Reduce material handling, decrease installation time and increase productivity…

Affordable, Efficient & Effective

Electrical Raceway Condensate/Liquid Drains

DMAN ENTERPRISE CORP.

The Challenge

Electrical contractors are under constant scrutiny to provide high-quality installations, while maintaining tight installation schedules and remaining within budget. **Outdoor electrical raceway installations** are particularly challenging due to site limitations, impediments and general system complexities.

DMAN ENTERPRISE CORP.

Outdoor Electrical Raceways

Installations in hazardous locations increases the probability that liquid or condensed vapor may form inside the electrical control enclosures or within raceway systems. Contractors must take proper measures to either stop the liquid from accumulating or allow for **proper draining** to avoid potential electrical hazards.

DMAN ENTERPRISE CORP.

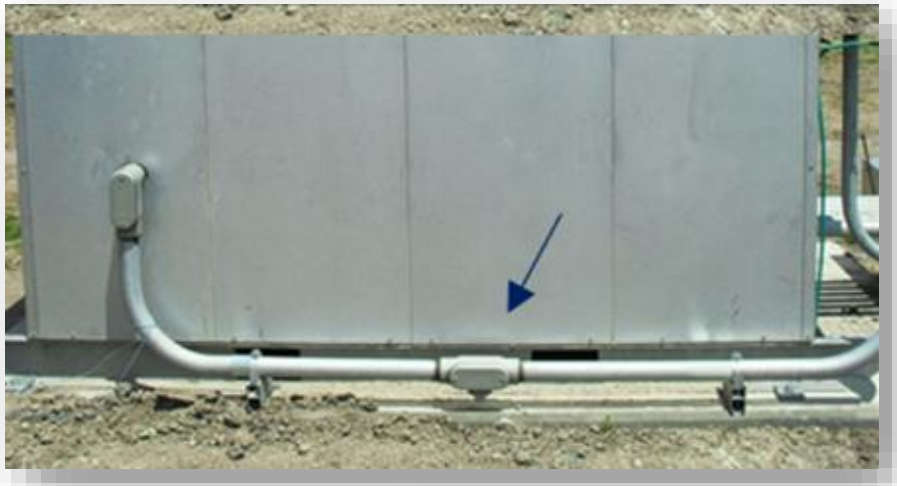
Liquid and condensate draining...

A *necessary* component to every raceway

National Electrical Code

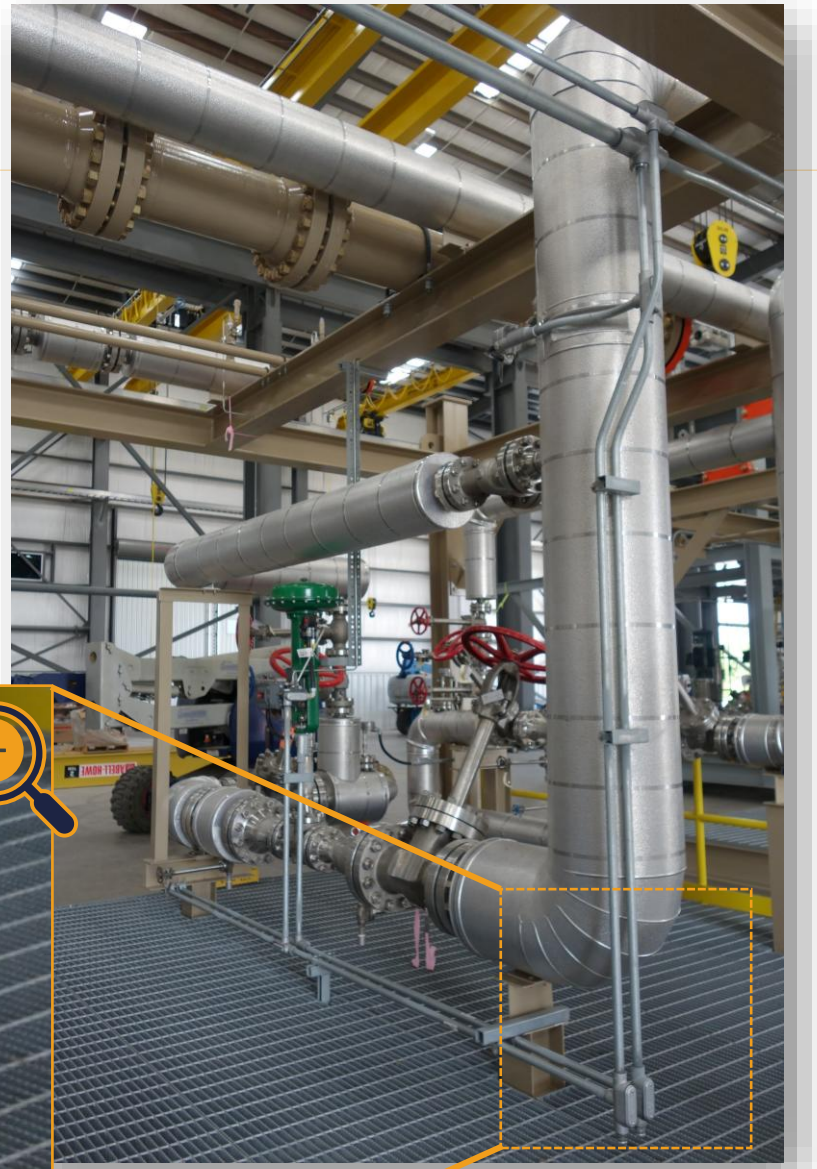
Drain Fitting Installations

Contractors add drain fittings to raceway system installations. These drain fittings help expel liquid and condensation that tends to form on the interior body of the conduit or may infiltrate the system through seals or breaks. Typically, these drain fittings are installed at a low point within the system so that the liquid or condensate can move naturally to the low point where it can egress from the interior of the system through the drain.



DMAN ENTERPRISE CORP.

Drain fitting installations



DMAN ENTERPRISE CORP.

Drain fitting installations

DMAN ENTERPRISE CORP.

T & TB outlet bodies with drain fittings

Rigid, Heavy & Bulky

Various Manufacturers

The drain fitting of the past...

DMAN ENTERPRISE CORP.

DFit

The Fitting of the Future

The Solution

DMan Enterprise Corporation has designed and developed a monolithic drain fitting that will revolutionize how electrical contractors install these raceway systems. Our patented design provides a more affordable, efficient, and effective means of liquid and condensation mitigation in electrical raceway systems.

DMAN ENTERPRISE CORP.

The fitting of the future

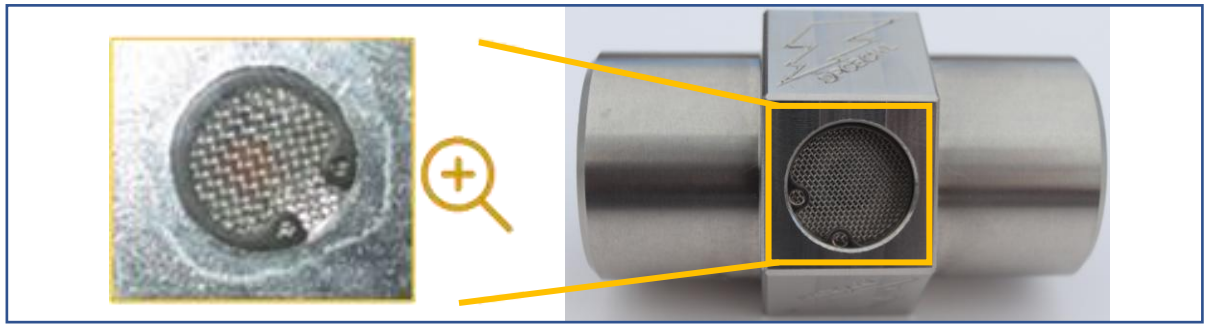
DMAN ENTERPRISE CORP.

DESIGN BASICS DFit

The Fitting of the Future

Snapshot

- Monolithic, minimalistic unibody design
- Tubular coupling with a through bore and connecting portions at opposing ends
- Centrally located tool engaging surface
- Integral interior liquid drain recess.
- Aperture located on the underside extending into the through bore
- A screen and clip or “Ex Proof” drain plug option attached/installed below the aperture



DMAN ENTERPRISE CORP.

DESIGN BASICS DFit

The Fitting of the Future

Applicable Materials

- Galvanized Steel
- Aluminum
- Stainless Steel
- Coated RGS
- Schedule 40/80PVC
- Brass
- Coated RGS
- EMT
- Any other approved corrosive resistant material

Variations

- ERCDN- Electrical Raceway Condensate/liquid Drain Nipple (Male-Thereon NPT & Metric)
- ERCDC- Electrical Raceway Condensate/liquid Drain Coupling (Female/Therein NPT & Metric)
- ERCDCN Electrical Raceway Condensate/liquid Drain Coupling/ Nipple (Female Therein / Male Thereon NPT & Metric)

ERCDN & ERCDC are available from ½" – 6" Eng & 16-155 Metric diameters and can be UL & IEC certified.

DMAN ENTERPRISE CORP.

COMPARATIVE DFit vs T(TB) Body & Drain Fitting

Design Comparative

In most external raceway installation either a T or TB shape conduit body with drain fitting attachment is used. For this comparative we will use the TB outlet body and drain attachment and compare it to our DFit.

DMAN ENTERPRISE CORP.

COMPARATIVE DFit vs T(TB) Body & Drain Fitting

TB Body and Drain Fitting

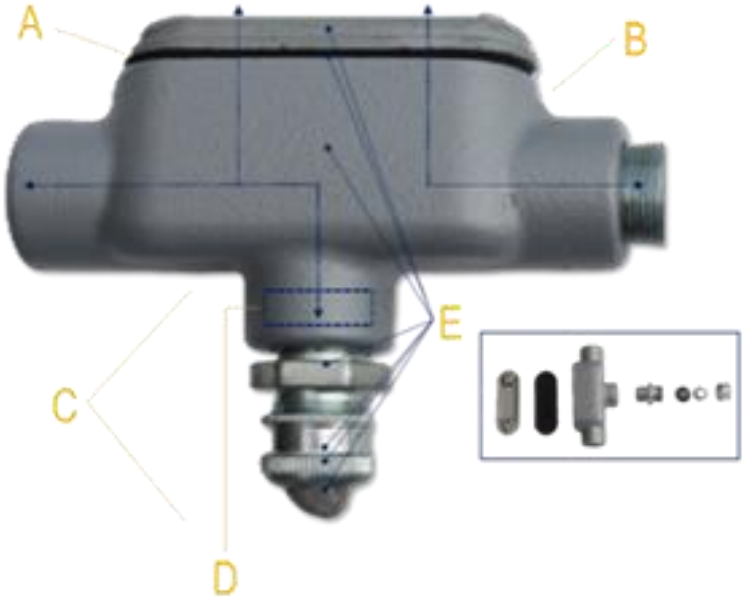
A. Outlet cover and gasket typically fastened to the outlet body with two screws. Commonly a separate part when ordering. Gasket failures create the potential for liquid or condensate infiltration.

B. The rigidity of the outlet body and its acute angles pose challenges for contractors to meet bend radius requirements and may require additional fittings to meet the NEC requirements [3]. Additional fittings, increase the potential for liquid or condensate infiltration and with each fitting, more laborious wiring pulling for the contractors.

C. The drain fitting (threaded into to the lower hub in the example above) extends the body and requires more space or clearance for proper installation. The protruding components may require contractors to adapt the area around installation for compliance and effectiveness.

D. The drain fitting is threaded into the hub of the outlet body, increasing the potential for corrosion, premature deterioration and the potential for liquid or condensate infiltration.

E. 7 components/parts make up this drain fitting mechanism:



DMAN ENTERPRISE CORP.

COMPARATIVE DFit vs T(TB) Body & Drain Fitting

DFit by DMan Enterprise

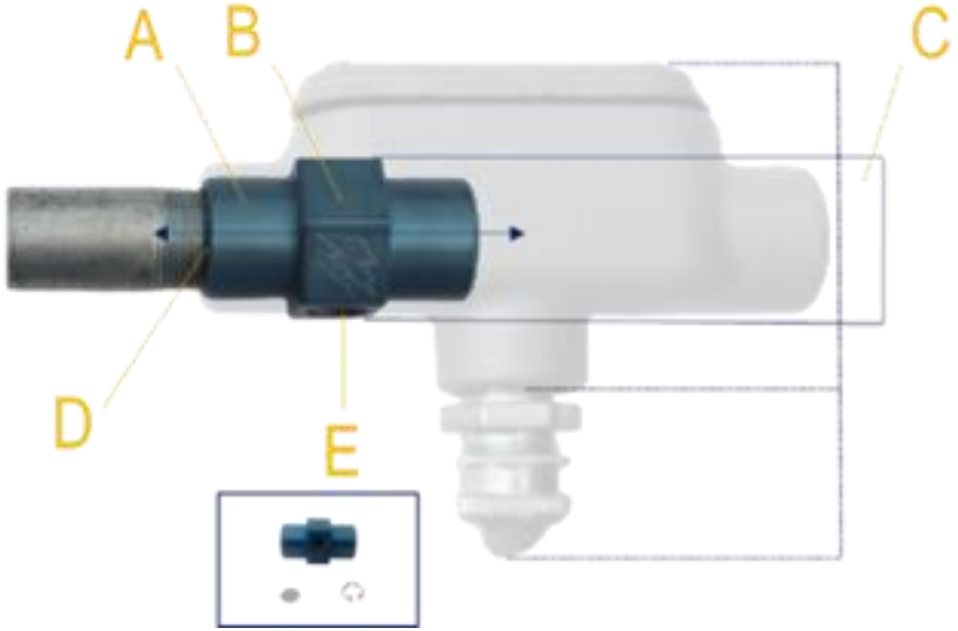
A. The monolithic (singular piece) design has fewer areas for potential liquid and condensate infiltration and less potential for corrosion and premature deterioration.

B. The hex shape makes threading into the existing conduit easy.

C. The size and weight require less space and clearance at points of installation, and it is much easier for contractors to handle and maneuver.

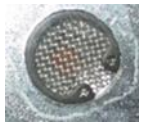
D. The in-line through bore design makes wire pulling easier and it reduces the number of fittings needed as it easier for contractors to maintain bend radius compliance.

E. Perpendicular to the inline through bore is the drain recess and aperture in which the drainage component is applied. The screen and securing clip are flush with the fitting, and with no protrusions (note: aperture is threaded for compatibility with ex proof plugs).



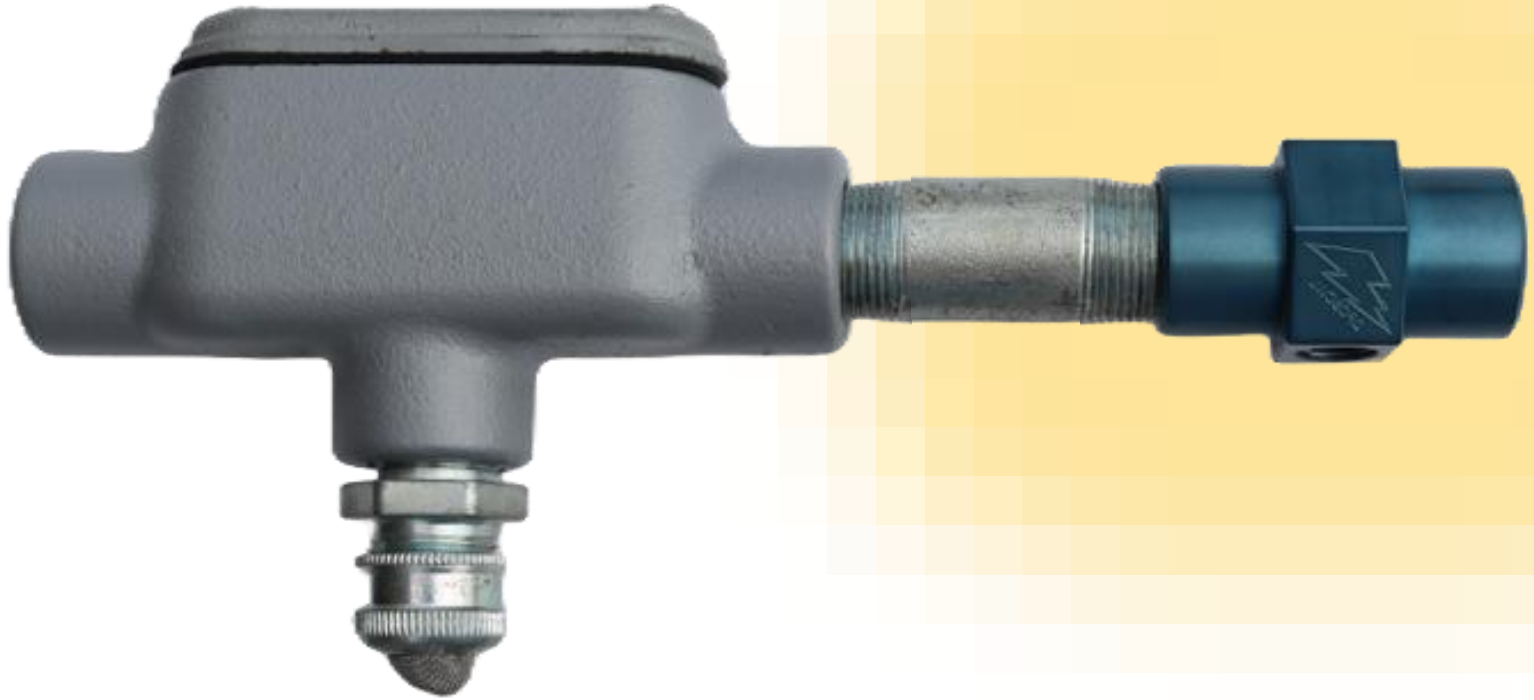
3 components make up the entire drain fitting

Screen secured with clip, easily applied and removed with a common Snap Ring Plier



DMAN ENTERPRISE CORP.

COMPARATIVE DFit vs T(TB) Body & Drain Fitting



DMAN ENTERPRISE CORP.

DFit

REDUCE CABLE PULLING

The Dread of Cable Pulling

Pulling cables through conduit is often described as the most **tedious** and **frustrating** aspects of any raceway installation. For every fitting, a contractor needs to pull the cable through it. The larger the run the more difficult the pull. The more fittings the more pulling needed. This means that at every point a condensate/liquid drain is installed in a raceway system contractors must spend time and energy to pull the cable through the T body outlet before continuing the run.

DFit **greatly reduces** the need for cable pulling and makes cable pulling **easier**

DMAN ENTERPRISE CORP.

DFit

Gas Plant in Texas

Gas Plant in New Mexico

That's A LOT of cable pulling!

DMAN ENTERPRISE CORP.

DFit

REDUCE CABLE PULLING

TB Outlet

Acute angle path (yellow). Cable is pulled through the body at opening than ran through vertically in the example shown.

DFit

Simplifies pulling needs and allows for the continuation of the conduit with no acute directional changes (green).

DMAN ENTERPRISE CORP.

DFit

FEWER SITE MODIFICATIONS

Cutting Grates & Skids

For drains to be effective in raceway systems the must be installed at the low points within the within the raceway.

This limits the locations where these fittings can be installed. Additional mechanical work is often required to eliminate interference or obstructions for the proper placement of these drains.

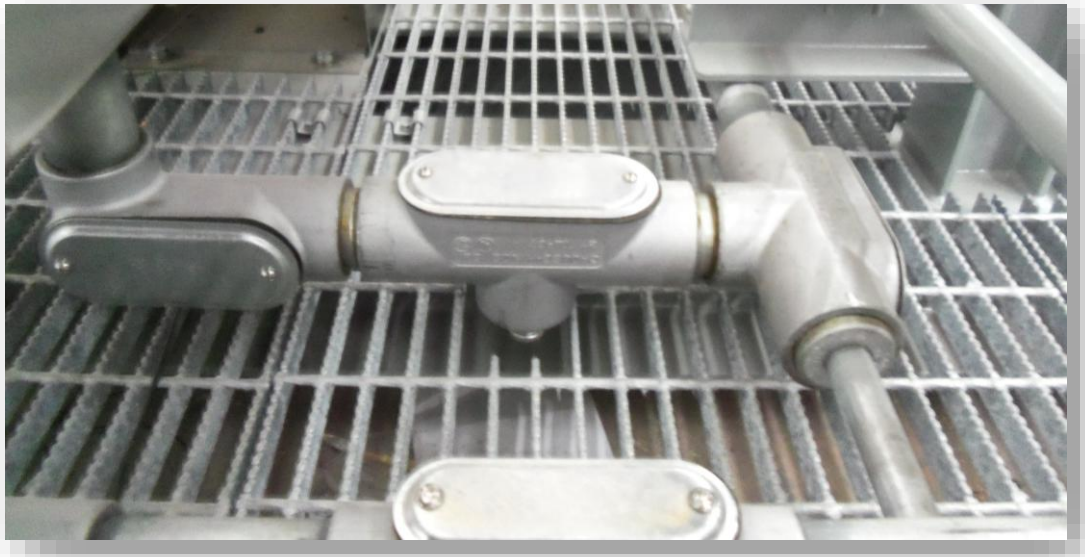
Adaptations are often required to the surrounding site. Contractors may need to cut into the surrounding structures such as, grates, or skids to allow for proper clearance and space. These modifications are **time consuming**, **slow production** and may **require additional permitting**.

Cut the grate to fit the drain

DMAN ENTERPRISE CORP.

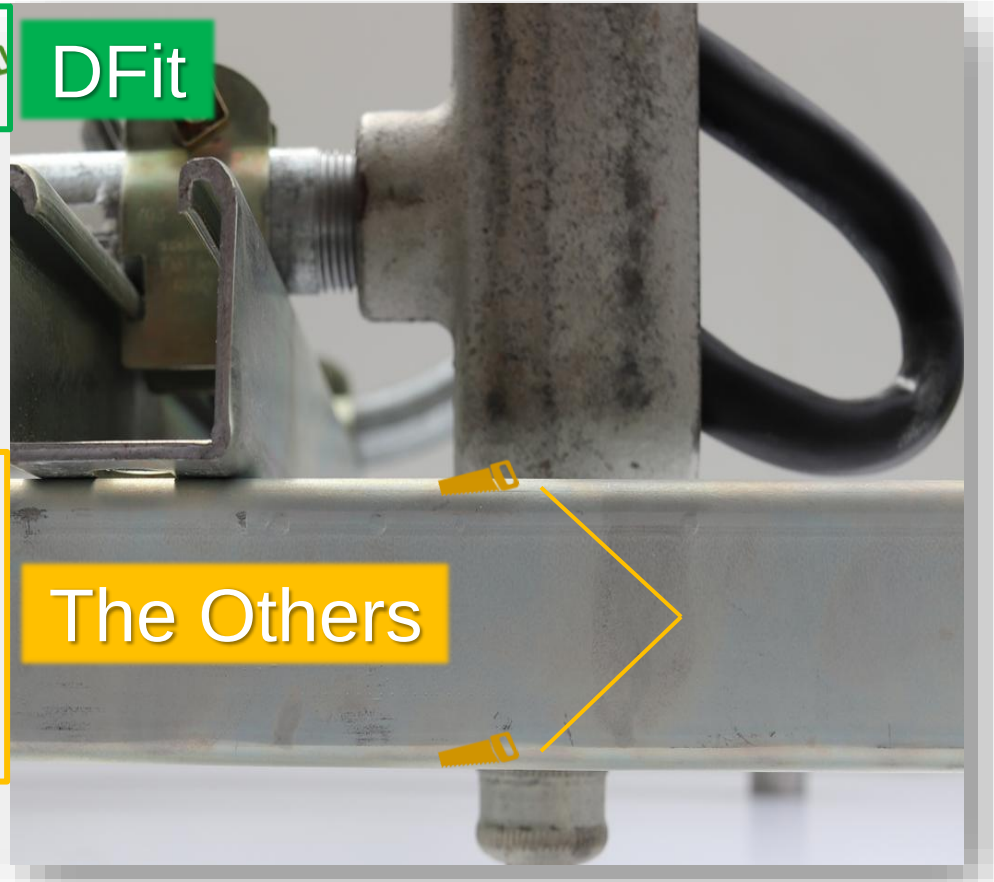
DFit

FEWER SITE MODIFICATIONS



No Cutting with DFit

Cuts made to skid/grates to fit the outlet body and drain fitting



DMAN ENTERPRISE CORP.

DFit

BETTER BEND RADIUS COMPLIANCE

NEC Bend Radius Requirements

The NEC provides standard requirements for cable bending for specific installations. In raceway installations requiring condensate/liquid drains, adding fittings such as these can create a challenge for contractors to maintain bend radius compliance. The diagram below is an example of how additional fittings are needed to maintain the cable bend compliance.

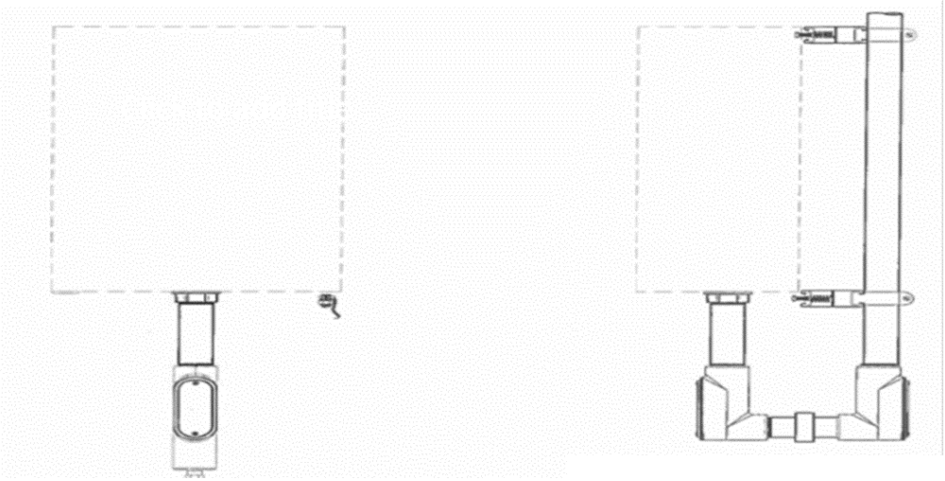
DMAN ENTERPRISE CORP.

DFit

BETTER BEND RADIUS COMPLIANCE

Bend Radius Challenges (Example)

TB body (left) is replaced with LBD moguls (right) to maintain cable bend limitations, new condensate/liquid drain nipple needed to be installed with raceway installation.



DMAN ENTERPRISE CORP.

DFit

BETTER BEND RADIUS COMPLIANCE

Add LBD Moguls or Upsizing

- More cable pulling
- More threading and seals
  - Increased risk of improper installation
  - More areas for corrosion
  - Potential for premature deterioration
  - More areas for liquid infiltrations. Requiring
- Contractors may elect to upsize
  - More resources and materials.

Use DFit for Bend Radius Compliance

- It's inline and compact design = No impact on fill limits
  - More freedom with conduit runs
  - Reduces the need for LBD moguls
  - Reduces the need for additional fittings
    - Less risk of liquid or condensate infiltrations,
    - Less time needed for threading conduit,
    - Less cable pulling
    - Decreases the risk of installation error(s)

DMAN ENTERPRISE CORP.

DFit

LIGHTER
COMPACT
LESS MATERIAL

Manufacturing, Shipping & Storage

Materials

DFit can be manufactured using any of the standard materials found in the electrical industry. The difference in its size and weight compared to that of the traditional condensate/liquid drain options, **greatly reduces manufacturing costs** associate with material procurement. Additionally, **manufacturing time is greatly reduced** because of its monolithic design which requires only single casts and forms. This leads to less total material, simplified molding and machining requirements. Thus, **lower production time and costs**.

DMAN ENTERPRISE CORP.

DFit

LIGHTER
COMPACT
LESS MATERIAL

Manufacturing, Shipping & Storage

Size and Weight

DFit serves the same purpose with improved results, while being compact and weighing less. This significantly **reduces the costs of shipping, freight and storage**. This includes handling labor from the supplier at delivery and during installation. These savings benefit manufacturers, suppliers, contractors and clients.

On many jobsites, contractors use one or multiple material trailers where their installation materials are stored. Reducing the space needed for onsite storage and component count is another benefit to contractors under pressure to complete work on time and on budget.

DMAN ENTERPRISE CORP.

Denny Mansell, Founder

DMan Enterprise Corp.

Denny Mansell is a proud Texan hailing from the great city of Katy Texas. He has worked as an electrical engineer and in the electrical trade business for over 41 years. His work includes installation, design, project management, purchasing and quality assurance. Denny holds master electrician licenses in Texas, Wyoming, Utah and South Dakota and he is UL, NEMA, IEC Certified. He is a member of National Fire Protection Association with extensive studies in National Electrical and IEC Code.

Denny, created DMan Enterprise Corp. in 2015 with the goal of to solving an industry-wide problem. The culmination of his efforts resulted in the design, creation and patent of a drain fitting that revolutionizes how outdoor electrical conduit raceways are installed. A design that his colleagues have coined as ‘the future’ of condensate drain fittings.

DMAN ENTERPRISE CORP.

Industry leaders, electrical engineers, fitting manufactures, IEC manufacturers and wholesalers are invited to contact DMan.

DManEnterprise.com

Don't let '**the future**' pass you by!

Contact us today to discuss how you can add DFit to your business.

DMan Enterprise Corp.
5154 Katy Hockley Road
Katy, TX USA
DManEnterprise.com

Eric Yashinski
Eric@DManEnterprise.com