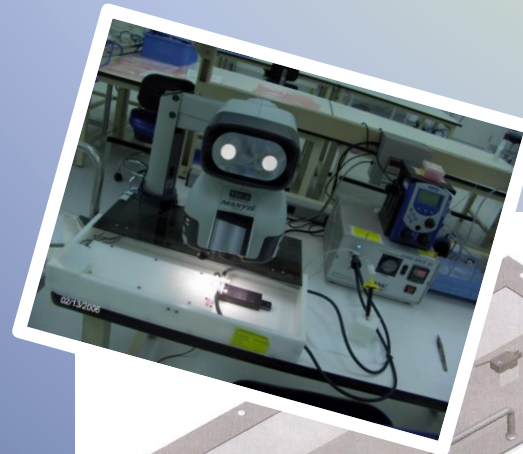
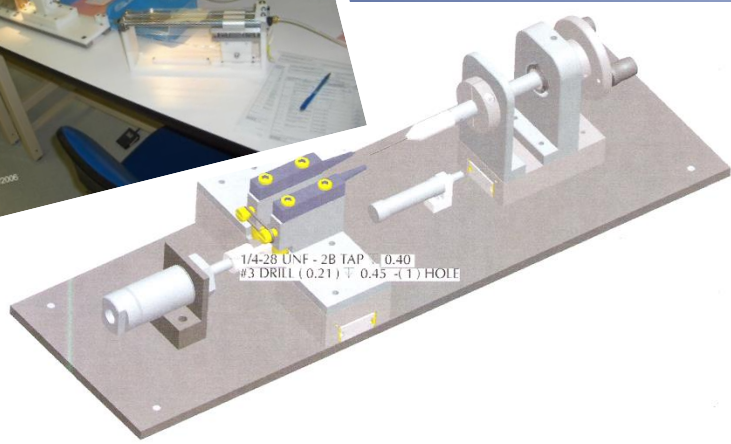
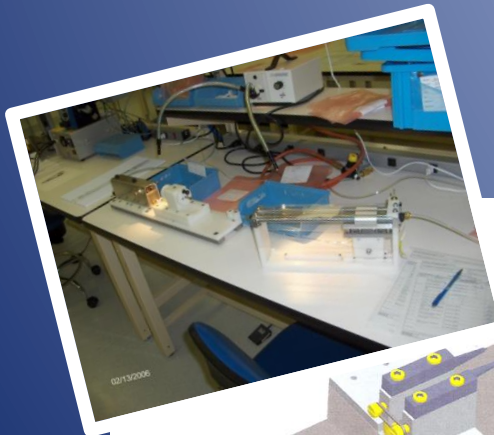
PRODUCT	CAT NO.
On-Site 131 with per foot Sterile, single use only	84000

Datascope
INTERVENTIONAL

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- On-Site; over the wire collagen femoral closure device
 - Process Design / Layout , Manufacturing Fixture Design
 - Polyurethane Balloon Design Stretching & Bonding,
 - Nitinol wire basket design/ scale up





2006-2012

Becton Dickinson & Company

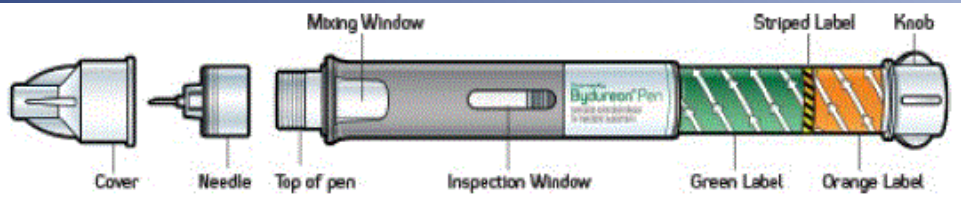
Diabetes Care Division

Lead Design on a Custom Pen Needle Hub/Needle/Animal Labs/Cap Needle Glue Well/Impact Testing

Responsibility: All design, UV Needle Bonding, Corona , testing, verification, MSA

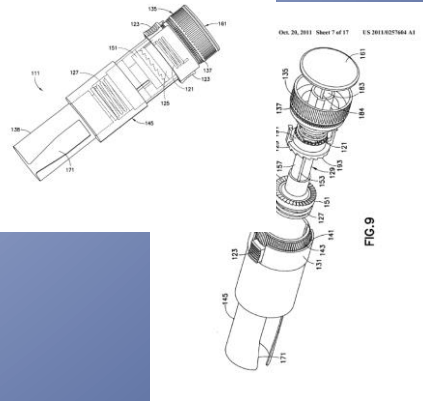
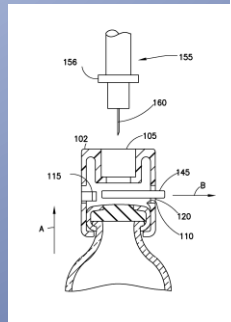
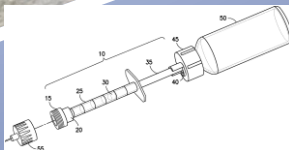
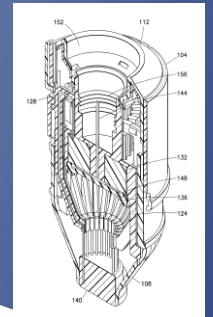
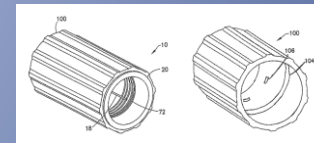
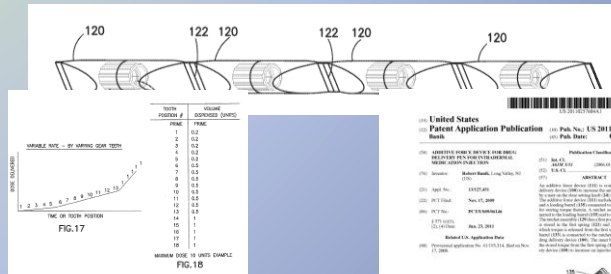
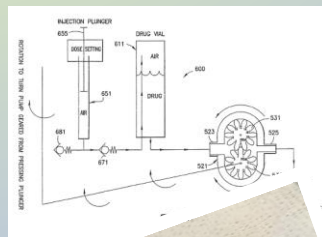
Outcome: Built 3 million for inventory Product Launch, **millions sold**

Process Development UV Adhesive Dispensing / Corona Treatment / Needle lubrication





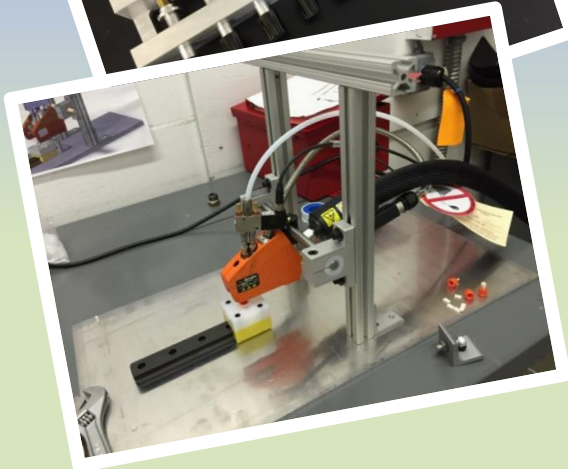
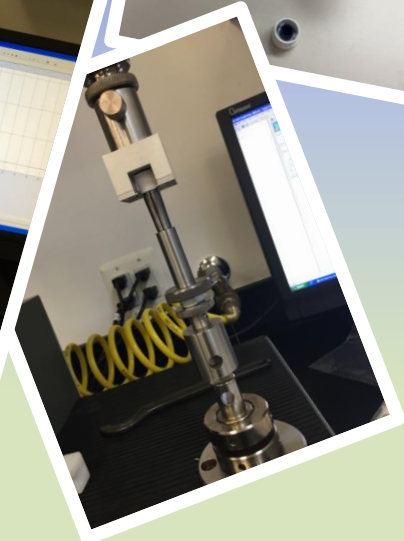
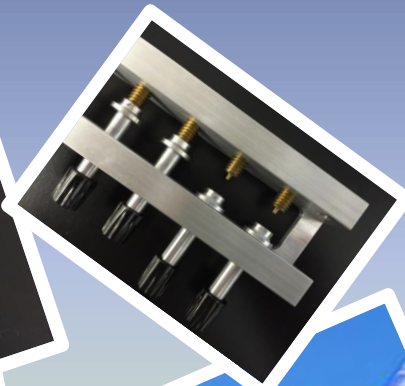
- Over 20 patents issued pertaining to injection products, packaging, diabetes care consumer products





2013-2015

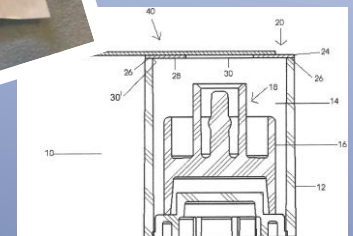
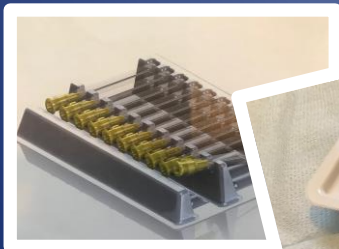
- Novel Patents issued for Luer Access Devices Disinfectant Products
- Design and Scale Up of Silicone / COP Syringe for Potency Sensitive Drugs
- Test Fixture Design for DV and MFG/QA Inspections
- Development Hot Melt Process



- MIR LLC Developed a Manufacturing Process for RFID Tag Application
Sterile and Non-Sterile Products Syringe Accessories
(Corona treatment / label machine design / test method / specification development)

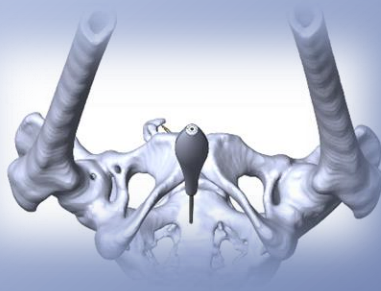
Defensive Intellectual Property Both Design & Manufacturing
Facilitating the growing pharmaceutical industry

Many Patents Issued and Pending on Novel Syringe Tamper Evident Accessories In
Various Phases of Development



Novel Female Urinary incontinence device

- MIR LLC Worked with a prominent local gynecologist /surgeon to develop prototypes of a novel device concept
- Conducted 2 successful cadaver labs in 2020/2021 in Miami to demonstrate proof of concept and create investor videos
 - Prototypes included custom tubing forms / handle design / metal anchor/ barbed suture / breakaway sheath concepts
 - Intellectual property included active barbed suture designs



M.I.R. LLC

Making Ideas Reality

Robert Banik

1991 BS Mechanical Engineering, The College of New Jersey (Trenton State)

2008 MS Mechanical Engineering, Integrated Product Development, Stevens Institute of Technology

2012 Mini MBA Cert. Finance, Rutgers

Robert has attended professional development programs by the ASME and universities such as MIT

Robert has over 35 patents and many more pending spanning 7 companies

Robert's work has been cited over 550 times

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